KPMG

Micro- Level Skill Gap Study for the State of Maharashtra

Prepared for:

Maharashtra State Skill Development Society

Government of Maharashtra

Final Report

Disclaimer and Notice to the Reader

1 This report has been prepared exclusively for Maharashtra State Skill Development Society, Government of Maharashtra ("Client", "MSSDS") based on the terms of the Work Order No. MSSDS/AEP/G/72/2017/447 dated 03/05/2018 issued to KPMG Advisory Services Private Limited ("KASPL", "KPMG") and further contract signed between MSSDS and KPMG on 12th July 2018.

2 The performance of KPMG's services and the report issued to the Client are based on and subject to the terms of the Contract.

3 This report is confidential and for the use of management only. It is not to be distributed beyond the management nor is to be copied, circulated, referred to or quoted in correspondence, or discussed with any other party, in whole or in part, without our prior written consent.

4 This report sets forth our views based on the completeness and accuracy of the facts stated to KPMG and any assumptions that were included. If any of the facts and assumptions is not complete or accurate, it is imperative that we be informed accordingly, as the inaccuracy or incompleteness thereof could have a material effect on our conclusions.

5 While performing the work, we assumed the genuineness of all signatures and the authenticity of all original documents. We have not independently verified the correctness or authenticity of the same.

6 We have not performed an audit and do not express an opinion or any other form of assurance. Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion.

7 While information obtained from the public domain or external sources has not been verified for authenticity, accuracy or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. We assume no responsibility for such information.

8 Our views are not binding on any person, entity, authority or Court, and hence, no assurance is given that a position contrary to the opinions expressed herein will not be asserted by any person, entity, authority and/or sustained by an appellate authority or a Court of law.

9 Performance of our work was based on information and explanations given to us by the Client. Neither KPMG nor any of its partners, directors or employees undertake responsibility in any way whatsoever to any person in respect of errors in this report, arising from incorrect information provided by the Client.

10 Our report may make reference to 'KPMG Analysis'; this indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the veracity of the underlying data.

11 In accordance with its policy, KPMG advises that neither it nor any of its partner, director or employee undertakes any responsibility arising in any way whatsoever, to any person other than Client in respect of the matters dealt with in this report, including any errors or omissions therein, arising through negligence or otherwise, howsoever caused.

12 In connection with our report or any part thereof, KPMG does not owe duty of care(whether in contract or in tort or under statute or otherwise) to any person or party to whom the report is circulated to and KPMG shall not be liable to any party who uses or relies on this report. KPMG thus disclaims all responsibility or liability for any costs, damages, losses, liabilities, expenses incurred by such third party arising out of or in connection with the report or any part thereof.

13 By reading our report, the reader of the report shall be deemed to have accepted the terms mentioned hereinabove

Table of Contents

List of Tables

List of Figures

Acknowledgement

We are grateful to the Maharashtra State Skill Development Society (MSSDS), Government of Maharashtra for their contribution towards the successful completion of the study. Our special thanks to CEO, MSSDS and Mission Coordinator, MSSDS who gave their time for focused and intense discussions and guided us during the course of the study.

We acknowledge with gratitude the support provided by the State and District Level government functionaries; industry representatives, Training Service Providers and the youth of the state for their contribution to the study. The study would not have been possible without their collaborative efforts.

In addition, we convey our gratitude to all those who have, in some way or other, contributed towards the successful completion of this study

Executive Summary
Background

Maharashtra, India's leading industrial state, has a decade remaining to reap the benefits of a demographic dividend. The window of opportunity presented before Maharashtra can be seized through well-defined investments in its human capital to propel future economic growth and development. In this context, the stock of 'skill' available (measured by units of labour possessing desired skills and competencies) should be closely monitored. The role of government is extremely critical to support the creation and maintenance of high-quality capacity for education and training. **In Maharashtra (as is across India), government funding towards skilling is in essence an input subsidy to support the creation of a network of training institutions across the country**. Arguably, this approach has allowed for rapid and simultaneous creation of capacity across the state for training. With 'talent availability' being a major driver in the future for critical industries such as automotive, aerospace, consumer businesses, banking and financial services (BFSI), IT-ITeS etc. meeting industry needs will be critical for future growth.

Government of Maharashtra had set itself up a target of generating 4.5 Cr. skilled manpower by 2020. To achieve the skill development objective in the State, Maharashtra State Skill Development Society (MSSDS) was established. MSSDS is responsible for skills assessment in the State, implement any skill development initiative across the length and breadth of Maharashtra and support Department of Vocational Education & Training (DVET)in establishing a dynamic labor market information system. The state faces a mandate of developing and maintaining high quality human resources to deal with the evolving economy and provide decent employment for its populace. Thus, it is essential to analyze industry demand, supply through public, private and non-formal / informal channels, labour force participation, aspiration and employability of both new entrants and existing workforce, in order to support overall development of the state.

Context for present study

In 2012, National Skill Development Corporation (NSDC) commissioned a skill gap study for the state of Maharashtra. The study covered all the districts of Maharashtra and provided incremental workforce requirement for the period 2012-2020. The study adopted a mix of secondary and primary research and relied largely on focus group discussions with various stakeholder groups such as youth, employers, industry associations, government officials, and skill training providers. The study estimated skill gap for a period of 10 years, up to FY 2022. In the study, it was estimated that an incremental demand of 1.55 Cr. people would be generated in Maharashtra. Given the dynamic and rapid change in the state's social and economic context, it is imperative to align state's skill ecosystem with fresh assessment. With recent announcements made by Government of Maharashtra for making investments easier for businesses through Magnetic Maharashtra and Make in India with projects such as 'Samruddhi' which focuses on sectors like Construction, Retail, Agriculture & Tourism, there is a need to re-align skilling initiatives to the latest industry demands. Furthermore, there have been changes in employment scenario in India due to everchanging global economic development, for example in 2018, the largest number of jobs in formal employment has been in services sector and Maharashtra leads the country in terms of formal employment opportunities generated every year. In addition, to estimate the skill gap within the state it is essential to assess the latest industry demand, understand supply side dynamics, labor force participation rate and thereafter mapping the aspirations of the workforce not only at district level but also at taluka/village level. A contemporary estimation, using both quantitative and qualitative analysis would reveal relevant insights and findings related to the demographic profile, socio-economic characteristics of the youth, emerging sectors and job roles and the skillsets in demand.

The present study

MSSDS has, through a competitive procurement process engaged KPMG Advisory Services Private Limited (KPMG) to carry out "Micro-Level Skill Gap Study for the state of Maharashtra". MSSDS requires

this study to have an evidence-based approach to help them in key decisions associated with resource allocation as per detailed understanding of the economy and labour force.

KPMG conducted a primary survey to gather inputs on aspirations of the labour force in Maharashtra. In order to estimate future employment potential that will be serviced through 'skills' or units of labour possessing certain skills and/or competencies, a comprehensive economic and statistical analysis was conducted. Refer to the 'approach and methodology' section in the final report for further details.

This study was designed in a manner to offer insights into: (i) which skills are required to support State's economic growth, while also responding to the career aspirations of the youth and (iii) aligning the resources to the priority sectors as per the recommendation framework in collaboration with stakeholder consultations.

Approach & Methodology for the study

The team supplemented the economic and statistical analysis with field visits and cross validation workshops at a district level, across Maharashtra. It is important to note here that economic activity and labour force analysis is most effective at a 'cluster' level. Economic activities (referenced by National Industrial Classification, NIC classified 3-digit level sub-sectors) can be effectively studied and understood at a certain minimum scale rather than studying it at every lowest possible geographical unit. Similarly, given labour mobility to seek and undertake economic activity, it is relevant to analyze trends within a certain geographical context. Combined with data availability, any estimations are best possible with a district view. There is sufficient information to support this level of governance to make evidence-based decisions related to resource allocation in the skill ecosystem The key elements in the methodology are provided below:

i. **District demography, economy, educational profiling and the upcoming investments scenario:** Detailed analysis on demographic and economic indicators is undertaken for each of the districts. The key demographic indicators include population, population growth, human development indicators, and workforce distribution by primary secondary and tertiary sectors, unemployment rates, nature of employment, working age population, workforce participation rates. Further district economy is studied to understand the key drivers of GDP and main industries in the district contributing to employment. Human development scenario includes assessment of existing skill training capacity across sectors from major central schemes and state scheme, no. of institutes for primary, secondary and vocational education in the district. Relevant comparisons are made to highlight the distinguishing characteristics of the district.

ii. **Labour force Aspiration survey:** The aspiration study has been undertaken with the objective of understanding aspirations of the youth in terms of type of employment, further education and training. The insights from the study are helpful in expectation management and linking people to training of their choice which is critical for higher job engagement and retention. The key aspects captured in the study are aspirations for self v/s wage employment, preference to undertake further education and training, aspirational sectors, perceived benefits from trainings attended and challenges faced post the training. A quantitative survey covering **7,000 persons** chosen randomly basis location, age group, urban/rural etc. was conducted. This included the labour force (people working and people seeking work)

iii. **Quantitative employer and training providers survey:** a quantitative survey covering **628 employers** with adequate representation from Large, Medium, Small and Micro industries across the state. Also, a quantitative survey covering **200 training providers** was conducted to ascertain the challenges faced by them

iv. **Estimation of incremental manpower demand:** This analysis is undertaken with the objective of estimating incremental manpower requirements sub sector wise for each district. Sector wise future employment generation potential is a key determinant for prioritizing skills trainings. Future

employment is projected on the basis of a scientific formula which is provided in the Approach and Methodology section of the final report.

Estimated workforce = Baseline workforce* [1+ (Employment elasticity *GDP growth rate]^{n}

Where n = number of years for which projected

CAGR approach has been used to estimate sectoral employment elasticity. Employment elasticity between two time periods is estimated as:

Employment elasticity = ΔE / ΔG

Where
ΔE = growth in employment (% CAGR)
ΔG = GDP growth (% CAGR)

v.   **Voice of stakeholders:** multiple interactions with district officials were done to understand district and sector specific needs, priority areas and emerging sectors. Numerous consultative divisional workshops were organized showcasing the findings of the study to members of the district skill development committee. Relevant inputs from the workshops have been incorporated in the report.

vi.   **Recommendation framework and identification of priority sectors:** A structured approach has been adopted for making recommendations for each district. The sub-sectors have been ranked using three parameters namely, estimated economic growth, estimated incremental employment potential in the district, and aspirational value. Upon detailed discussions with key decision makers it was determined that a combination of economic and labour aspirations are implicit to decision making in the skill ecosystem. In the absence of a defined policy framework or guidelines, it was found important to reflect these implicit considerations in the chosen parameters.

For each parameter attributes of 'high', 'medium' and 'low' were assigned based on the below defined thresholds. For example: If the incremental employment potential was >5% (over the base year) then it was assigned the attribute value 'high'. Next, each sub-sector was analyzed, for each district against the below defined framework and an attribute value assigned. Once, the attributes were assigned for each parameter, all sub-sectors were evaluated, and priority was assigned to those sub-sectors which had higher number of 'high' attribute values across parameters. Hence, the framework was able to identify and rank sectors where economic growth, employment generation potential and labour market preferences were relatively higher.

Understanding the sub-sector rankings using the recommendation framework:

Green: High;
Amber- Medium;
Red- Low

Parameter 1: Economic Growth:
>10%- High;
<10%->5%- Medium;
<5%- Low

Parameter 2: Incremental Employment Potential:

>5%- High;
<5%->3%- Medium;
<3%- Low

Parameter 3: Aspiration:
Top 2 responses- High;
Top 6 responses- Medium;
Below Top 6 responses- Low

Sample output table

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture & Allied			
Forestry & Logging			
Fishing & Aquaculture			

Based on this analysis, and considering inputs from field visits and stakeholder interactions, top sectors have been identified for each district (refer to sample output). These can be prioritized for offering skills training. Additionally, key job roles have been identified in these sectors based on stakeholder inputs and secondary research.

Key findings

Following are the key findings of the study:

Demographic analysis	• As per census 2011, the population of Maharashtra is 112.3 million with **top 30% of the districts having more than 50% of the state's population** • Thane, Pune, Mumbai-Suburban, Nashik and Nagpur are the districts which has high density of population. Whereas, Gadchiroli having the lowest density of population
Economic analysis	• Maharashtra's economy is **services driven** with 55%, 34% and 11% of the gross state value add derived from services, industry and agriculture and allied services, respectively • Economy grew at an average compounded annual growth rate (CAGR) of **7.1%** between the years 2011-12 to 2016-17, services sector grew at **8.7%** in the same period • **Output from agriculture and allied activities** grew at a CAGR of 3.4% and **industry output** (which includes manufacturing and construction activities) grew at 6.1%
Labour market analysis	• **30% of the workforce** was engaged in **services sector** activity and is estimated to grow in next 10 years • Average **women's participation** in labour force is **relatively greater** in Maharashtra as compared to India • As per the report on district level estimates 2013-14, ~5% of the labour force had received vocational training; 3.6% received formal vocational training. Of these, 72.4% were employed in urban areas and 24.2% were not in the labour force. 4.9% were unemployed

Educational infrastructure	• During 2016-17 the state government's expenditure on primary education (Standard I to VIII) was INR 19,846 crore[1], whereas in secondary & higher secondary (Standard IX to XII) education was INR 16,089 crore[2] • State is implementing schemes like Sarva Siksha Abhiyan, Rashtriya Madhyamik Shiksha Abhiyan and inclusive education of disabled • In higher education, state has 22 state universities, 21 deemed universities, 1 central university, 4 private universities and 5 institutes of national importance universities • In vocational education, state has 957 ITIs and has a strong vocational training partner network

Findings from Primary Survey

Labour force aspiration	• From the total respondents, 56% preferred being self-employed whereas 44% preferred having wage employment • The average expected monthly income of self-employed respondents is INR 21,981 whereas average expected monthly income of wage employed respondents (INR 18,453) • 58% of the self-employed respondents preferred further training / learning skills whereas 20% of the respondents would like to get further education • Amongst the wage employed respondents, only 27% respondents showed a desire to get further training / learn skills whereas 30% respondents said that they would want to get further education • Top sectors for self-employment as per the survey are Retail, Agri & Allied, Skill based business, food products & handicrafts, Beauty & Wellness and Hospitality • Top sectors for wage employment as per the survey are Government & Administration, Agri & Allied, BFSI, Manufacturing, Healthcare and Railways
Employer & Training Provider Perspective	• Pune, Aurangabad, Nagpur and Mumbai are the identified 4 districts which are emerging and are expected to drive the demand for labour in future • Agriculture & Allied, Automobile, Engineering & Capital Goods, BFSI and food processing are the emerging sectors • At the mid-level jobs, employers place high importance on core / professional skills whereas at the entry level employers tend to place more importance on technical skills • Training institutions reported that almost 44% of the students had matric/secondary (9th/10th standard) and 37% of the students had higher secondary (school 22th/12th standard) qualification • Selecting candidates who would fit various job roles and lack of genuine candidates who actually need training are the major challenges faced by training providers
Incremental employment generation	• Looking at the immediate 5-year period 2019-2023 it is estimated that 74 lakh new employment opportunities are expected to be created across the state • Key sub-sectors include BFSI, transportation, education, healthcare in services whereas fabrication of metal products, machinery & equipment and textiles in manufacturing

Name of the sector	Incremental employment (2019-23) in persons	Incremental employment (2024-28) in persons
Agriculture & Allied	10,90,318	11,33,038
Construction	1,23,402	1,29,528
Registered Manufacturing	17,54,688	21,79,760
Services	44,37,417	57,00,606

---

[1] Economic Survey of Maharashtra 2017-18
[2] Economic Survey of Maharashtra 2017-18

Manpower Supply	• Maharashtra has a significant opportunity in terms of a sizeable projected population of the working age spectrum.

Projected working Population		Projected labour force		Projected workforce	
2023	2028	2023	2028	2023	2028
7,74,19,424	8,40,13,996	5,05,80,546	5,47,76,133	4,94,96,058	5,36,01,449

The total target population in the state for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~16,65,020

Particular	Numbers
Enrolment in VIII	20,08,417
Enrolment in X	18,10,025
Enrolment in XII	14,12,078
Dropout at VIII	**2,39,841**
Passing out of VIII*	17,68,576
Students not transitioned to IX	**2,91,108**
Dropout at X	**3,03,324**
Passing out of X*	15,05,701
Students not transitioned to XI	**2,47,838**
Passing out at XII**	12,08,456
Students not transitioned to Higher Education	8,21,750
Total Target population	**16,65,020**

Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
*** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force*
Source: UDISE, AISHE

Recommendations

Maharashtra being one the leading industrial states and considered amongst one of the most developed in the country with a young demographic dividend as compared to the national average there is a need to develop a stock of future-relevant skills and in order to achieve it, right investments in human capital should be made. As per the study 74 lakh incremental employment opportunities will be created over a period of 5 years with tertiary sectors having the lion's share and a shift from traditional primary sector. With everchanging needs of economy in the country, it is imperative to measure the pulse of changing consumption patterns, evolving business models and innovation disrupting public and private enterprises. Adopting to technological changes such as artificial intelligence, machine learning, increased automation etc. is need of the hour and will result in creation of different kind of demand for skilled labour.

This study combined economic analysis with on-field observations and a state-wide primary research survey to estimate the employment expected to be generated and hence priorities for skilling activities. The goal of deploying this multi-pronged approach to a 'skill gap' study is to offer evidence to decision makers to strengthen their resource allocation decisions. Important decisions can be taken by understanding regional needs and aspirations. Some of the recommendations are mentioned below

1. **Developing policy guidelines**: A well-defined policy linking investments in skill to clearly defined outcomes such as boosting the state's economic growth, supporting self-employment/ livelihood opportunities, supporting labour aspirations, or a combination of these, can have two major benefits i.e. clarity on how to allocate resources and sending a clear signal to investors, employers and the labour market about available resources to consider while planning for the future

2. **Need based targeting of annual training spent:** Through this study it is important to have continuous collaboration with district level stakeholders to understand the needs at local community level in order to engage with the members of the labour force and maximize reach of training activities. Understanding the needs and the aspiration will result in improvement of target allocation and mobilization efforts across the state.

3. **Multi-department collaborative effort to plug data and information gaps:** Through this study it became increasingly evident that there are gaps in availability of basic economic indicators and occupational data at a sub-state and sub-sectoral level. While the announced annual Periodic Labour Force Survey (PLFS) exercise is likely to provide more frequent employment data. Data adequacy at a sub-state level to analyze changing labour market trends is essential. Collaboration with the Directorate of Economics and Statistics (DES), Government of Maharashtra to leverage their statewide machinery could be an alternative. Initiating a joint consultation with various departments and DES can reveal other alternatives worth exploring as well

4. **Institutional strengthening and capacity building**: There is also significant potential to leverage existing institutional capacity at general and technical education institutions to deliver training as well. Infrastructural facilities of higher education institutions and the typical learning environment created at formal education institutions could improve learning outcomes from private training activities. This can help in optimizing capital expenses and non-wage recurring expenses through shared capacity, for both formal education and TVET

5. **Training of Trainers:** There is a dearth of trainers and master trainers across the State and especially in the less developed Districts like Gadchiroli, Nandurbar, Beed, Parbhani, Sangli, Sindhudurg etc. There is also limited efforts and investments for continual upgrading/ upskilling of the trainers. MSSDS can consider establishing Regional Trainers' Academies at one nodal district of the 6 divisions of the state equipped with adequate facilities to train, assess and certify trainers and in partnership with the Sector Skill Councils (SSCs), industry bodies and/or relevant national institutions

6. **Strengthening soft-skills and employability skills**: Employers across all sectors have acknowledged the limitations on inter-personal skills and communication skills among the youth, as constraining their effective performance of work. Many employers highlighted the need for strengthening the skills in spoken English. Given that the existing educational institutions and their mandate do not cater to the requirement of soft-skills and employability skills, it is important for MSSDS to consider designing a targeted intervention on improving the soft-skills and employability skills of the State's Youth. MSSDS can learn from the experiences of other States in this regard, and develop a custom-pack of the interventions, encompassing 21st century employability skills and soft-skills, in addition to spoken-English and basic information and communication technology (ICT). MSSDS should consider implementing this in long-term and short-term skill development program

7. **Strengthening Industry-experience**: It is seen that the earning potential among graduates does not vary significantly from Diploma / ITI certificate holders over their career path. To enhance the value of the programs at the graduate level, it is necessary to strengthen their exposure to work environments (through guided industry-visits, internships or apprenticeships) for both technical and non-technical programs across the industrial and services sectors. It is also important to consider mandatory and periodic industry exposure for the faculties/ trainers, to develop an industry-ready workforce

8. **Promotion of niche sectors for livelihood**: Maharashtra is home to several traditional vocations of handicrafts, handlooms and arts such as warli paintings, wooden toy making, coir making, idol making, seed processing etc. However, many of these are at the risk of dying out owing to lack of appropriate patronage, documentation and transmission of skills. The youth prefer alternate vocations more lucrative than traditional vocations. It is necessary for the Govt. of Maharashtra to promote the

traditional skill-based occupations by formalizing the traditional skills and ensuring market access/development through linkages. MSSDS in partnership with other relevant departments, should implement targeted interventions including developing Qualification Packs and carry out training programs including through RPL[3] Mode

List of niche sectors in select districts that have potential for employment is provided below

District	Sector
Chandrapur	Bamboo Product Manufacturing
Jalna	Seed Production, Sericulture
Raigad	Idol Making, Port Operations (Logistics)
Latur	Railway Coach Manufacturing
Sindhudurg	Coir, Wooden Toy Making
Nanded	Furniture & Fittings (mainly manufacturing & services)
Wardha	Turmeric Processing
Aurangabad	Medical Tourism
Mumbai	Port Operations (Logistics)
Gadchiroli	Forest Produce (cultivation & Primary Processing)
Jalgaon	Organic Farming
Nashik	Meat Processing
Nandurbar	Idol Making
Palghar	Warli Panting

9. **Prioritizing entrepreneurship development:** Through the primary surveys conducted with the labour force, it is noted that 56% of the respondents opted for self-employment as compared to 44% wage-employment. However, dearth of proper counselling and entrepreneurial skills leaves them with no option but to choose wage-employment. In order to increase the employment in the state it is necessary to focus on entrepreneurship development.

10. **Prioritization of identified/emerging sectors:** As per the study conducted and the recommendation framework, MSSDS should focus on the identified/emerging sectors with popular job roles for the sector. MSSDS needs to prioritize on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

List of priority sectors to be focused with popular job roles as per the study are mentioned below

Sector name	Job role name
Food Processing	- Dairy Processing Equipment Operator - Fish & Sea food processing Technician - Fruits and Vegetables Selection In-Charge - Pulse Processing Technician - Soya beverage making technician
Machinery & Equipment	- CNC Operator – Turning - Fitter – fabrication - Equipment operator - Forger - Fitter – electrical and electronic assembly

---

[3] Recognition of Prior Learning (RPL) refers to an assessment process used to evaluate a person's existing skill sets, knowledge and experience gained either by formal, non-formal or informal learning

Sector name	Job role name
Agriculture & Allied	• Bamboo Grower • Dairy Farmer • Goat Farmer • Gardener • Quality Seed Grower
Automotive	• Auto body technician • Automotive electrician • Forging operator • Welding technician • Surface treatment technician
Retail	• Cashier • Retail Sales Associate • Store Ops Assistant • Seller Activation Executive • Retail Trainee Associate
Transportation	• Reach Truck Operator • Crane Operator • Shipment Classification Agent • Clearance Support Agent • Consignment Booking Assistant
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant
Fabrication of metal products	• Assistant Manual Metal Arc Welder • Lab Technician- Metal Tester • Gas Metal Arc Welder • Sheet Metal Worker- Hand Tools • Casting Operator
Education	• Teacher-Class/Subjects (School Education) • Lab Assistant (Higher Education) • Professors Junior (Higher Education) • Trainers (Vocational Education) • Mobilizers (Vocational Education) • Placement Coordinators (Vocational Education)
Public Administration & Other Administrative services	• Unarmed Security Guard • Ticketing Consultant • Travel Consultant • Visa Assistance Consultant
Other services	• Assistant Beauty/Wellness Consultant • Personal Trainer • Hair Stylist • General Housekeeper • Home Cook

Study Objectives

India is one of the world's youngest nations with 30% of its population classified as 'youth'[4]. With 365 million in the age group 10-24, new entrants to India's labour force will continue to grow. This presents the opportunity to reap benefits from its demographic dividend. An important feature of this opportunity is the large variations among states. As per the United Nations Fund for Population, Maharashtra is one of 8 states that has entered this window of opportunity but has a decade left to reap the benefits of a demographic dividend. States such as Kerala and Tamil Nadu have exited this window while Chhattisgarh, Jharkhand, Bihar etc., are likely to enter the window two decades from now[5]. Overall, this expands the window of opportunity for India as a whole.

Benefits of a demographic dividend can be realized when a country's youth are equipped to lead productive lives and contribute to their family, society and economy. Capacity building of India's human capital is essential through education and training efforts – be it traditional or vocational. Investments for capacity building through tertiary education and vocational education are led by governments – central and state.

This study is driven by vocational education related efforts undertaken in Maharashtra, specifically by the Maharashtra State Skill Development Society (MSSDS). MSSDS was set up as a nodal agency to coordinate statewide investments in vocational education, specifically the 'skill' programmes, and implement flagship vocational education/ training schemes. In order to have an evidence-based approach for decision making it was felt that an updated and more detailed assessment of the demand, supply and aspirations of the labour force be studied. Some of the key decisions associated with resource allocation can be strengthened with a detailed understanding of the economy and labour force. The micro level skill gap study conducted by KPMG Advisory Services (KPMG) is performed in this context. KPMG conducted a primary survey to gather inputs on aspirations of the labour force in Maharashtra. In order to estimate future employment potential that will be serviced through 'skills' or units of labour possessing certain skills and/or competencies, a comprehensive economic and statistical analysis was conducted. Refer to the 'approach and methodology' section for details. The team supplemented the economic and statistical analysis with field visits and cross validation workshops at a district level, across Maharashtra.

It is important to note here that economic activity and labour force analysis is most effective at a 'cluster' level. Economic activities (referenced by NIC classified 3-digit level sub-sectors) can be effectively studied and understood at a certain minimum scale rather than studying it at every lowest possible geographical unit. Similarly, given labour mobility to seek and undertake economic activity, it is relevant to analyze trends within a certain geographical context. Combined with data availability, any estimations are best possible with a district view. There is sufficient information to support this level of governance to make evidence-based decisions related to resource allocation in the skill ecosystem.

---

[4] Census 2011
[5] United Nations Fund for Population India, Ninth Country Highlights - 2017

Study Limitations

- Estimates for unregistered manufacturing district wise are not included due to insufficient data.

- Latest available 'actuals' vary across sectors; recent sub-sectoral growth and employment especially in services not published

- Dependency on NSSO sample data for distribution of employment among service subsectors. Hence it is highly representative but not exhaustive.

- Primary inputs used in the study are as per the responses gathered from the survey and stakeholder consultations. Hence, may suffer from inherent bias of the respondents.

- Lack of reliable data for analyzing demand across job roles aligned to the NSQF.

- Availability of statistical data separately for Thane and Palghar.

Approach & Methodology

KPMG has adopted a comprehensive approach based on rigorous research and analysis of various dimensions of skill gap, including assessment of incremental manpower needs, aspirational study and insights from primary interactions and, collate these insights to arrive at recommendations to address skill gap in the districts of Maharashtra.

Approach and methodology to this study comprises of the following key elements:

1. District demography, economy and human resource development scenario:

Detailed analysis on demographic and economic indicators is undertaken for each of the districts. The key demographic indicators include population, population growth, human development indicators, and workforce distribution by primary secondary and tertiary sectors, unemployment rates, nature of employment, working age population, workforce participation rates. Further district economy is studied to understand the key drivers of GDP and main industries in the district contributing to employment. Human development scenario includes assessment of existing skill training capacity across sectors from major central schemes and state scheme, no. of institutes for primary, secondary and vocational education in the district. Relevant comparisons are made to highlight the distinguishing characteristics of the district.

2. Aspiration Study:

The aspiration study has been undertaken with the objective of understanding aspirations of the youth in terms of type of employment, further education and training. The insights from the study are helpful in expectation management and linking people to training of their choice which is critical for higher job engagement and retention. The key aspects captured in the study are aspirations for self v/s wage employment, preference to undertake further education and training, aspirational sectors, perceived benefits from trainings attended and challenges faced post the training.

The survey design and methodology for conducting the aspiration study is described in detail in the Additional Information section.

3. Estimation of incremental manpower demand:

This analysis is undertaken with the objective of estimating incremental manpower requirements sub sector wise for each district. Sector wise future employment generation potential is a key determinant for prioritizing skills trainings.

Future employment is projected on the basis of the following formula:

Estimated workforce = Baseline workforce* [1+ (Employment elasticity *GDP growth rate]^{n}

Where n = number of years for which projected

CAGR approach has been used to estimate sectoral employment elasticity. Employment elasticity between two time periods is estimated as:

Employment elasticity = ΔE / ΔG

Where
ΔE = growth in employment (% CAGR)
ΔG = GDP growth (% CAGR)

The baseline workforce is considered at a district level for each sector. Data from Annual Survey of Industries has been used for manufacturing sub sectors. For agriculture and services, data from Census 2011 and NSSO 68th round, Employment-Unemployment Survey.

GDP growth is estimated using CAGR approach. Future expectation of growth is based on recent trends in each sector. Alternate growth scenarios are considered for sectors that have experienced sharp fluctuations in growth to arrive at more conservative estimates.

Incremental demand is the annual change in projected demand.

A list of secondary sources used for this analysis is also enclosed appendix- Appendix II

4. Estimation of manpower supply:

The objective of this step is to estimate the expected labour and workforce supply district wise. The methodology adopted for this is as follows:
The population of the district has been projected till 2023 based on annual growth rate of population district wise between 2001 and 2011. The projected population is distributed into different age groups (0-14, 15-59, 60 & above) using estimates published by NHRM.
Labour force and workforce supply is derived using estimates for labour force participation rates and worker population ratio published in the district level estimates for state of Maharashtra by Labour bureau.

5. Voice of Stakeholders:
- Interactions with the district officials to understand district and sector specific needs priority areas and emerging sectors. List of district departments consulted is provided in the Appendix No III
- Seeking inputs and feedback from industry experts and labour economists on the chosen methodology and assumptions
- Employers from different sectors and training partners were surveyed to understand, emerging sectors, recruitment trends, and trainings offered at various levels, challenges faced by employers and training institutes, and areas of improvement.
- The interim findings of the study were presented in consultative divisional workshops with representation from members of district skill development committee. Relevant inputs from the workshops have been incorporated in the report.

6. Recommendation framework:
A structured approach has been adopted for making recommendations for each district. The sub-sectors have been ranked using **three parameters namely, estimated economic growth, estimated incremental employment potential in the district**, and aspirational value. Upon detailed discussions with key decision makers it was determined that a combination of economic and labour aspirations are implicit to decision making in the skill ecosystem. In the absence of a defined policy framework or guidelines, it was found important to reflect these implicit considerations in the chosen parameters.
For each parameter attributes of 'high', 'medium' and 'low' were assigned based on the below defined thresholds. For example: If the incremental employment potential was >5% (over the base year) then it was assigned the attribute value 'high'. Next, each sub-sector was analyzed, for each district against the below defined framework and an attribute value assigned. Once, the attributes were assigned for each parameter, all sub-sectors were evaluated, and priority was assigned to those sub-sectors which had higher number of 'high' attribute values across parameters. Hence, the framework was able to identify and rank sectors where economic growth, employment generation potential and labour market preferences were relatively higher.

Understanding the sub-sector rankings using the recommendation framework:

Green: High;

Amber- Medium;
Red- Low

Parameter 1: Economic Growth:
>10%- High;
<10%->5%- Medium;
<5%- Low

Parameter 2: Incremental Employment Potential:
>5%- High;
<5%->3%- Medium;
<3%- Low

Parameter 3: Aspiration:
Top 2 responses- High;
Top 6 responses- Medium;
Below Top 6 responses- Low

Sample output table

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production			
Forestry & Logging			
Fishing & Aquaculture			

Based on this analysis, and considering inputs from field visits and stakeholder interactions, top sectors have been identified for each district (refer to sample output). These can be prioritized for offering skills training. Additionally, key job roles have been identified in these sectors based on stakeholder inputs and secondary research.

State Profile

I. Geography

Maharashtra is the second largest state in India covering roughly 9.3% of the total area. The state comprises 36 districts which are grouped into six revenue divisions namely, Konkan, Aurangabad, Nagpur, Nashik, Amravati and Pune. The Western Ghats, Sahayadri hills (to the west), Satpura range (in the north) and the Bhamragad-Chiroli-Gaikhuri ranges (in the east) form some of the natural barriers defining state boundaries and enclose partly plateau and partly plain region. Major rivers such as Godavari and Krishna are major rivers flowing (and irrigating) through Maharashtra. Most agricultural activity in the state continues to be heavily dependent on rainfall and these rivers.

Maharashtra also has ~720 km coastline which cuts across Sindhudurg, Ratnagiri, Raigad, Mumbai Suburban, Mumbai City districts. These districts fall within the Konkan Division. This long coastline supports a strong culture and tradition of fishing activities. Maharashtra also supports port operations, logistics and other related economic activities and corresponding employment. For example, the state is expected to benefit from at least 13 government led projects at these ports under the Government of India's Sagarmala initiative.

Maharashtra is also rich in mineral deposits such as iron ore, manganese, iron ore, granite etc. Districts such as Chandrapur, Gadchiroli, Bhandara and Nagpur have substantial mining related economy activity. Districts such as Chandrapur and Gadchiroli, in addition to Raigad, Sindhudurg, and Nandurbar also have a heavy forest cover with more than 30% of the district area under forest cover compared to the average 16.9%.

II. Economy

Maharashtra's economy is services driven with 55%, 34% and 11% of the gross state value add derived from services, industry and agriculture and allied services, respectively. The registered manufacturing sector contributes to ~22% of the gross state value add followed by real estate activities (20%); agriculture and allied activities and financial services contribute to 11%, each. Other major sub sectors include retail, hospitality, construction and transportation.

While the economy grew at an average compounded annual growth rate (CAGR) of 7.1% between the years 2011-12 to 2016-17, services sector grew at 8.7% in the same period[6]. During the same period, output from agriculture and allied activities grew at a CAGR of 3.4% and industry output (which includes manufacturing and construction activities) grew at 6.1%. A further look reveals that sub-sectors such as IT and communication (11.74%), real estate activities (10.92%), transport (9.49%), registered manufacturing (7.94%) and financial services (7.69%) were the highest growing sub sectors between 2011-12 and 2015-16[7]. A leading industrial state, Maharashtra's manufacturing growth reflects national estimates. Manufacturing motor vehicles, apparel and dressing, paper and paper products and food processing grew at 24%, 16%, 13% and 11%, respectively[8].

While Maharashtra is one of India's leading industrial states, the local economy varies significantly across the state. For instance, the value of district output varies significantly between a Mumbai (City and Suburban) or Pune district, both with a GVA of more than 1,00,000 cr to Hingoli or Gadchiroli where GVA figure is below INR 8000 cr (refer to figure 1). Mumbai (City and Suburban), Thane, Palghar and Pune contribute to about 45% of the state's GVA.

---

[6] Economics Survey of Maharashtra 2017-18, Directorate of Economics and Statistics, Maharashtra
[7] Economics Survey of Maharashtra 2017-18, Directorate of Economics and Statistics, Maharashtra, Central Statistics Office, Annual Survey of Industries
[8] Economics Survey of Maharashtra 2017-18, Directorate of Economics and Statistics, Maharashtra, Central Statistics Office, Annual Survey of Industries

It is important to note that 19 districts have a GVA of less than 25,000 Cr. Typically, these districts are found to be heavily agrarian districts with relatively low tertiary sector activities and registered manufacturing (refer to figure 2 to 4 for an overview of economic clusters, by key sub-sectors[1]). Maharashtra is a leading state in manufacturing activity. The greater Mumbai region, Thane, Pune, Solapur, Ahmednagar, Nashik, Aurangabad and Nagpur are major industrial clusters. However, the state has a broad range of industrial activity with respective clusters.

For example: the Pune region is the largest automotive hub of India with over 4000 manufacturing and ancillary units[9]. The Mumbai-Thane-Raigad region houses a major chemical manufacturing cluster. There is a total of 13 chemicals manufacturing zones in Maharashtra. Another important sector is food processing which has more than 16,500 small and medium enterprises across the state and 322 large sized units. There are 8 designated food parks in Maharashtra, 3 wine parks clustered in the Nashik region and 3 floriculture clustered in Pune, Nanded and Osmanabad. Another example is textile manufacturing activity. Textile manufacturing is an important sub-sector of the state economy. While manufacturing activities is present in several regions of the state, it is important to highlight 8 major textile parks in Maharashtra spread across Thane, Solapur, Pune, Kolhapur, Nagpur and Nandurbar.

Government policies such as the 2016 Maritime Development Policy, 2016 Retail Policy and 2016 Single Window Policy announced by the Maharashtra Industrial Development Corporation highlight continued reform orientation of the government to increase industrial activity and expand the breadth of sectors.
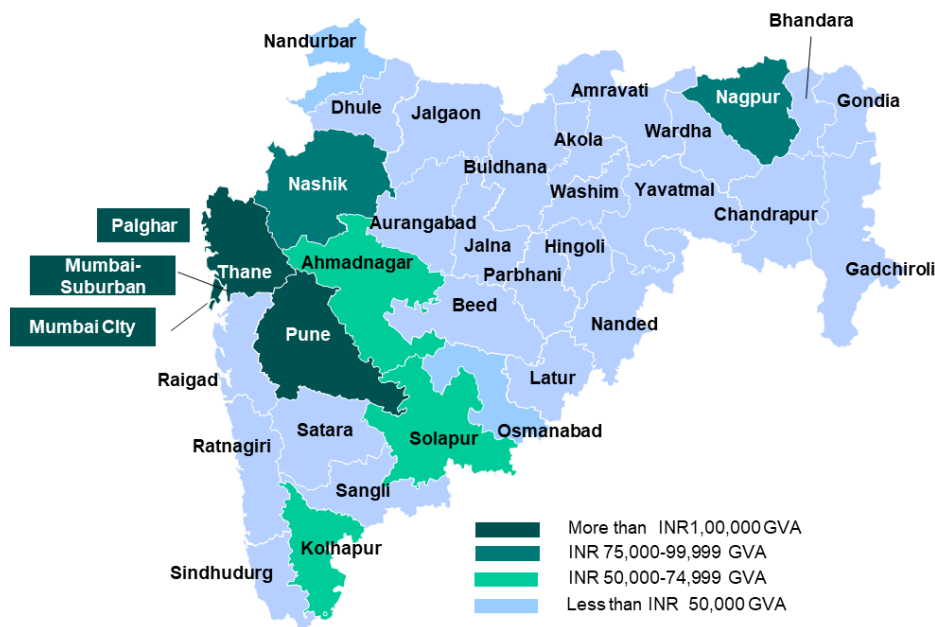
Figure 1: Gross Value Add by district (at constant prices) 2016-17in crores for the State

---

[1] Directorate of Economics and Statistics, Maharashtra; MIDC India website, as on 31st March 2019
[9] MIDC India website (https://www.midcindia.org/auto-mobile); as on 31st March 2019
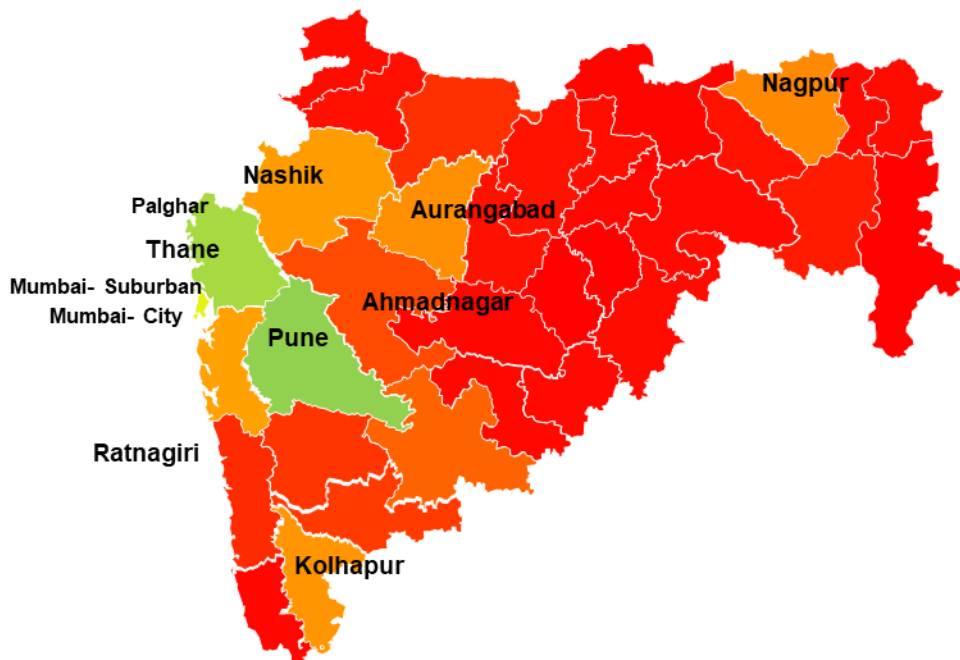
Figure 2: Registered manufacturing output, by GDDP at constant prices (2013-14) for the state
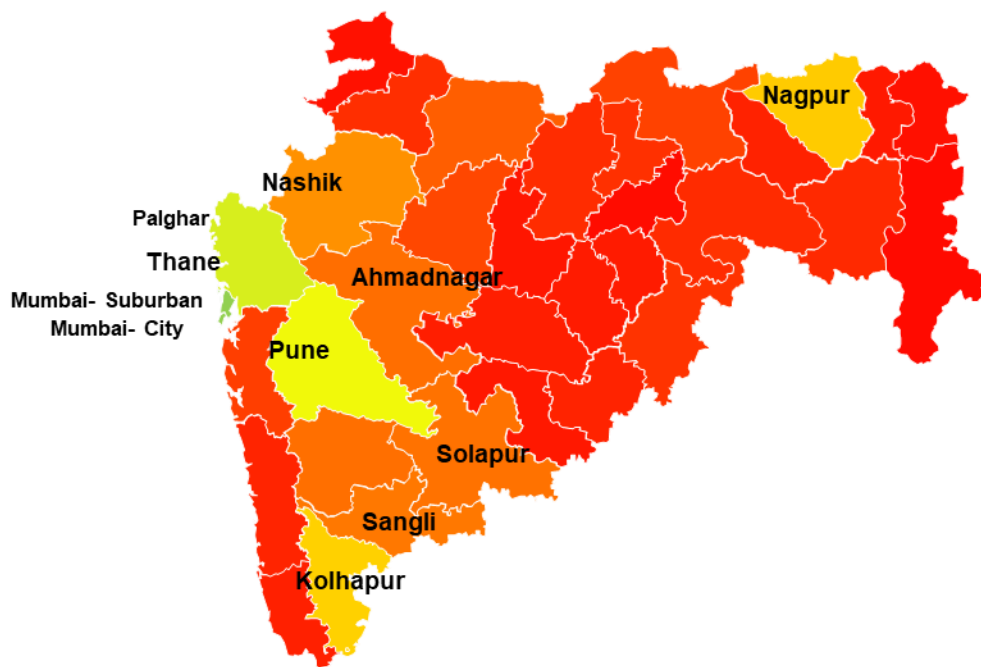
Figure 3: Financial Services (Banking and Insurance), GDDP at constant prices (2013-14) for the state
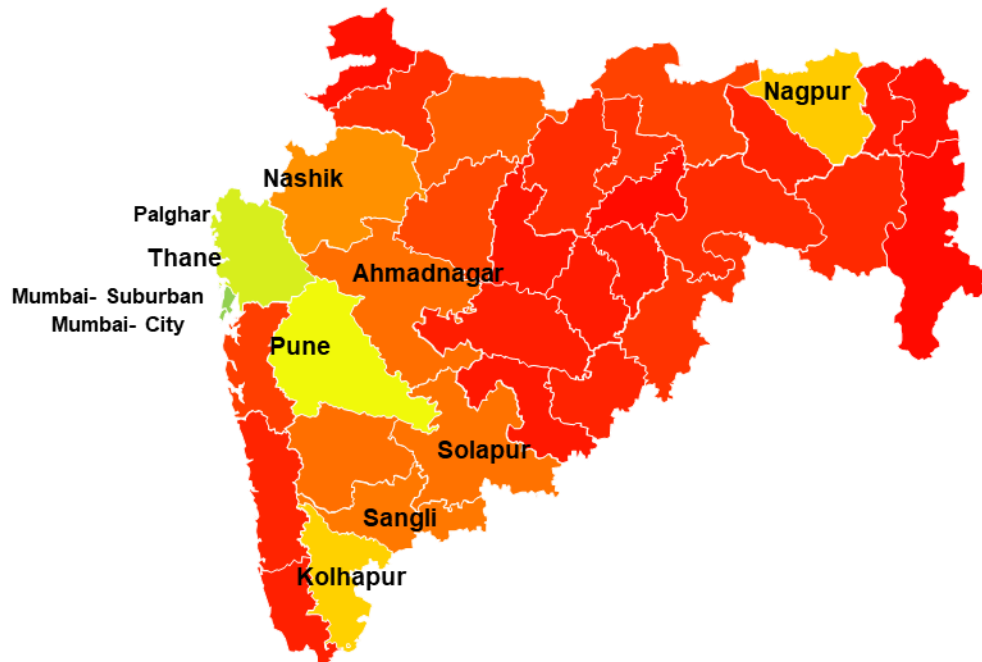
Figure 4: Retail and Hospitality, GDDP at constant prices (2013-14) for the state

II.I Key focus sectors in the state

The study has arrived at a few key focus sectors being identified for the State of Maharashtra which will have a huge potential for growth in the coming 10 years. These sectors have also been on the priority list of Govt. of Maharashtra in the recent past. The sectors are:

1. **IT / ITeS:** The IT industry in India is concentrated in and around 7 cities[10], Pune and Mumbai being amongst them. The State also has software technology parks of India (STPI) at Nagpur, Nashik, Aurangabad and Kolhapur. Maharashtra also came out with a new revised IT / ITeS policy in 2015 with an objective of accelerating investment flow to industrially underdeveloped regions and creating more employment opportunities for educated youths. Maharashtra has plans of attracting investments worth INR 50,000 Cr by private IT parks and the IT/ITES/AVGC units in the State and creating jobs for 1 million people.

    As on October 2015[11], the State approved 485 private Information Technology parks. 160 IT parks were established with an estimated employment generation of 4.85 lakhs. The remaining 312 IT parks are expected to generate employment worth 11.94 lakhs. 37 public IT parks have been created with an estimated employment generation of 2.68 lakhs.

2. **Automobile:** The automobile industry is expected to touch US $ 115 billion by FY 2020-21 with Maharashtra accounting for approximately 35.1% of the country's output by value. The auto hub industry of Maharashtra has a market share of 21% and has witnessed a CAGR of 24% from FY 2011-12 to FY 2015-16. Maharashtra is the leading producer of heavy and commercial vehicles in the country. Major automobile players like Tata Motors, Bajaj Auto, Force Motors, Mahindra & Mahindra, etc. have their presence in the State. The major automobile centers in the State include Pune, Nashik, Aurangabad, Mumbai and Nagpur. Pune is the largest auto hub of India with over 4000 manufacturing & ancillary units in the Pimpri Chinchwad region alone.

---

[10] NASSCOM –AT Kearney report

[11] Statistics – Directorate of Industries, Govt. of Maharashtra

Due to low cost labour force, presence of skilled workforce and cost-effective supplier base, Maharashtra presents an opportunity of low-cost manufacturing base for the automobile companies. Close proximity to ports (JNPT in Navi Mumbai) also helps in enhancing the export potential. The State has also witnessed setting up of niche institutes catering to the requirement of automobile sector with institutes like Automotive Research Association of India (ARAI) in Pune. India's first auto cluster development and research institute are also present in Pune. Auto Cluster Development & Research Institute works towards development of MSMEs (Micro, Small and Medium Enterprise) in and around Pune to meet expectations of OEM's.

3. **Textile and Apparels:** The State accounts for 10.4% of India's textile and apparel sector output and accounts for 10.2% of the country's employment in the sector. India's textile market is expected to expand at a compound annual growth rate (CAGR) of 8.7 per cent over 2009-2023 to reach US$ 226 billion. Out of the 18,709 industrial projects approved from August 1991 – October 2014, 10.6% projects approved were in the textile and apparel sector. State has 1,981 approved projects with investment of USD 7,809.84 Million.

   MIDC has developed 8 exclusive textile parks, two in Thane, two in Solapur, one each in Kolhapur, Nagpur, Pune and Nandurbar with facilities such as R&D laboratory/Institute, Trade center, Management and Training center, Product / Process development laboratory. The State has a presence of 2,000 textile industries with fixed capital worth USD2417 Million and has signed MoUs worth USD 2960 with major investments from textile sector.

4. **Transportation and Logistics:** Maharashtra has ~720 km coastline, accounting for roughly 10% of India's coastline. The State has a presence of 2 major ports – MbPT and JNPT. Presence of JNPT and MbPT ports in Maharashtra has made the logistic industry a very strong sector. In order to develop Maharashtra as a logistics hub and promote port led development, the State has also come up with a Logistics Park policy in 2018. Maharashtra plans to develop logistics cluster in the State and develop atleast 25 integrated multi-modal logistics park across the State. The State will also be promoting 100 logistic parks as per the policy.

   Development of INR 40,000 Cr Mumbai-Nagpur Super Communication Expressway will help establish connectivity between central India and Visakhapatnam. The cargo distribution from JNPT which is currently restricted to Mumbai, Thane and Pune is proposed to be expanded to 24 districts. Nagpur is all set to become the logistics hub for Maharashtra due to its strategic location. Logistic hubs are being developed as a part of DMIC related development as well, with a Multi Modal Logistic Park developed at Karla in Pune. Key logistics players like DHL Logistics, Om Logistics, AGL, United Liner Agencies, Balmer Lawrie, Concor, ULA, Maersk, Adani Logistics, AA Llyod Lines etc. have their presence in Mumbai.

5. **Banking Financial Services & Insurance:** Maharashtra has been the first State in the country to announce a Fintech policy. The policy was released in 2018 and talks about setting up a 'World Fintech Hub' in Mumbai. Maharashtra plans to incubate atleast 300 startups in next 3 years in the financial sector space. Also, BFSI is the 4th largest contributor to the GSDP of Maharashtra with 11% contribution.

   The sector, initially being concentrated to in and around Mumbai, has now grown considerably to other parts of the State as well. Key cities like Pune, Nagpur, Nashik and Aurangabad and a few other smaller districts are also seeing a growth in the sector. A sizable part of the business of commercial and investment banks, exchanges, securities firms, private equity and other financial services operates from Mumbai as the base.

6. **Food processing:** The food processing sector in Maharashtra has as many as 16,512 small and medium and 322 large scale food processing units. From 1991 – 2012 the sector has attracted USD 159.8 Million worth FDI through 173 projects. The State has also come up with specific policies like grape processing industry policy and wine industry policy for providing special emphasis on these areas.

    The major food processing hubs in Maharashtra are:
    - **Food parks:** Eight Specialized Food Parks with facilities like cold storage, warehousing, advanced packaging, tera packaging & food testing laboratory. They are located at: Butibori (Nagur), Shandra (Aurangabad), Nevasa (Ahmednagar), Latur, Osmanabad, Nanded, Chiplun (Ratnagiri)
    - **Wine parks:** MIDC has set up three Wine parks at: Vinchur, near Nashik, Addn Vinchur near Nashik, Palus near Sangli
    - **Floriculture:** Three Floriculture Parks developed as world class facility for production of flowers of different types and varieties. MIDC provides nursery, post-harvest, infrastructure and logistic facilities. The parks are located in Talegaon (Pune), Mudkhed (Nanded) and Osmanabad.

A dedicated institute, Central Food Technology Research Institute (CFTRI), Mumbai caters to the technology transfer and business development services to the food industries and allied organizations in Mumbai as well as the western region of the country.

7. **ESDM:** Maharashtra occupies a share of more than 30% in the industrial output of India's machinery, computer, electronics, optical products and equipment manufacturing sector. The sector has been identified as a focus sector and 3 brownfield EMC's are planned to be setup in Pune, Aurangabad and Navi Mumbai with common facilities for production, R&D, test and measurement, prototyping, calibration and funding support.

    Currently, 8 manufacturing clusters have been notified in the State by the Government of India. These are Nashik, Thane, Navi Mumbai, Mumbai, Pune, Aurangabad, Ahmednagar and Nagpur. Within Pune, Talegoan and Khed are two well established ESDM Hubs. Excellent connectivity of these locations to the two of India's largest ports – JNPT and MBPT, Connectivity, Industrial Infrastructure, Strong presence of education institutes makes these places attractive destination for ESDM sector.

8. **Retail:** The State released the retail trade policy in 2016. The State of Maharashtra is a leading state in retail business. The gross state domestic product (GSDP) of Maharashtra state at current prices was 13, 23,768 crore in 2013-14 and accounted for 14.1 per cent of India's GDP, the highest among all the states. The State plans to setup a CoE in PPP mode with MIDC. The centre will have a finishing academy cum incubator centre.

    The State also plans to setup Retail parks across the State under the city development plan. As of 2015, India's retailing industry was largely owner-manned small shops. In 2010, larger format convenience stores and supermarkets accounted for about 4% of the industry, and these were present only in large urban centers. India's retail and logistics industry employ about 40 million employees (3.3% of Indian population). However, the key challenges faced by the organized retail industry is its capacity to retain people. The attrition rates are very high. With the sector on a boom and organized retail sector reaching tier 2 tier 3 cities, the demand for trained manpower is expected to grow in the near future.

9. **Tourism & Hospitality:** The Tourism and Hospitality industry is one of the largest service industries in India and Maharashtra tops the chart in favorite destination. Tourism is an integral pillar of the Make in India programme. Tourism plays a role of significant economic multiplier and becomes critical since India has to grow at rapid rates and create jobs.

A single window clearance mechanism is being prepared for the hospitality industry by the State government. The state also plans to come up with shopping, entertainment and city hubs at 22 points across the upcoming Mumbai – Nagpur corridor to boost the hospitality sector. The organized food services market in Mumbai alone is estimated to contribute around INR 3,500-4000 Cr as taxes. Out of the 5-lakh people employed in the city, organized employs 53 per cent. Restaurants constitute the maximum manpower requirement across the hospitality value chain.

10. **Agriculture:** Maharashtra has diverse agro climatic conditions Agriculture and allied activities contribute around 13% in the State GDP with agriculture alone contributing around 10%. The sector employs 52% of the workforce as cultivators or agricultural labourers. The Govt. of Maharashtra has been focusing on creating more off farm jobs and bringing greater value addition and income for the rural poor. Absence of backward and forward linkages across the food value chain have resulted in lack of scale in most units. Focus needs to be given on strengthening agri clusters based on production strengths of the various sectors and sub sectors of the State. Promoting end to end integrated projects shall be promoted in these clusters.

Several Food Parks have been set up in Maharashtra in the private sector and through public agencies such as the Maharashtra Agro-Industries Development Corporation (MAIDC) and the Maharashtra Industrial Development Corporation (MIDC) with some assistance from the Central agencies, but have not achieved the required level of integration or attracted the number of working units expected. The State Govt. plans to support the development of Food Parks based on the production strengths of the region, the backward and forward linkages, connectivity with airports, railways or highways, the facilities proposed to be provided by the developers, and an appraisal of the techno-economic feasibility of the projects.

III. Demography and labour market

The latest available data on the state's population is as per the 2011 Population Census. Based on the Census 2011, there are 112.3 million people with **the top 30% of the districts having more than 50% of the state's population**. Thane, Pune, Mumbai-Suburban, Nashik, and Nagpur districts rank as the top 5. These districts also have very high density of population. Population density varies significantly across the state with districts such as Gadchiroli having 74 persons per square kilometer to 20980 persons per square kilometer in Mumbai-Suburban (Figure 5). The state average is 365 persons per square kilometer. Economic prosperity is also reflection in the high rate of urbanization and large urban population, 45.2% in Maharashtra.

However, the gender composition remains skewed in Maharashtra with an average of 925 females per 1000 males, compared to India's average of 943. This skewed demographic composition also poses a challenge to the state. There are far fewer females in the more developed districts of the state (Figure 6).
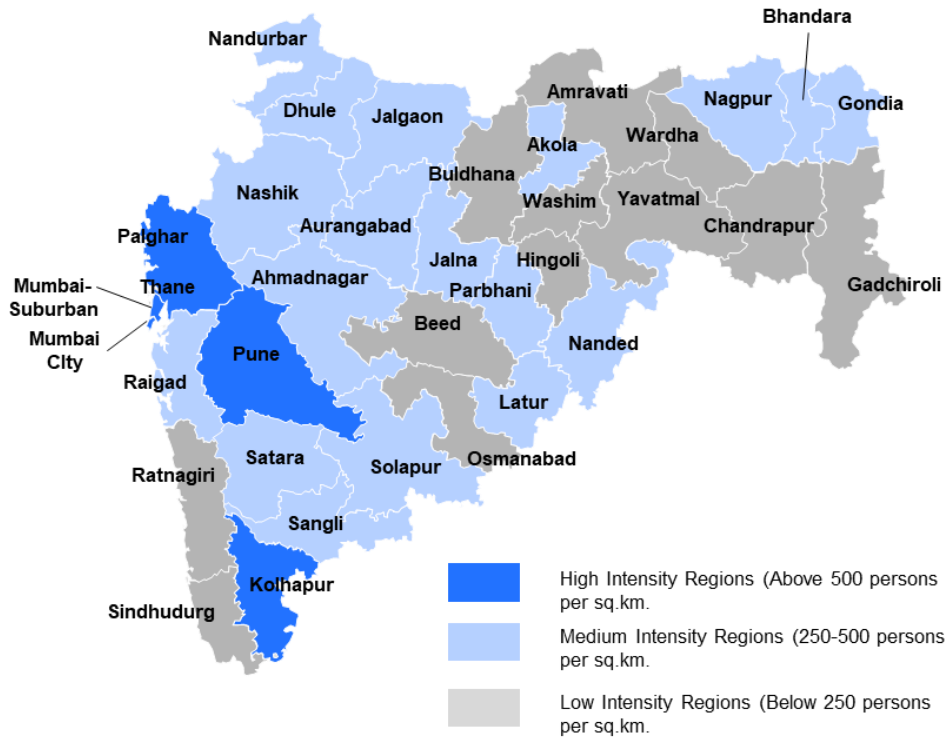
Figure 5: Regional variations in Population density for the state
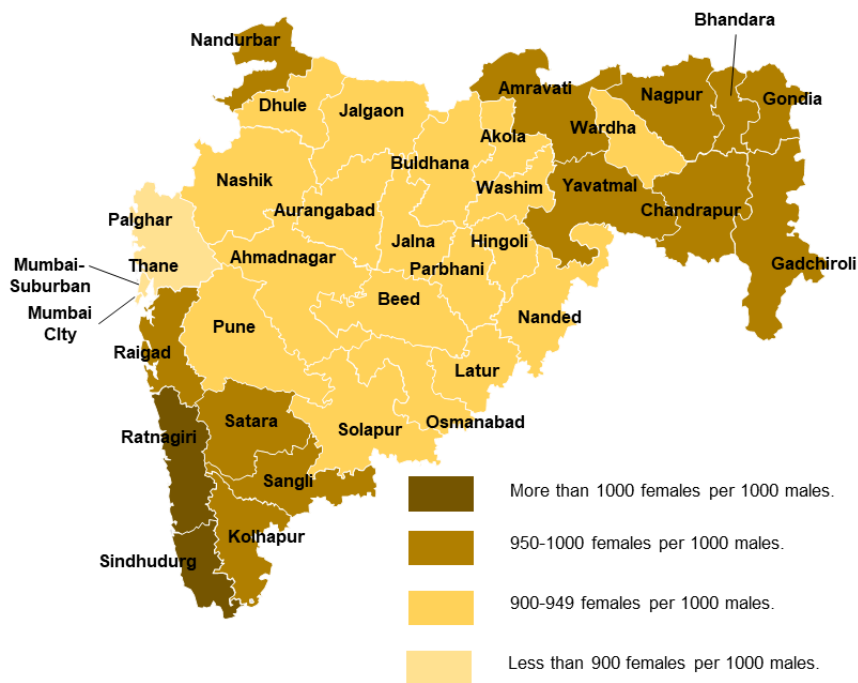
Figure 6: Gender Composition of population, by district for the state

Maharashtra's diverse economic profile is also reflected in significant variations in the sectoral workforce distribution. The services sector has contributed to a higher share of employment compared to the national

average. As per Census 2011, 30% of the workforce was engaged in services sector activity which is estimated to grow for the next 10 years as well. More than half of the state's workforce self-employed. This is driven by a higher share of self-employment in rural areas (60.4%) compared to urban areas (39.6%). In urban areas, 42.5% of the workers are wage employed, compared to only 8.5% in rural areas[12].

Interestingly, we witness a higher participation of women in Maharashtra's workforce especially in the Western and Eastern districts. The average women's participation in the labour force is relatively greater in Maharashtra. The female-male labour force ratio is 0.47 in Maharashtra compared to 0.34 across India. However, a higher women's participation in the labour force often masks disguised unemployment due to the nature of agricultural activities undertaken by women. Another important factor when discussing women's role in the labour force is the issue of wage gap. A recent study[13] revealed the wage gap to be relatively lower in Maharashtra compared to available national estimates- 0.77 compared to 0.50 rupees per rupee earned by a male.

Analyzing the labour force of a region can be considered incomplete without understanding the quality of that labour force. Acquisition of education (primary, secondary and tertiary), 'stock' of skills, health and nutrition are key factors that affect the quality and in turn the productivity of the labour force. In a labour-rich economy such as India, understanding this is especially important for policy makers, employers as well as those engaged in self-employment. As per Census 2011, Maharashtra has a literacy rate of 82% (75.48% among females). As per NSSO's 68th round Employment-Unemployment Survey estimates 28.1% of the workforce has acquired primary education (Class I to IV), 16.6% of the workforce has acquired middle education (Class V to VIII) and 31.8% has acquired secondary & above education.

Looking a bit deeper, at the school level, there are 104,971 schools in Maharashtra of which 66,946 are run by the government. Including aided schools, this figure is as high as 88,588. As of 2016-17, the number of children enrolled in grade 9 in the state stood at 8, 86,409. Thus, the gross enrolment ratio (GER) at secondary school level was at 61.3[14] (2016-17). As per the 2017-18 AISHE report, the GER in higher and tertiary education is 31.1% in Maharashtra with the second highest number students enrolled in tertiary education in India. The state Higher and Technical Education Department oversees 4443 colleges. 2940 colleges are general education colleges enrolling more than 20 lakh students. Including open schools and technical education, there are an estimated 32 lakh students enrolled in Maharashtra.

As per the Report on District Level Estimates for the State of Maharashtra 2013-14 (Labour Bureau), ~5% of the labour force had received vocational training; 3.6% received formal vocational training. Of these, 72.4% were employed in urban areas and 24.2% were not in the labour force. 4.9% were unemployed. Among those who received vocational training 45% were engaged in wage employment and 43.9% in self-employment activities. These indicators reflect an urban focus of vocational training activities in the state during this time. **Periodic monitoring of these indicators is extremely important as they reveal reach, coverage and employability implications**. **In the event of finding evidence of unexpected and undesirable variations it will offer MSSDS an opportunity to strengthen targeting and mobilisation efforts.**

IV. Educational Infrastructure

Developing a robust educational infrastructure is the most crucial input for empowering the youth with knowledge, skills & vocational trainings by providing them access to productive employment which will ultimately help boost economic growth of the state. Maharashtra as a state has made significant progress to provide primary & secondary education. During 2016-17 the state government's expenditure on primary education (Standard I to VIII) was ₹19,846 crore[15], whereas in secondary & higher secondary (Standard IX

---

[12] District Level Estimates of Maharashtra, Ministry of Labour & Employment
[13] McKinsey Global Institute Report: Power of Parity
[14] U-DISE dashboard for secondary education
[15] Economic Survey of Maharashtra 2017-18

to XII) education was ₹16,089 crore[16]. In addition, to this state is implementing schemes like Sarva Siksha Abhiyan, Rashtriya Madhyamik Shiksha Abhiyan and inclusive education of disabled. State is also focusing on schemes to encourage education through various schemes like Girls education, Mid-Day meal scheme to name a few.

In Higher & Technical education, there are 22 state universities, out of which 4 universities are for agriculture, one university for the health science courses one University for Veterinary Science, one for technology and 15 other universities for general courses. In addition to these, there are 21 deemed universities, 1 central university, 4 private universities and five institutes of national importance universities in the State.

Further, the state has a total of 957 ITIs with an annual capacity of 132,714 students. There are 418 government ITIs and 539 private ITIs in the state.

Details of schools, institutions and ITIs with their intake capacity is provided below in Table 1:

Table 1: Education Statistics of the State

Particular	No. of Institutes	No. of Students ('000)
Primary Schools (I to VIII)	1,06,527	15,909
Secondary Schools (IX to XII)	26,879	6,648
No. of Universities	49	4,956
No. of colleges	4,286	
No. of standalone institutions	1,959	
Total no. of ITIs (Govt. & Private)	957	132,714

Source: Economic Survey of Maharashtra 2017-18

In addition, the state also has a strong vocational training partner network which provides skill trainings across central & state level schemes like PMKUVA, PMKVY, NULM & NSDC Fee based model. Below Table 2 depicts FY 17-18 top sectors as per the training numbers in the state of Maharashtra across the schemes as mentioned above.

Table 2: Short Term Skilling Trained numbers in the State

Sector	Training numbers in an year
Apparel, Made-Ups & Home Furnishing	50,811
Beauty & Wellness	34,858
Banking, Financial Services and Insurance	28,762
Automotive	21,801
Retail	18,302
IT-ITES	18,227
Construction	17,330
Telecom	15,228
Electronics & Hardware	14,527
Healthcare	11,188
Agriculture	9,762
Capital Goods	5,193
Tourism & Hospitality	4,775
Gems & Jewelry	3,427
Logistics	3,281

Source: NSDC, MSSDS

The state has a total of 5027[17] trainings partners empaneled across various central & state level schemes. Basis the estimation of the training capacity for the VTPs and assuming that each of the VTPs have a

---

[16] Economic Survey of Maharashtra 2017-18
[17] MSSDS website

capacity of running 2 batches in a day and completing 3 cycles in an year, it is deduced that these VTPs have a capacity of 9.04 lakhs which can be trained by them annually.

V. Key Skilling initiatives in the state

V.I Pramod Mahajan Kaushalya Udyojkta Vikas Abhiyan (PMKUVA)

PMKUVA is the state's flagship skill development scheme launched in September 2015. The scheme targets skilling of candidates in the age group of 15-45 years belonging to Maharashtra and placing them. Both short term and long-term courses are being offers under the scheme. The schemed targeted training of 30,000 candidates for FY 2018-19.

V.II National Urban Livelihood Mission (NULM)

National Urban Livelihoods Mission (NULM) launched by the Ministry of Housing and Urban Poverty Alleviation (MHUPA) was launched by Government of India in 2013 and in all district headquarters and all cities with a population of one lakh or more. NULM aims at organizing urban poor into Self Help Groups (SHGs) and offering skills training to urban poor for market-based employment.

V.III Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

PMKVY is the flagship scheme of Ministry of Skill Development & Entrepreneurship (MSDE). This is a centrally sponsored state managed scheme (CSSM), aimed at enabling the youth to take up industry-relevant skill training for a better livelihood. Short term trainings are imparted under the scheme in courses aligned with the National Skill Qualification Framework. Additionally, trainings in soft skills, entrepreneurship, financial and digital literacy are also offered under the scheme. The scheme also recognizes and certifies individuals with prior learning under Recognition of Prior Learning (RPL).

V.IV Maharashtra Agriculture Special Project

Maharashtra Agriculture Special Project was launched with the objective of utilizing the full potential of agriculture sector which contributes to more than 50 percent to the total employment in the State but only 11 percent to State's gross state domestic product (GSDP). Under this initiative, MSSDS has tied up with Sakal International Learning Centre to provide RPL and short term up-skilling courses to farmers as well as professionals in this sector.

V.V Rural Self Employment Training Institutes (RSETI)

The Ministry of Rural Development (MoRD) has proposed a national scheme called Rural Self Employment Training Institutes (**RSETI) to support the rural BPL.** RSETIs have been set up in every district of the country with the objective of promoting self-employment for the unemployed rural youth, and for periodic skill upgradation on latest technologies through necessary skill training. The long-term intention is to mitigate the problem of unemployment problem by capacitating the youth to be able to launch profitable micro-enterprises, contribute to the national economy and enhance their standards of living. **The intended trainings to be provided under the scheme include intensive short-term trainings in trade along with soft skills training which are highly acceptable and in demand in the market. Besides,** after completion of the training, credit linkage assistance will be provided by the banks to start entrepreneurial ventures under any other government sponsored programs.

In order to make the trainings fruitful and to ensure that the trainee is able to capitalize to the maximum possible through the trainings, certificates issued by an RSETI will be recognized by all banks for purposes of extending credit to the trainees. Also, proper weightage will be given to SC/STs, minorities, physically challenged and women.

V.VI Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)

The scheme aims at promoting rural livelihoods by skilling the rural youth between 15-35 years from poor households. The scheme is an initiative of Ministry of Rural Development (MoRD) which aims at benefitting over 55 million poor youth. DDU-GKY is an initiative of the National Rural Livelihood Mission (NRLM).

V.VII Maharashtra Centre for Entrepreneurship Development (MCED)

Maharashtra Centre for Entrepreneurship Development (MCED) is one of the CEDs in India working in the field of entrepreneurship development since 1988 and has trained 14, 50, 703 participants till 31st March 2018. It is setup as an autonomous society working under Directorate of Industries, Govt. of Maharashtra. MCED has been a pioneer in espousing social & economic entrepreneurship. It is a training institute in the core area of entrepreneurship development. It works as a facilitator & guide for the creation & cultivation of the entrepreneurial spirit in the society.

The organization has been conducting international, national and state level projects in the field of skill development and training. MCED has accredited trainers having international and national level exposure in the field of entrepreneurship.

The institute primarily undertakes the following activities:

- Entrepreneurship Orientation Programme (EOP)
- Entrepreneurship Awareness Programme (EAP)
- Development Programme for Self-Employment (DPSE)
- Entrepreneurship Development Programme (EDP)
- Refresher Programme (RP)
- Organizers Training Programme (OTP)
- Training of Trainers (TOT)
- Faculty Development Programme (FDP)
- Organization Development Programme (ODP)
- Orientation Programme (OP)
- Technical Entrepreneurship Development Programme (TEDP)
- Exhibition
- Closed unit survey
- Training for capacity building
- Talent mela
- Candidates selection for Govt. schemes
- Industrial exposure
- Udyojak magazine

VI. Migration

Migration in Maharashtra is high in comparison to the scenario at all India level, with 22 out of 1000 households reporting migration activity in 2009-10 as against India level[18]. Maharashtra has a significantly higher migration in urban areas in comparison to rural areas, which is similar to the trend observed at a national level. Being the most industrialized State of the country and having major concentration of the industries across the Mumbai – Thane – Pune belt, Maharashtra witnesses both in and out migration.

---

[18] Migration in India NSSO 64th Round

Being the most industrialized State, Maharashtra presents various opportunities to people from other parts of the country, thus witnessing in migration trends. Similarly, the State also witnesses out migration with skilled workforce moving out from Maharashtra to various parts of the world.

Major reasons for migration

Major reasons for migration in the State is to seek better employment opportunities in males (50.28%), whereas marriage is the prime reason for migration amongst females (78.87%).

Compared to census 1991 and census 2001, there has been an upward trend in migration because of employment[19]. The people employed in labour force increased from 26.5% (pre migration) to 88.4% (post migration)[20].

Figure 7: Percentage distribution of migrants by reason of migration in the state
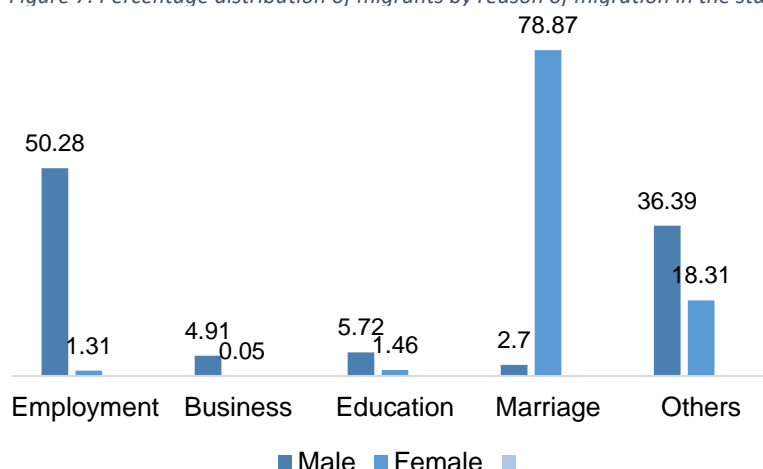
Seasonal migration

Seasonal migration is higher in rural areas of Maharashtra with people primarily employed in the agriculture sector moving out for another job-related search during the 'off season'. The trend of seasonal migration is predominantly witnessed amongst the rural population employed in the agriculture sector (57.4%), followed by construction (14.8%) and manufacturing (10.7%). Amongst the urban population, seasonal migration is mainly amongst people who are employed in 'other services' (30.7%) followed by construction (17.5%).

Seasonal migration amongst females (71.2%) involved in agricultural activity in rural areas is higher as compared to their male counterparts (50.9%). Similarly, seasonal migration amongst urban females (44.7%) is higher as compared to urban males (26.1%) working in other services sector.

Figure 8: Seasonal Migration - Major Sectors (in %) for the state

---
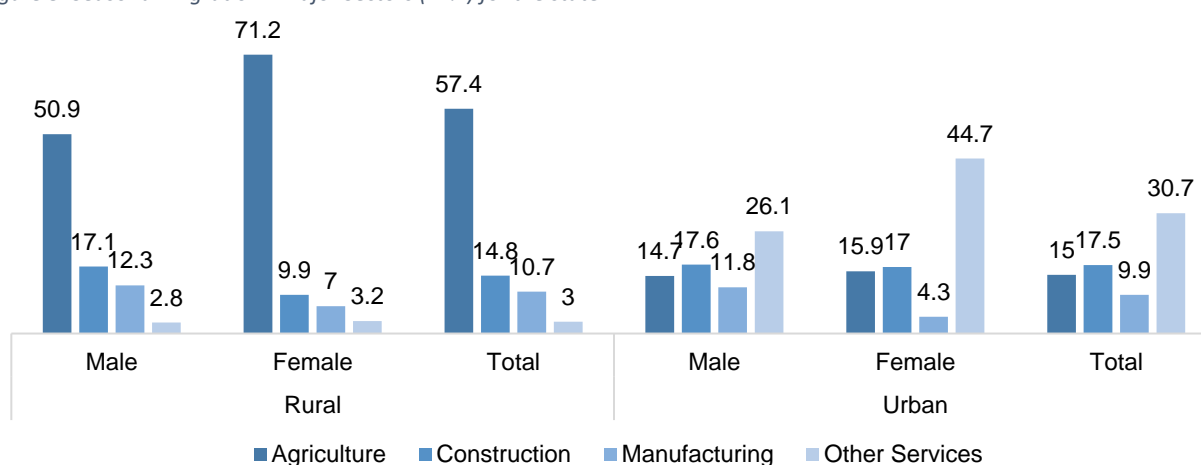
[19] Migration in India NSSO 64th Round
[20] Migration in India NSSO 64th Round

Overseas migration

The State has also witnessed increasing overseas migration trend in the recent past mainly for job roles which are technical and highly professional in nature. Most migrants from the State, who have foreign connects, move to those countries since the connects help them in settling down in those countries. The demand and aspiration for overseas migration can be inferred from the fact that Govt. of Maharashtra has come up with an Overseas Placement Policy and is coming up with Overseas Placement Centers for smooth facilitation of overseas placements of youth.

VII. Employment

Understanding nature and evolution of employment generation is important when evaluating decisions for investment in formal education and/or training. The evidence is available through various statistical exercises namely, census, national sample survey (NSS), annual survey of industries (ASI). In order to conduct factual, credible, evidence-based analysis of sub-sectoral employment trends at a district level, this study has relied on all three statistical exercises (refer to approach and methodology section). The mandate of this study is the period up to 2028. Given the changing nature of the economy, evolving skill needs and quantum of labour demanded, it is recommended that employment projections (and demand estimations) be reviewed at least every 2-3 years for policy related decisions. This can be done in the future with the announced transition to the annual periodic labour force surveys (PLFS), although the results of the first round of PLFS are yet to be published[21]. Hence, for the purpose of this study the Economic Census, NSSO 68th round (2013-14), Annual Survey of Industries (2017-18) and Census (2011) are primarily used, among other sources.

As per census 2011, 263 lakh workers were engaged in agriculture and allied activities in Maharashtra, of which 228 lakh were main workers. 148 lakh workers were engaged in services in the same year and 23.2 lakh in construction sector. As per ASI 2017-18, there were 25. 8 lakh workers in the registered manufacturing sector in Maharashtra. 54% of the state's population is engaged in primary sector, followed by about 30% and 16% in tertiary and secondary activities respectively.

In the context of analysing share of formal employment, the data published by the Employee's provident Fund Organization of India (EPFO) and Employees' State Insurance Corporation (ESIC) are important data sources. Historically, Maharashtra has been ranked number one among states in creating formal employment opportunities. Within a 3 year period from 2012 to 2015, the state witnessed approximately 19% CAGR in additional formal employment generation. By 2015, an estimated 1.6 crore formal employment opportunities existed in Maharashtra followed by Tamil Nadu with an estimated 1.1 crore formal jobs[22]. In general, by 2015 one in five formal employment opportunities were being created in the state of Maharashtra. In the absence of publicly available state specific data it is difficult to identify key sectors driving growth in formal employment. However, a national study of EPFO coverage revealed that 50% of formal employment in India are in three sub-sectors namely – establishments rendering expert services; electrical, mechanical and general engineering products; trading and commercial establishments[23]. Other key sub-sectors include Engineers and Engineering Contractors, garment making factories, textile manufacturing and education (Table 3). These can be assumed to be representative of Maharashtra's own formal employment mix as it comprised nearly 20% of all formal employment in India at this time.

---

[21] As on 1st April 2019

[22] KPMG in India estimates, EPFO annual reports 2012 to 2015, ESIC annual reports 2012 to 2015

23 Every trading and commercial establishment engaged in the purchase, sale or storage of any goods, including establishments of exporters, importers, advertisers, commission agents and brokers, and commodity and stock exchanges, but not including banks or warehouses established under any Central or State Act, covered by the notification of the Government of India in the Ministry of Labour and Employment G.S.R. 346, dated the 7th March, 1962 (https://www.epfindia.gov.in/site_en/Classes_of_Industries.php)

Table 3: Top 25 sectors with EPFO members[24]for the state

Rank	Sub-sector name	Share of total EPFO members
1	ESTTS rendering expert services	31.3%
2	E M & G	10.7%
3	Trading and commercial estt.	7.0%
4	Engineers and Engineering Contractors	5.3%
5	Garments making factories	5.2%
6	Building and Construction	5.1%
7	Textiles	3.5%
8	University, college, school, etc.	2.9%
9	Manufacture of Beedi.	2.5%
10	Heavy and Fine Chemicals	2.4%
11	Computers	1.7%
12	Irons and Steel	1.2%
13	Hotels	1.1%
14	Hospitals	1.1%
15	Road Motor Transport estt.	1.0%
16	Financing establishment other	0.8%
17	Plastic and Plastic Products	0.8%
18	Rubber and Rubber Products	0.7%
19	Electricity	0.6%
20	Restaurants	0.6%
21	Leather and Leather Products	0.6%
22	Automobile repair and servicing	0.5%
23	Bank	0.5%
24	Cement	0.4%
25	Cleaning & Sweeping	0.4%

As per provisional estimates released in March 2019, about 1.4 lakh net payroll additions were recorded within the year 2018 in Maharashtra. This was the highest number of formal employment additions among all states in India. The sub-sector with consistently highest number of additions is establishments providing expert services.

VIII. Industrial Clusters in the State

Govt. of Maharashtra has announced Maharashtra State Industrial Cluster Development Programme (MSICDP) Govt. Resolution dated 25.02.2014. A total of 71 clusters have been approved for implementation of Soft Intervention Programme under MSICDP upto October, 2016. Out of which, 12 cluster proposals have been accorded final approval. The list of 12 finally approved clusters (CFC) under MSICDP are mentioned in Table 4:

Table 4: MSICDP approved clusters and their locations in the State

Sl. No.	Name of the cluster	Location
1	Rice mill cluster	Charmoshi, District - Gadchiroli
2	Rice mill cluster	Sadak-Arjuni, District - Gondiya
3	Jaggery cluster	Kasa-Birsola, District - Gondiya
4	Printing cluster	Ambegaon, District - Pune
5	Cashew cluster	Shrungarwadi,District - Kolhapur

---

[24] EPFO annual reports 2015

Sl. No.	Name of the cluster	Location
6	Cashew cluster	Lanja, Distritc - Ratnagiri
7	Printing cluster	District - Nanded
8	Rubber cluster	District - Aurangabad
9	Khawa cluster	Bhoom, District - Aurangabad
10	Raisin making cluster	Kawathemahakal, District - Sangli
11	Raisin making cluster	Tal. Pandharpur, District - Solapur
12	Garment cluster	District - Amaravati

Apart from the above mentioned 12 approved clusters, 59 other clusters have been approved for soft implementation program under MSICDP but are awaiting final approval. The list of all 71 clusters and their locations is provided in Appendix VI.

UNIDO has also identified 57 MSME clusters in Maharashtra. The list is attached in Appendix VII.

IX. Estimations of incremental employment generation

Looking at the immediate 5 year period 2019-2023 (detailed, 10 year incremental employment projections are included in Table 5, Annexure VII) it is estimated that services sector employment will dominate the share of employment. Between 2019 and 2023, cumulatively nearly 74 lakh new employment opportunities in the services sector (refer to table 2) are expected to be created across the state. A lion's share, nearly 50%, of these are expected to be created in the Thane, Mumbai-Suburban, Pune, and Mumbai city regions. Nearly 2 lakh and 1.7 lakh new employment opportunities are expected to be created in the district of Nagpur and Nashik, respectively as well. Based on available data and expected growth estimates, it is estimated banking and financial services, transportation, education, public administration and defence, and healthcare are key sub-sectors creating new employment opportunities.

With respect to organised manufacturing activity (based on analysis of registered manufacturing units) it is estimated that a total of 17.54 lakh new employment opportunities will be created cumulatively in the next 5 years. Some of key sub-sectors expected to generate new employment opportunities are manufacturing of fabricated metal products, machinery and equipment and textiles. Approximately 1.4 lakh new employment opportunities are expected to be created in the next 5 years in textile manufacturing units alone.

Based on available data related to baseline estimates, **food processing (referred to as manufacturing of food products and beverages) can create only about 15,300 new employment opportunities among registered manufacturing units. However, there are an estimated 16,500 small and medium scale enterprises and 322 large scale units across the state25. Food processing units, even micro scale units, can offer livelihood opportunities through unorganised economic activities undertaken in regional and/or local communities**. Hence, livelihood and employment opportunities in this sector must be monitored closely to identify additional and/or new, emerging opportunities for the labour force to be engaged in. This emerged as a common theme during field visits and stakeholder consultations as a clear area of opportunity for the future starting with basic, raw processing of agricultural and forest produce in local communities. In the larger context of providing training and/or vocational education for wage or self-employment, prioritising such sectors can prove beneficial.

In the next 5 years, an estimated 10 lakh new entrants to agriculture and allied services are likely to be focused on crop and animal production activities.

---

[25] MIDC website statistics (https://www.midcindia.org/documents/20181/26611/Food+Processing.pdf/809cc171-ee0f-4440-88c2-cafc67d551e1); as on 31st March 2019

Table 5: Key sectors with incremental employment generation estimations for the state

Name of Sub-sector	Estimated incremental employment (2019-2023) Maharashtra
Agriculture and Allied (Total)	**1,090,318**
Construction	**123,402**
Registered Manufacturing (Total)	**1,754,688**
Services (Total)	**4,437,417**

A detailed, sub-sectoral and district-wise incremental employment estimations are provided in Annexure VII.

IX.I Changes in employment scenario and key drivers of change

In order to understand the drivers of changing employment it is important to identify the key structural changes in the nature of employment itself.

As highlighted in the earlier section, Maharashtra leads the country in terms of formal employment opportunities generated every year. In 2018 across India, the largest number of these jobs are in the services sector and within 'establishments rendering expert services'. Other sectors including banking and financial services, education, healthcare etc. It can be assumed that the observed sectoral split applies to Maharashtra as well. In this context, the study explored other possible sources of formal labour market data.

The Future of Jobs Report 2018 by the World Economic Forum identified **top sectors where 'talent availability' is a primary driver affecting location of employment generation. These include 'Automotive, Aerospace, Supply Chain & Transport', 'Aviation, Travel and Tourism', 'Chemistry, Advanced Metals and Biotechnology', 'Consumer' businesses, 'Financial Services and Investors', 'Global Health and Healthcare', 'Information and Communication Technologies' and "Professional Services'.** Hence investing in education and training of labour force in these sectors will create or continue to attract employment generation opportunities in Maharashtra. Data analysed by online job search platform LinkedIn revealed following job roles with emerging demand in India (not exhaustive):

1. Sales and Marketing Professionals
2. Sales Representatives
3. Software and Applications Developers and Analysts
4. Data Analysts and Scientists
5. Assembly and Factory Workers
6. Financial Analysts
7. Financial and Investment Advisers

It is important that training needs reflect changing skill and competency requirements as well and these are noted in the box below.

Emerging skills:

— Analytical thinking and innovation
— Active learning and learning strategies
— Creativity, originality and initiative
— Technology design and programming
— Critical thinking and analysis
— Complex problem-solving
— Leadership and social influence
— Reasoning, problem-solving and ideation
— Emotional intelligence
— Systems analysis and evaluation

Source: Future of Jobs 2018, India Country Profile, World Economic Forum

A major driver of changing skill needs is the impact of new technology adoption. Specifically, the widespread adoption of high speed mobile internet, artificial intelligence, big data and cloud technology by 2022. There are two key employment implications – growth in contracted employment for specialised needs and some reduction of full time roles. Productivity of workers will be a key focus area. Upskilling or reskilling the work force to meet changing is essential for enterprises to grow. As noted above, the availability of talent, in other words, units of labour with relevant skills, is a location driver for several sub-sectors and hence preparing for such labour market changes is imperative for growth. These global and national trends are likely to reflect directly in Maharashtra's economy. The Future of Jobs Survey 2018 conducted by the World Economic Forum identified top technologies and sectors that will adopt these technologies by 2022. A detailed table is included in Annexure IX.

A very important finding presented in this report is the perceived need for reskilling. **Nearly 54% of the respondents indicated a need for reskilling of the work force**. While drivers of reskilling across sectors are several a major driver is technology. Specifically, the pace of change of technology requiring periodic reskilling. Of these, half the respondents indicated the need for less than 3 months of reskilling training and 10% indicated the need to invest more than a year to reskill. 51% of the training needs were met internally by employers themselves; 29% of the training needs were met through private training providers. Overall, **reskilling needs in India, in terms of number of days, is the fifth highest in the world**.

IX.II Wages

Low pay and wage inequality still remains a serious challenge in India. The real average daily wages almost doubled between 1993–94 and 2011–12 in India and increased more rapidly in rural than in urban areas. Average wages increased more rapidly for women than for men, and rose faster in the unorganized than in the organized sector. In 2011–12, the average wage in India was about 247 rupees (INR) per day, and the average wage of casual workers was an estimated INR 143 per day.

Understanding rural wages requires a detailed occupational level wage data. Sample data collected by the Labour Bureau for 25 key occupations reveal that in general, non-agricultural occupations have higher average daily wages. Males earn significantly more, up to 1.5x in some cases. Among agricultural workers studied, loggers and wood cutters, and ploughing/ tilling workers earn relatively more at INR 290 per day. In comparison, on an average a Mason can earn an average of INR 437 per day followed by electrician (INR 356.2), plumber (INR 332.9), carpenter (INR 355), and LMV & tractor drivers (INR 336). These rates can change in the event of over supply but will continue to attract rural population looking to shift away from agricultural activities.

In urban areas, regular/salaried workers (75%) are found in greater proportion compared to rural areas where mostly casual workers (80%) are found. The daily wages in urban areas (INR 364) remain more than twice of the daily wages earned in rural areas (INR 175). The average daily wages for urban regular workers were INR 449 as compared to INR 300 for regular rural workers. The average daily wages for casual urban workers were INR 171 as compared to INR 138 for casual rural workers. Maharashtra is amongst the States which has the lowest wages for casual workers in rural areas

X. Labour force aspiration

Key findings from 2018-19 survey

X.I Labour force

X.I.I Key characteristics of the respondents

A total of 6277 respondents in the age group of 15-59 years were interviewed as a part of the aspirational survey. The respondent profile was evenly distributed amongst urban (56%) - rural (44%), male (69%) – female (31%) and worker (62%) – non worker (38%).50% of the respondents had studied till 10th standard, 35% had education till 12th standard and only 15% of the respondents had a graduate degree. 73% of the respondents reported receiving no technical / non-technical job related training in the past whereas only 21% of the respondents confirmed that they have received some form of training. Around 40% of the respondents admitted receiving training in a Govt. institute, 54.6% of the respondents admitted receiving training in a private institute whereas 5.7% of the respondents had received the training in their company premises arranged by their employer or any other source.

X.I.II Preferences of the aspirants

Figure 9: Preference for wage v/s self-employment in the state

From the total respondents, 56% preferred being self-employed whereas 44% preferred having wage employment.

Majority of the respondents acknowledged a need for them to undertake further education and/or training. The average expected monthly income of self-employed respondents is INR 21,981 which is slightly higher compared to the average expected monthly income of wage employed respondents (INR 18,453).

Amongst the wage employed respondents, 97% preferred working within the State of Maharashtra and 70% of the respondents were even willing to accept lower wages so that they can stay in Maharashtra.

Future education and/or training preferences – self employed

58% of the self-employed respondents preferred further training / learning skills whereas 20% of the respondents would like to get further education. Amongst the 78% respondents willing to get further training / education, most of them (34%) wanted skills training like vocational courses, diploma courses, ITI courses, etc. followed by graduate non-technical courses (30% respondents) and post graduate non-technical courses (11% respondents).

Future education and/or training preferences – wage employed

Amongst the wage employed respondents, only 27% respondents showed a desire to get further training / learn skills whereas 30% respondents said that they would want to get further education. Significantly larger no. of respondents (43%) indicated no desire for further training or education. Amongst the 57% respondents willing to get further training / education, most of them wanted to be a non-technical graduate (36%) followed by being provided skill training in vocational courses (23%) and non-technical post graduate courses (16%).

The Table 6 below shows the preferred sectors for employment for both self-employed and wage-employed respondents:

Table 6: Preferred sectors for employment in the state

Preferred sectors for self-employment	Preferred sectors for wage employment
Retail	Government and administration
Agriculture & allied services	Agriculture & allied services
Skill based business – Plumbing, electrician, etc.	Finance, Banking & Insurance Services (BFSI)
Food products & handicrafts	Other manufacturing
Beauty & wellness	Healthcare
Hospitality – restaurant, tea stalls, etc.	Railways

X.II Training institutions

X.II.I Key characteristics of the respondents

A total of 200 training institutions representatives were included in the survey. Amongst the surveyed training institutions, 52% provide job placement services and 83% provide counselling services to the trainees. The top 3 focus areas of the training programs being run by these training institutions are **technical skills, computer skills** and **personality development.** As per the responses received from the training institutions, it is understood that the recruiting employers are largely concentrated in 4 districts – Aurangabad, Pune, Nagpur and Mumbai.

X.II.II Types of training provided

The training institutions surveyed had mostly provided training in technical skills related to jobs (20% respondents) followed by computer skills (19% respondents), personality development (16% respondents), communication skills (16% respondents) and proficiency in English (10% respondents).

Training on people management, leadership skills, team building skills, and other areas was provided by limited training providers (less than or equal to 6% respondents in each case).

Figure 10: Type of training provided in the state

Technical skills related…	20
Computer Skills	19
Personality Development	16
Communication Skills	16
Proficieny in English	10
Training on…	6
Leadership skills	5
Team building skills	4
Others	3
Proficieny in other…	1
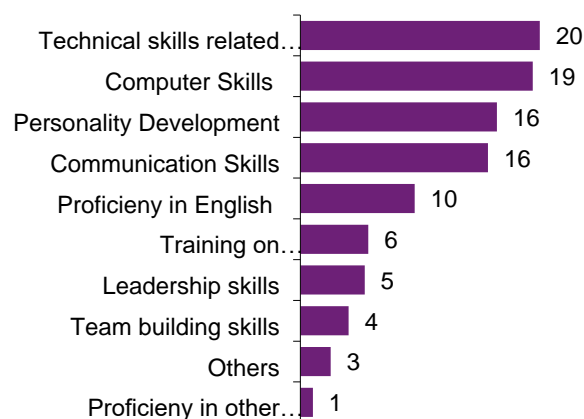
X.II.III Average education level of students

The training institutions reported that almost 44% of the students had matric/secondary (9th/10th standard) and 37% of the students had higher secondary (school 22th/12th standard) qualification. The students were educated up to a certain level with no illiterates (0%) coming to the training centres for any form of training. Similarly, graduate students (0%) also did not come to the training centres for any skill based courses.

Legend:
- Illiterate
- Literate but no formal schooling
- Primary - School upto 5 th standard
- Middle - School 6 to 8 th standard
- Matric/Secondary   9/10 standard
- Higher secondary (School 11/ 12 standard)
- Non-technical diploma
- Technical diploma
- Some College but not graduate
- Graduate

Values shown: 0, 0, 2, 8, 44, 37, 1, 2, 0, 6, 0

X.II.IV Top sectors identified by the training institutions

The Table 7 below shows the sectors identified by the training institutions in which the training is being provided to the students, top sectors for placements and top sectors where jobs have increased in last 2-3 years (both Govt. and private):

Table 7: Top sectors identified by training institutions in the state

Top sectors where training is currently offered	Top sectors for placements	To sectors where jobs have increased in last 2-3 years	
		Government	**Private**
IT-ITeS (36%)	IT-ITeS (19%)	BFSI (13%)	BFSI (14%)
General training (11%)	Other (11%)	IT-ITeS (12%)	IT-ITeS (12%)
BFSI (9%)	BFSI (9%)	Auto & auto ancillaries (11%)	Auto & auto ancillaries (11%)
Beauty & Wellness (7%)	Auto & auto ancillaries (8%)	Agriculture & allied services (8%)	Agriculture & allied services (10%)
Textiles & related sectors (7%)	Telecommunications (8%)	Food processing (6%)	Government and administration (5%)

X.II.V Challenges faced by training institutions in offering training programs

The training institutions are basically facing challenges on two fronts - mobilizing the right candidate and employer connects. When surveyed, the top challenges faced by the training institutions in offering training programs are:
- Selecting candidates who would fit the various roles **(29%)**
- Lack of genuine candidates who actually need training **(22%)**

- Placement of candidates **14%)**
- Matching student aspiration **(11%)**
- Student dropouts **(8%)**
- Lack of awareness about training among employers **(6%)**

When enquired about the reasons for student dropouts, most of the training institutions reported lack of seriousness amongst students due to free training (25%) followed by constraints on payment of fee (23%) and intensive curriculum (21%).

Lack of opportunities for placement (9%) and distance between the location of the training institute and the trainee (9%) were also perceived as a reason for dropout.

Figure 12: Main Reasons for Students drop-outs

- Other
- Lack of co-ordination between trainer & trainee
- Distance between location of the training institute and trainee
- Lack of opportunities for placement
- Intensive curriculum
- Contraints on payment of fee
- Lack of seriousness

The top 3 reasons perceived for 'lack of seriousness' were:
- Free of cost training
- No requirement of regular training after job placements
- Candidates do not feel the need for training

X.III Employers

X.III.I Key characteristics of respondents

A total of 631 employers were surveyed as a part of the study. All the surveyed employers were directly involved in hiring decisions. Almost 96% of the employers admitted to hiring from within the same district. 544 employers were overseeing less than 100 employees, 53 employers were overseeing 101-199 employees and 31 employers were overseeing more than 200 employees. 75% of the employers provided full time employment, 5% provided part time, 18% admitted to providing both full and part time employment and 2% employers did not respond.

62% employers' surveyed recruit trained people from training institutions. 67% of employers also admitted directly investing in training junior/ entry level employees. 37% of employers invest in mid-level employee training; 25% in senior employees. 75% of the employers recruited candidates from private institutions only while 7% employers recruited from only Govt. institutions. 18% employers recruited from both private and Govt. institutions.

X.III.II Emerging regions and sectors

Pune, Aurangabad, Nagpur and Mumbai are the 4 identified districts which are emerging and are expected to drive the demand for labour in the near future. A few identified sectors as per the surveyed employers that will provide employment in next 5 years are:
- Agriculture and allied activities: Expectations of continued reliance on agriculture remains high
- Automobiles and auto ancillaries
- Other sectors namely, art & culture, engineering and capital goods, BFSI and food processing were mentioned but at a relatively lower frequency

X.III.III Level at which hiring is done

Most of the hiring done by the employers is at entry / junior level / job worker level. Almost 75% hiring are done at the entry level, followed by 19% hiring at the mid-level / supervisor level. Only 6% hiring are done for senior / top level.

Figure 13: Level at which most hiring is done
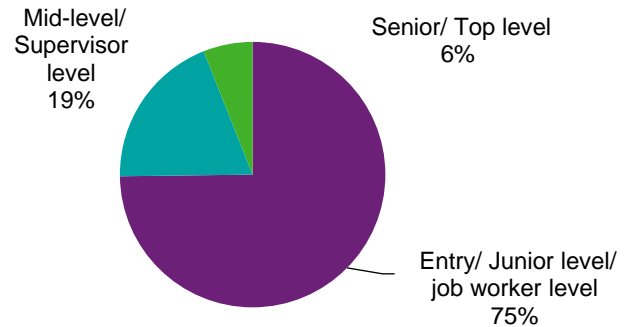
X.III.IV Level of education required

Entry level job

Figure 14: Level of Education required for entry level job

For entry level jobs, most of the employers reported a requirement of higher secondary / intermediate (36%), followed by matric / secondary (33%). Only 12% employers reported that an education up to 8th standard was required for an entry level job in their organization.

3% employers also reported taking illiterate candidates for entry level jobs whereas 7% employers said that they require graduates for entry level jobs in their organization.

Figure 14: Level of Education required for entry level job

Mid-level job
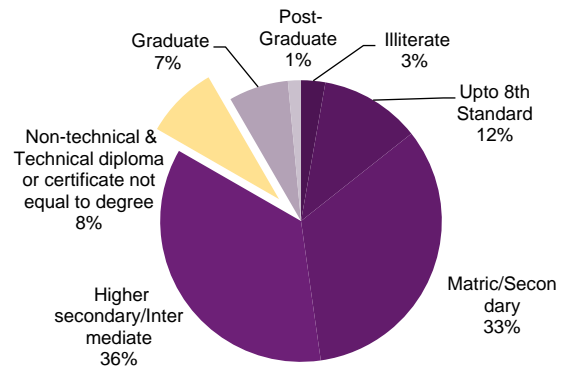
Figure 15: Level of Education required for mid level job

For mid-level jobs, 40% of the employers said that higher secondary / intermediate was required whereas 21% preferred graduates. 13% hired matric / secondary pass candidates, 6% were fine hiring 8th pass candidates, 4% hired illiterate and 2 % said that post-graduation was required for hiring at mid-level jobs.

14% employers said that non-technical & technical diploma or certificate not equal to degree was required for hiring at mid-level jobs. Thus, Scope for skill/ TVET programs can be considered to be of highest perceived relevance when training for mid-level roles.

Figure 15: Level of Education required for mid level job
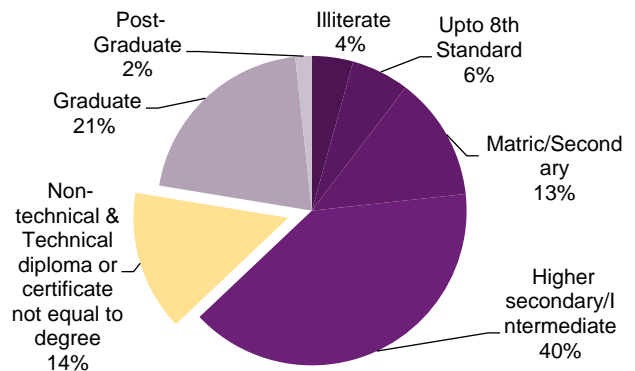
Senior level jobs

At senior level jobs, 37% of the surveyed employers reported that the candidates need to be at least graduates whereas 34% reported hiring higher secondary / intermediate.

11% employers reported education up to 8th standard a requirement for hiring at senior level whereas 8% required a post graduate degree. Only 5% required a non-technical & technical diploma or certificate equal to degree.

Illiterate 0%
Upto 8th Standard 11%
Matric/Secondary 5%
Higher secondary/Intermediate 34%
Graduate 37%
Non-technical & Technical diploma or certificate not equal to degree 5%
Post-Graduate 8%
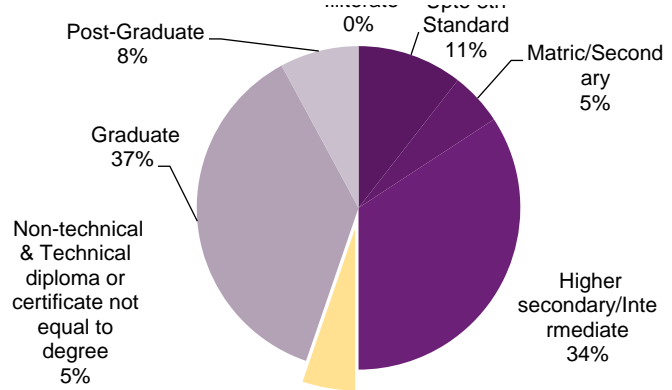
X.III.V Type of training provided at each level

Figure 17: Type of training provided at each level

Type of training provided at entry level

Technical Skills related…	67
Communicati…	22
Personality development	20
Proficiency in computer skills	16
Others	13
Training on management/…	13
Training on team building	11
Proficiency in English	11
Training on Leadership skill	10
Proficiency in other language	2
No Response	0

Type of training provided at mid level

Technical Skills related to the job	51
Communication skills	32
Personality development	30
Proficiency in computer skills	27
Training on team building	15
Training on Leadership skill	14
Proficiency in English	14
Training on management/…	13
Others	9
Proficiency in other language	2
No Response	0

Type of training provided at senior level

Technical Skills related to the job	40
Proficiency in computer skills	27
Training on management/…	26
Communication skills	26
Personality development	22
Training on Leadership skill	21
Proficiency in English	21
Training on team building	17
Others	11
Proficiency in other language	3
No Response	0

At the entry level jobs, employers place high importance on core / professional skills whereas at the entry level employers tend to place more importance on technical skills. Also, despite the fact that most of the employers hire the candidates from training institutions, technical skills training continues to be the major area where employers train entry level hires.

At the entry level, major focus is on providing technical skills related to the job (67%), followed by communication skills (22%), personality development (20%) and proficiency in computer skills (16%). Whereas at the mid-level, the focus of training on communications skills (32%), personality development (30%) and proficiency in computer skills (27%) increases considerably.

At the senior level, greater emphasis is provided on proficiency in computer skills (27%), training on management / people management (26%), communication skills (26%), personality development (22%), training on leadership skills (21%) and proficiency in English (21%).

X.III.VI Areas of improvement

Figure 18: Areas of improvement for Training Programs & Institutions as per employers
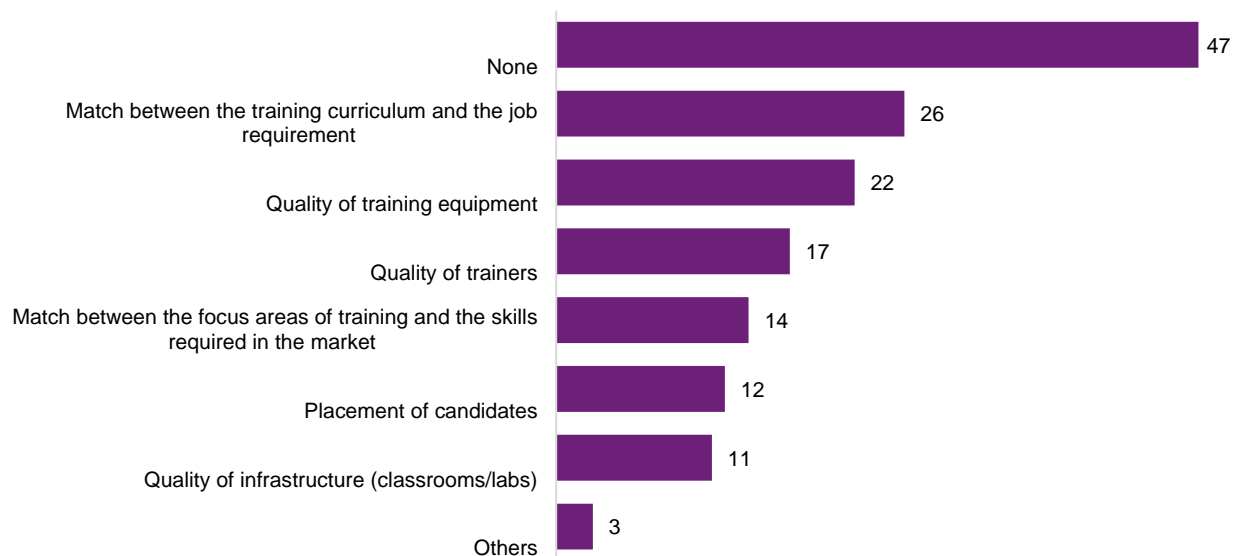
47% of the employers reported no requirement of any improvement for training programs and institutions. 26% employers reported a mismatch between the training curriculum and the job requirement. 22% reported the quality of training equipment not being met as per the industry standards and 17% reported the quality of trainers not being up to the mark. 14% reported a mismatch between the focus area of training and the skills required in the market whereas 12% reported that training providers and training institutions need to work on placements of the candidates. Quality of infrastructure was also a concern for 11% of the respondent employers.

Summing up, the design and delivery of the training program needs to be improved by the training providers and institutions along with creating strong industry linkages so as to map the industry needs to and provide focused training as per the industry requirement.

XI. Key Statistics of the labour force

Figure 19: Key statistics of labour force for the state

Stock of "Skill" in the labour force and available education/training capacity

Estimated share of workforce, by level of education/training[26]

Total current capacity (2016/2017 data)

K-12

- Illiterate : 21%
- Literate but below secondary : 38%
- Secondary but below graduate : 23%
- Graduate & above or technical diploma/degree : 12%
- Literate : 6%

- 1,09,749 schools
- ~100% coverage up to Grade 8
(U-DISE 2016)

Vocational Ed.

Formal vocational education in work force[27]
- Formal employment: 36 per 1000
- Informal employment: 17 per 1000
(Based on 2013-14 Labour bureau estimates)

- 9.04 lakh seats in short term TVET[28]
- 132,714 seats in ITI & Polytechnics
(Based on 2017/18 data on seats for short term and long term TVET)[29]

Higher Ed.

- No. of Universities: 49
- No. of Colleges: 4,286

- >40 lakh sanctioned seats, incl. open schools
- >4400 colleges
(Department of Higher and Technical Education 2017)

Demand Side Estimates for the State

Name of the sector	Incremental employment (2019-2023) in persons	Incremental employment (2024-2028) in persons
Agriculture & Allied	10,90,318	11,33,038
Construction	1,23,402	1,29,528
Registered Manufacturing	17,54,688	21,79,760
Services	44,37,417	57,00,606

Manpower Supply Estimates for the State

Projected Working Population		Projected Labour Force		Projected Work force	
2023	2028	2023	2028	2023	2028
7,74,19,424	8,40,13,996	5,05,80,546	5,47,76,133	4,94,96,058	5,36,01,449

---

[26] Based on Census 2011, KPMG in India Analysis

[27] Per 1000 distribution of persons aged 15 years and above who received/receiving vocational education in Maharashtra , Report on district level estimates for the state of Maharashtra, Labour Bureau 2013-14

[28] Assuming training capacity for the VTPs and assuming that each VTP have a capacity of running 2 batches in a day and completing 3 cycles in an year

[29] Key programmes evaluated for short term schemes running in Maharashtra PMKUVA, NULM, PMKVY 1, PMKVY 2 and NSDC Fee Based

1. Ahmednagar

1.1 About the district

Ahmednagar district is located in the western region of the Maharashtra state with the district headquarters in Ahmednagar City. The district is included in Nashik division. Ahmednagar is divided into 15 sub-districts and 1,581 inhabited villages.

Ahmednagar is the largest district of Maharashtra with a land area of 17,048 sq.km. It constitutes 5.6% of the total state area. It is bordered by Nashik and Aurangabad districts to the north, Thane and Pune districts to the west, Solapur, Osmanabad and Beed districts to the South-east. The district has several tourist attractions.

Ralegan Siddhi, a village in Parner taluka of Ahmednagar District, is considered a model of environmental conservation and is an ideal village in India. The district is also known for its high number of sugar factories.

Table 8: Comparison of Ahmednagar district with Maharashtra

Indicator	Ahmednagar	Maharashtra
Area in sq.km.	17,048	3,07,713
Percentage share in state geographical area, %	5.6%	100
No. of Sub-districts	15	353
No. of inhabited villages	1,581	40,959
No. of households	9,25,826	24,421,519
Forest area as a % of total geographical area	8.7%	16.94%

Source: Census 2011

1.2 Demography

According to 2011 census data, the district has a population of over 45.4 lakh persons which is ~4% of the state. Ahmednagar is one of the least urbanized districts in the state having about one-fifth of its population in urban areas whereas more than two-fifth of the state population lives in urban areas. With a population density of 266 persons/Sq. Km which is significantly lower than the state average, the district is one of the many medium-intensity regions. Despite being the sixth most populous district of the state, the district manages to be less densely populated because of its larger land size.

Table 9 lists down multiple demographic indicators of the district. Ahmednagar district has higher sex ratio (number of female per 1000 males) compared to the state. About three-fifth of the district's population falls in the working age group (i.e. 15-59 years) while a little less than half of its population is actually working i.e. % of total workers (main and marginal workers) to the total population. The remaining ~51% of the population are non-workers.

Table 9: Demographic indicators of Ahmednagar district

Indicator	Ahmednagar	Maharashtra
Population, No.	45,43,159	11,23,74,333
Decadal growth rate of population, %	12.44%	16
Urban Population as a percentage of total population, %	20%	45.2
SC Population, %	12.6%	10.2
ST Population, %	8.3%	8.8
Sex ratio, No. of females per 1000 males	939	925
Population density, per sq.km.	266	365
Literacy rate, %	79.05%	83
Working age population* as a percentage of total population, %	61%	59
Work participation rate^, %	48.53%	44
HDI Index	0.720	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 22.03 lakh persons. Figure 20 suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by mainly and secondary sector. As shown in the figure 20 below, the rate of unemployment (per 1000) in the district is significantly lower than the state average across all the categories. The rate of rural and urban unemployment (per 1000) in Ahmednagar is less than half of the state average. The rate of unemployment (per 1000) is equivalent among the females and males of the district.

Figure 20: Share of workforce & Employment Rate for Ahmednagar District
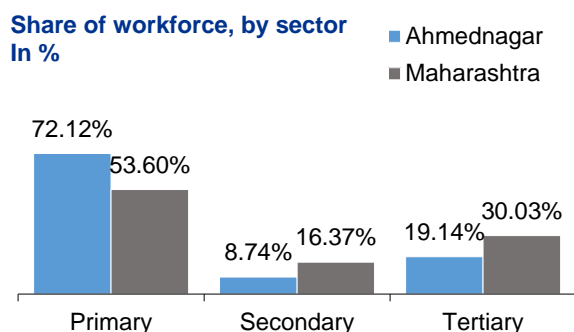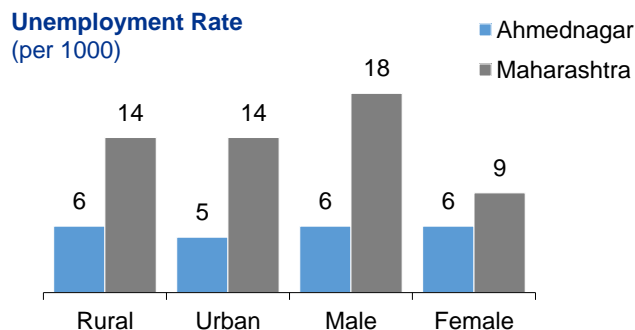
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in figure 21, more than three-fifth of the working population is self- employed in Ahmednagar. A significantly higher percentage of people are working as casual labor in the district as compared to the state average of 3%. A lesser workforce is engaged in salaried employment in the district as compared to casual labor in the district.
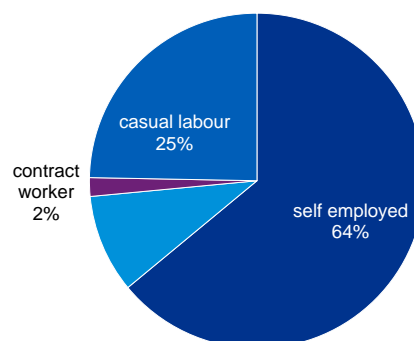
Figure 21 Type of employment in Ahemdnagar district

Source: Ministry of Labour & Employment

***Education Profile of the District**:*

Traditional Education:

Ahmednagar district has a total of 6,267 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of over 9.3 lakh students. The Pupil-Teacher ratio of the district is 22:1. The district also has 180 general and technical colleges with an enrolment of about 1.5 lakh students in state-run general and technical colleges.

Table 10: Educational Profile of Ahmednagar District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	5,132	6,51,009
Secondary Schools (IX to XII)	1,135	2,86,981
General Colleges & Technical Education	180	1,50,000[30]

Source: AISHE, U-DISE

---

[30] Enrolment figures at State run general and technical education colleges only

Vocational Education:

The district has a total of 42 ITIs Government and Private with 5429 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Agriculture, Beauty and Wellness, Electronics, Apparel and Construction.

Table 11: Total no. of ITI and there training number in Ahmednagar district

Particular	Number
ITIs (Government & Private)	42
Trainee Count	5,429

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 13916 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making and Fashion Designing. Table below illustrates sector-wise annual training numbers in the district.

Table 12: Sector wise short- term skilling trained numbers in PMKUVA for Ahmednagar district

Sectors	Trained
Information and communication technology	4,267
Garment making	1,517
Fashion design	1,435
Banking and accounting	2,264
Medical and nursing	310
Soft skills	329
Construction	291
Beauty culture and hair dressing	1,390
Refrigeration and air conditioning	90
Production and manufacturing	270
Electrical	60
Remaining sectors	279
Total	13,916

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

It is to be noted that about two-fifth of the surveyed respondents were found to be receiving their training from government training providers.

1.3 Economy

As of 2016-17, Ahmednagar district ranked amongst the top ten districts of the state in terms of Gross District Value Added (at current prices) with the figure at Rs. 62,915 crores. The per capita income of the district was recorded at Rs. 1, 31,711. It is one of the twelve districts in Maharashtra currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

In Ahmednagar, the service sector contributes to 59% of the district economy despite employing only around 19% of the district's workforce. The agriculture and allied activities contribute to 14% and the industry sector contributes to 27% of the GDDP.

A deeper look reveals that the major sub-sectors in the services sector are Retail and Hospitality, Banking and Insurance and Real Estate Services accounting for 15%, 14% and 10% contribution to the GDDP respectively.

The primary crops cultivated in the district include Sugarcane, Bajra, Jowar, Wheat, Sunflower, Mango, Sapota and Amla.

Figure 22: Sector wise GDDP Distribution of Ahmednagar District
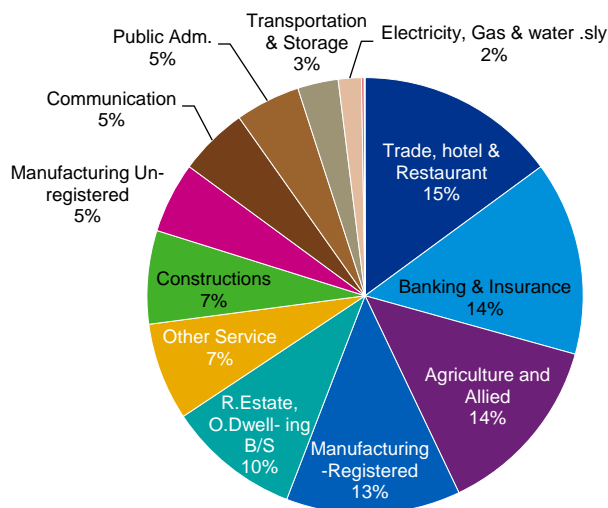
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

The primary sub-sectors in the industry sector include construction and registered manufacturing. Registered manufacturing contributes almost twice as much as the construction sector to the district's economy as can be seen in figure 22.

Major registered manufacturing industries of the district are: Food products and beverages, Basic metals Chemical and chemical products, pharmaceuticals and botanical products, and Machinery and equipment.

Food and beverage processing is the largest industry in the district employing over 20,000 people which is 41% of the workforce in registered manufacturing in the district. Of these over 11,000 are engaged in manufacturing of sugar. The district has the maximum number of sugar factories in the district. Some workforce is also engaged across manufacturing of dairy products and prepared animal feeds. The beverage manufacturing employs close to 2,700 people mainly engaged in distilling, rectifying and blending of spirits and ethyl alcohol production from fermented materials.

Manufacture of Basic metals is the second largest registered manufacturing industry in the district employing over 5,200 persons which is ~11% of the workforce in registered manufacturing in the district. Of these, 74% are engaged in manufacturing of basic iron and steel.

Manufacture of chemicals and chemical products, pharmaceuticals, medicinal chemical and botanical products is also the next major registered manufacturing industry in the district which accounts for about 6% of the employment in registered manufacturing. It employs about 2,950 persons of which 68% are employed in manufacture of pharmaceuticals, medicinal chemical and botanical products. Manufacturing plant for major pharma player, Sun Pharma Ltd., is located in Ahmednagar.

Manufacture of machinery and equipment is another major industry in the district employing about 2,800 people. More than three-fourth of the workforce in the industry is engaged in manufacturing bearings, gears, gearing and driving elements.

Other less prominent manufacturing industries in the district include fabricated metal products, except machinery and equipment and manufacture of motor vehicles, trailers and semi-trailers.

Table 13: Employment in major registered manufacturing sub-sectors in the district 2017-18 for Ahmednagar

Sector	Employment
Manufacture of food products and beverages	20,038
Manufacture of basic metals	5,255
Manufacture of chemicals and chemical products, , pharmaceuticals, medicinal chemical and botanical products	2,954
Manufacture of machinery and equipment n.e.c.	2,793
Manufacture of fabricated metal products, except machinery and equipment	2,261
Manufacture of motor vehicles, trailers and semi-trailers	2,061
Manufacture of rubber and plastics products	1,873
Manufacture of tobacco products	1,297
Manufacture of paper and paper products	440
Manufacture of other transport equipment	331
Manufacture of other non-metallic mineral products	285
Manufacture of textiles	154

Source: Annual Survey of Industries, 2017-18

Investments in the district:

Ahmednagar district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Railway transport infrastructure services, irrigation related services and Road transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 14: Sector wise investments in Ahmednagar District

Sector Name	Proposed Investment (in INR Million)	No of Projects
Railway transport infrastructure services	96,766.3	5
Irrigation	57,706.2	4
Road transport infrastructure services	48,601.1	14
Storage & distribution	19,602.5	3
Renewable electricity	16,377.6	13
Sugar	15,491.7	11
Electricity transmission	8,822.1	4
Beer & alcohol	5,559.5	14
Dairy products	4,130	3
Air transport infrastructure services	3,500	2
Generators, transformers & switchgears	2,775	3
Processed foods	2,004.8	5
Other chemical products	2,000	2
Conventional electricity	1,793.7	4
Others	1,4057	67
Total	**2,99,187.5**	**154**

Source: CMIE

1.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Profile	Details	
Urban vs. Rural	Urban	52%
	Rural	48%
Gender Profile	Male	59%
	Female	41%
Age Group	15-25 years	42%
	26-35 years	31%
	36-45 years	17%
	46-55 years	10%
	56-59 years	44%
Educational Level	Upto Xth	39%
	Upto XIIth	17%
	Any Graduation	61%
Occupational Profile	Worker	39%
	Non-Worker	52%

Figure 23: Past/Current participation in training, in % for Ahmednagar district
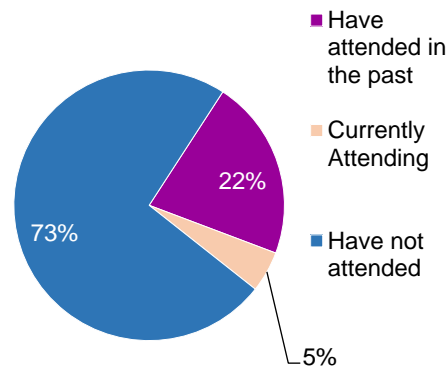
About 73% of the respondents in Ahmednagar stated that they hadn't attended any technical/ non-technical job related training in the past while 22% reported having attended a training programme in the past.

It is to be noted that about two-fifth of the respondents stated receiving their training from a government training institute. The district also has private training providers to enhance the skills of the people and more than half of the respondents were found to be receiving their training from them. A small proportion of respondents also mentioned receiving trainings organized by their employers.

Figure 24: Type of training provider (in %) for Ahmednagar
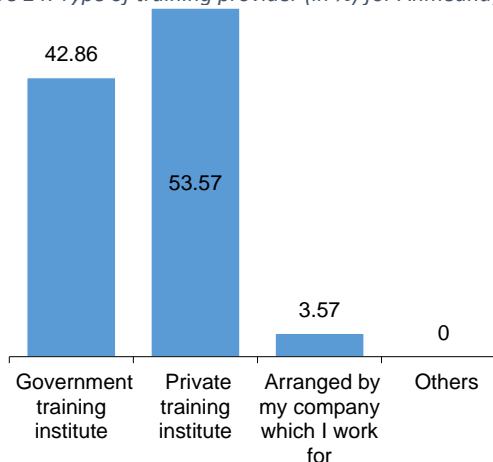
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure 25, 63% of the respondents in Ahmednagar aspire to be self-employed and 37% reported a preference for being wage-employed. Interestingly, amongst the respondents who aspire to be self-employed, there is a higher preference to undertake further education/ training as compared to wage-employment aspirants. Additionally, there is preference for acquiring vocational education amongst both categories of the aspirants i.e. those who aspire to be wage-employed and those who aspire to be self-employed.

Figure 25: Key Findings related to educational attainment of the labour force for Ahmednagar
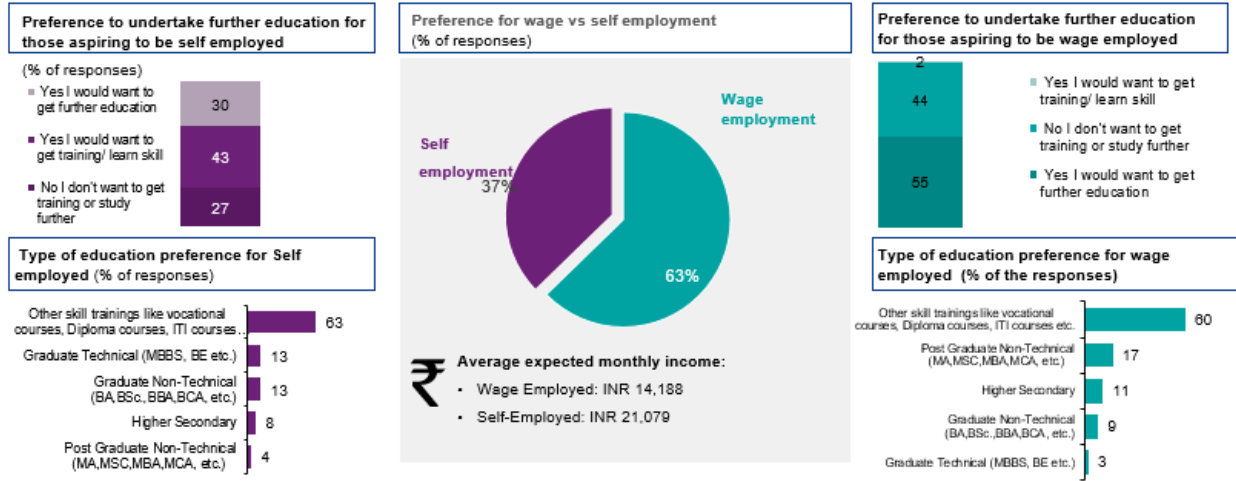
Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 16: Aspirational sub-sectors for labour force in Ahmednagar

For wage employment	For self-employment
Pharmaceuticals	Retail
Food Processing	Food Products & Handicrafts
Tourism & Hospitality	Own business/ Kirana store
Agriculture & Allied activities	Setting up NGO/NPO
Auto & Auto Components	Fabrication

For those aspiring to be self-employed, there was a preference towards opening a retail or wholesale shop (grocery, stationery, medical shop, pan shop, clothes). Making and selling of handicrafts and food products was also highlighted as a preferred business among self-employment aspirants.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 14,188 and Rs. 21,079 respectively.

Additionally, 96% the respondents would like to work within Maharashtra. 64% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra at a lower wage and expressed a lower inclination towards migrating to other regions outside the state for better economic opportunities.

Perceived benefits of acquiring training:

As high as 78% of the respondents who attended a training programme stated that they actually benefited from attending the training. The primary benefit which was highlighted by the respondents was acquisition of new skills or upgradation of current skill set. Other stated benefits include smooth movement to a new sector, getting certification, and increase in income. The primary challenge reported by majority of the respondents after attending the training was that the skills imparted by the trainings were not at par with the expectations of the employers in the industry. It is found that among 57% of the respondents who reported not having attended any training programme, there is no awareness on any employment-oriented training programs that help gain expertise/ enhance job skills.

1.5 Incremental Demand and Estimation of Manpower Supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities. Crop and animal production, Finance and Insurance services, Human health & social work activities, Manufacturing of machinery and equipment n.e.c. and Transportation sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub-sector of manufacture of machinery and equipment, even though a high proportion of the current workforce is also engaged in the sub-sector of manufacture of food products and beverages.

Table 17: Incremental Demand estimates (2019-2028); in persons for Ahmednagar

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	65,267	67,824
Forestry & Logging	229	238
Fishing & Aquaculture	162	168
Sub-Total	**65,658**	**68,230**
Registered Manufacturing		
Food processing	1,058	1,113
Textiles	102	164
Chemicals and Pharmaceuticals	361	404
Iron and Steel	252	264
Metal products (except machinery and equipment)	4,591	4,483
Machinery and Equipment	14,558	18,590
Automotive	155	166
Automotive (transport equipment)	105	136
Construction	**3,124**	**3,279**
Services		
Wholesale & Retail Trade	1,310	1,664
Transportation	9,495	11,447
Logistics	1,191	1,436
IT & ITeS	1,990	2,399
Hospitality	997	1,064
BFSI	4,335	5,639
Real Estate	867	1,128
Professional, Scientific & Technical activities	2,265	2,946
Public Administration & Administrative services	21,107	27,458
Education	13,148	17,103
Healthcare	17,587	22,879
Others	57,686	75,041
Sub-Total	**1,31,977**	**1,70,204**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing
The registered manufacturing subsectors above, account for 81% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Dairy within the **Agriculture sector** is in huge demand and is expected to generate employment as more and more people within the district are being inclined towards dairy farming activities.
- In **food processing sector,** sugarcane processing is in demand. Job roles such as machine operators are in demand and the industry is expected to generate employment for 400-500 persons per year.
- The southern part of the district has requirement for training in **agriculture and allied** activities.

Estimation of Manpower Supply

Ahmednagar district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be about 19.59 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 18: Manpower Supply of Ahmednagar district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Ahmednagar	29,02,141	19,72,537	19,59,050

Table 19: Education levels of projected workforce for Ahmednagar district

Education level	Projected work force
Illiterate	4,81,232
Literate but below matric/secondary	7,82,294
Matric/secondary but below graduate	4,23,974
Technical degree or diploma equal to degree or post-graduate degree	36,208
Technical diploma or certificate not equal to degree	18,027
Graduate and above other than technical degree	1,12,501
Literate others	1,04,814

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~70,042 annually.

Table 20: Size of Target Population for Ahmednagar District

Particular	Numbers
Enrolment in VIII	88,378
Enrolment in X	77,998
Enrolment in XII	61,969
Dropout at VIII	**8,193**
Passing out of VIII*	80,185
Students not transitioned to IX	**13,199**
Dropout at X	**9,508**
Passing out of X*	68,490
Students not transitioned to XI	**11,273**
Passing out at XII**	53,033
Students not transitioned to Higher Education	36,062
Total Target population	**70,042**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 21: Vocational Education annual capacity for Ahmendnagar district

Particular	Annual Capacity in Numbers
Short Term Skilling	15,850
ITI (Government & Private)	10,504

1.6 Recommendations

The economic growth of Ahmednagar district is predominantly driven by the secondary sector. Manufacturing forms the core of the employment generation activities in the district. However, agriculture, BFSI, health and public administration have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 22: Sector Specific economic growth, employment potential and aspirations for Ahmednagar

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Amber
Forestry & Logging	Red	Red	Amber
Fishing & Aquaculture	Amber		Amber
Food processing	Green	Red	Green
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Green
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Green	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Amber	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Amber

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
BFSI	🟨	🟥	🟥
Real Estate	🟩	🟥	🟥
Professional, Scientific & Technical Activities	🟩	🟥	🟥
Public Administration & Administrative Services	🟥	🟩	🟥
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟥
Other Services	🟩	🟩	🟨

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below Top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Food Processing, Paper & Paper products, Chemicals & Pharmaceuticals, Machinery & Equipment, Automotive (including transport equipment), IT & ITeS, Real estate, Professional, scientific & technical activities, education, healthcare and other services
- **High incremental employment potential sectors**: Agriculture, Manufacturing of machine and equipment, Public Administration & administrative services, Education and Human health & social work activities.
- **High Aspiration Sectors**: Manufacturing of food products and beverages, manufacturing of chemicals and chemical products

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 23: Priority Sectors for MSSDS for Ahmednagar district

Sl. No.	Sector	High / Medium Growth	High / Medium Employment Potential	High / Medium aspiration
1	Agriculture & Allied	✓	✓	✓
2	Food Processing	✓		✓
3	Chemicals and Pharmaceuticals	✓		✓
4	Machinery and equipment	✓	✓	
5	Auto and Auto Components	✓		✓
6	Healthcare	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Hospitality
- Transportation
- Public Administration and administrative services
- Education
- Other services

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 24. The basis of selecting the job roles is through the primary inputs while consulting various district officials and employers.

Table 24: Job Roles across high demand sectors for Ahmednagar district

High demand sectors	Identified Job Roles
Agriculture & Allied	• Sugarcane Cultivator • Dairy farmer • Agriculture machinery operator • Mango grower
Food Processing	• Supervisor: Fruits and vegetable processing (& sugarcane processing) • Machine operator • Multi skill technician (food processing) • Dairy products processor
Machinery and equipment	• CNC Operator – Turning • Fitter – fabrication • Service engineer – installation • Fitter – electrical and electronic assembly
Auto and Auto components	• CNC Operator • Automotive electrician • Automotive Service technician • Test Engineer – Product Vehicle
Transportation	• Transport consolidator • Courier delivery executive • Cargo surveyor • Ground operation associate • Courier branch sales executive
Healthcare	• Nursing • General Duty Assistant • Home Health Aide • Assistant Physiotherapist • Emergency Medical Technician – Basic • Pharmacy Assistant

2. Akola

2.1 About the district

Akola district is located in the eastern part of Maharashtra. It is bordered on the north and east by Amravati District, on the south by Washim District, and on the west by Buldhana District.

With a land area of 5676 sq.km, it is the 8th smallest district by area in the state of Maharashtra by constituting of only 2% of the area. However, it is the 11th populous district in the state, with 7 sub districts and 864 inhabited villages.

Akola city is well connected to other major cities by roads and railways with National Highways connecting Akola to districts across states of Kolkata and Andhra Pradesh.

Though not a common tourist destination, the district holds an important position in the historical, cultural, political and agricultural domain of the city.

Table 25: Comparison of Akola District with Maharashtra

Indicator	Akola	Maharashtra
Area in sq. km.	5,676	3,07,713
Percentage share in State geographical area, %	2	100
No. of Sub-districts	7	353
No. of inhabited villages	864	40,959
No. of households	3,91,135	2,44,21,519
Forest area as a % of total geographical area	5.97	16.94

Source: Census 2011

2.2 Demography

The population of Akola is 18, 13, 906 per census 2011, with almost 40% constituting the urban population (Table 26). The literacy rate and sex ratio of the district at 88% and 946 respectively are higher than that of the state. Close to 42% of the district's population is in the working age group (15-59 years), however, 61% of the population is actively working and contributing to the economy. The HDI of the district is lower than that of the state HDI.

Table 26: Demographic Indicators of Akola district

Indicator	Akola	Maharashtra
Population, No.	18,13,906	11,23,74,333
Decadal growth rate of population, %	11.27	16
Urban Population as a percentage of total population, %	39.68	45.2
SC Population, %	2.74	10.2
ST Population, %	0.95	8.8
Sex ratio, No. of females per 1000 males	946	925
Population density, per sq.km.	320	365
Literacy rate, %	88	83
Working age population* as a percentage of total population, %	42.3	59
Work participation rate^, %	61	44
HDI Index	0.42	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a total workforce of 7.68 lakh persons, of which 68% are engaged in primary sector (agriculture and allied activities and mining), 9% in the secondary sector and 23% in the tertiary sector. As indicated in the figure 26 below, Akola has high unemployment rate across all categories – rural, urban, male and female as compared to the state.
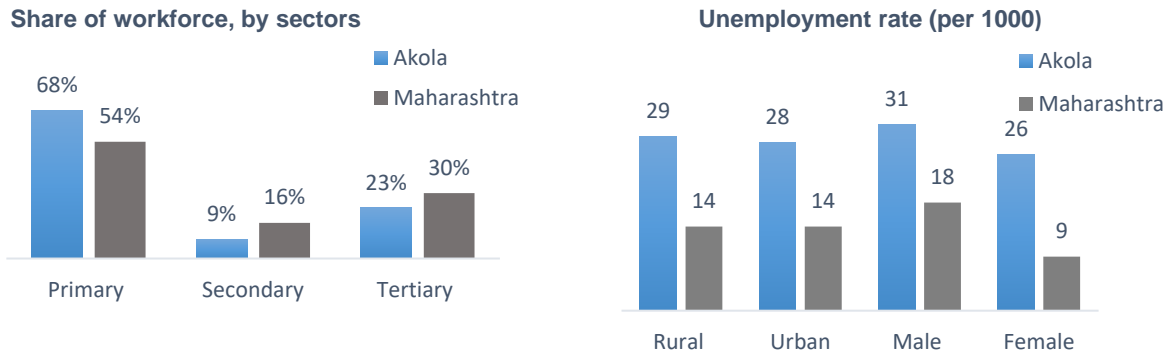
Share of workforce, by sectors

Unemployment rate (per 1000)

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 27: Type of employment in the Akola district

Type of Employment Numbers per 1000
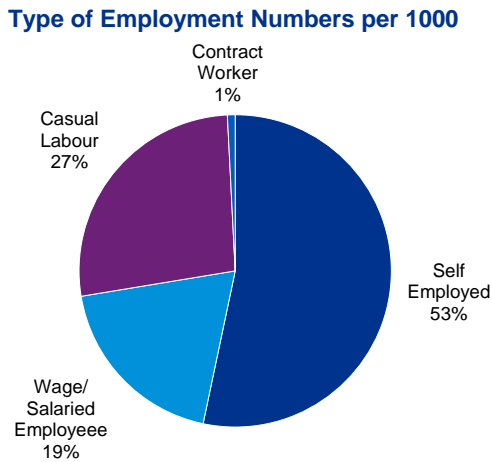
As can be seen in figure 27, almost 50% of the respondents are reported to be self-employed in the district, 19% of the workforce is reported to be salaried/wage employed, 27 % of the workforce is reported to be casual workers and 1% of the workforce is reported to be contract workers.

Source: Ministry of Labor & Employment

Education Profile of the District:

Traditional Education:

The district has 1439 schools of which 1307 are primary. Total enrolment in schools was 1,93,838 and the student-teacher ratio in the district is 20:1. The district has 58 general and technical colleges with the enrolment of approx. 35,546 students. Akola is an important educational center with several colleges affiliated with the Sant Gadge Baba Amravati University and with the main campus of Dr. Panjabrao Deshmukh Krishi Vidyapeeth (PDKV) situated in the district. Some of the other major colleges in the district are – agricultural sciences, veterinary colleges, engineering college, medical science and pharmacy colleges.

Table 27: Educational Profile of Akola District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	1,307	1,53,832
Secondary (9-12th)	132	40,006
Colleges (General and Technical)	58	35,546[31]

Source: AISHE, U-DISE

---

[31] *Enrolment figures at State run general and technical education colleges only*

Vocational Education:

Akola district has a total of 8 ITIs Government and Private with 2502 students currently enrolled in them. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Electronics, Retail, Healthcare and Government Making.

Table 28: Total no. of ITI and there training number in Akola district

Particular	Number
ITIs (Government & Private)	8
Trainee Count	2,052

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 8,926 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Electronics and Garment Making. Table below illustrates sector-wise annual training numbers in the district.

Table 29: Sector wise short- term skilling trained numbers in PMKUVA for Akola district

Sectors	Trained
Information And Communication Technology	4,076
SSC Electronics	51
Garment Making	869
Soft Skills	410
Banking and Accounting	823
Medical and Nursing	60
Automotive Repair	119
Electrical	1,018
Beauty Culture and Hair Dressing	327
Hospitality	536
Fashion Design	120
Construction	145
Electronics	200
Fabrication	52
Remaining Sectors	**120**
Total	**8,926**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

2.3 Economy

At 23692 crore (current prices) Akola district has the 23rd highest GDP in the state as of 2016-17. The per capita GDDP of Akola is INR. 1,22,687.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 65.5% towards the GDDP, secondary sector 20.7% and primary sector 13.8%.

Figure 28: Sector wise GDDP Distribution of Akola District
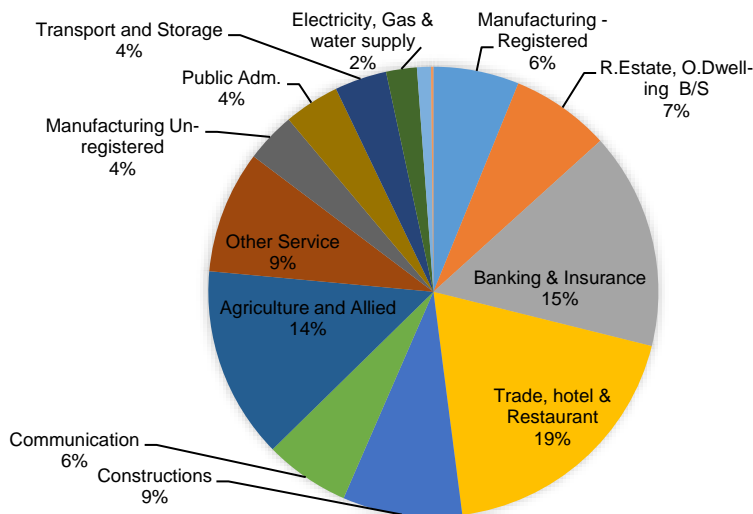
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

As presented in the figure 28, Tertiary Sector, which is the largest contributor towards the GDDP encompasses of services such as Trade, Hotel & Restaurant leading the sector by a contribution of 19%, followed by banking and insurance at 15%, real estate, ownership of dwellings and business service at 9%, and other contributing services, such as public administration, communication, transportation and storage with 4%, 6%, and 4% contribution respectively.

Known as the "cotton city", Akola is one of the largest cotton producing districts, and is a prominent road and rail junction in the Tapti River valley; which is a commercial trading centre chiefly in cotton. The growth of cotton and its use can be understood from the fact that it lies near the Tropic of Cancer and becomes very hot during the summer, making cotton a predominant wear for localities. Apart from cotton growing and rearing, crop production, is the main occupation of the people in rural parts of the region, and Soybean and jawar(sorghum) are the essential crops grown in the district apart from wheat, sunflower, canola, peanut, Bajra (pearl millet), Harbara (chick peas), Toor (pigeon peas), Urad and Moong (green gram).

In Akola, the industry accounts for over 20% of the districts GDDP, with registered and manufacturing accounting for 6% of the district's economy followed by unregistered manufacturing contributing 4% to the share.

The district has over 17 large and medium and 1403 micro & small enterprises and artisan, in total employing over 12000 people, out of which 4 major manufacturing industries of the district are: Manufacture of Food Products and Beverages, Manufacture of Chemicals and Chemical Products, Publishing, Printing and reproduction of recorded media and Manufacture of Textiles.

Manufacture of food products and beverages is the largest employment generating industry, with Manufacture of grain mill products sub-sector is giving livelihood opportunity to over 1300 people. Followed by this, is the Manufacture of vegetable and animal oils and fats sector, employing over 1000 persons. The other sectors which contribute to generating employment under the food products and beverages category include processing and preserving of fish, crustaceans and molluscs; Manufacture of bakery products, Manufacture of cocoa, chocolate and sugar confectionery, manufacture of macaroni, noodles, couscous and similar farinaceous products.

Manufacture of chemicals and chemical products is the second largest industry active in Akola. The Manufacture of pharmaceuticals, medicinal chemical and botanical products is the largest employer with

Leben Laboratories Pvt. Ltd giving employment to 345 individuals. Followed by this, is the Manufacture of pesticides and other agrochemical products sector, which employees around 230 people, mainly in Maharashtra Insecticides LTD. and Rallies India LTD. Apart from these two sub sectors, Manufacture of basic chemicals, Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations creates employment opportunities.

Publishing, printing and reproduction of recorded media is the third largest sector, with printing engaging the maximum persons in this sector. The leading employers in this section are Lokmat Media Pvt. Ltd. and Dainik Bhaskerncorp. Ltd

Manufacture of textiles is the fourth significant employment generator, in the preparation and spinning of textile fibres engaging over 200 individuals.

Other valuable manufacturing industries include manufacture of other non-metallic mineral products, manufacture of rubber and plastics products, manufacture of machinery and equipment, manufacture of basic metals, manufacture of fabricated metal products, except machinery and equipment, manufacture of coke, refined petroleum products and nuclear fuel, manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials

It is worth noting that the development of goods transportation and communication system through railway and roads in addition to extension of the electric grid system and establishment of the Paras Thermal Power Station, ensuring adequate electric power supply, has contributed to the industrial development of the city in recent years

Table 30: Employment in registered manufacturing sector in the district 2017-18 for Akola

Sector	Employment
Manufacture of food products and beverages	2,596
Manufacture of chemicals and chemical products	628
Publishing, printing and reproduction of recorded media	389
Manufacture of textiles	238
Manufacture of other non-metallic mineral products	156
Manufacture of rubber and plastics products	125
Manufacture of machinery and equipment n.e.c.	98
Manufacture of basic metals	43
Manufacture of fabricated metal products, except machinery and equipment	42
Manufacture of coke, refined petroleum products and nuclear fuel	14
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	6

Source: Annual Survey of Industries, 2017-18

Investments in the district:

Irrigation, Railway transport infrastructure services and conventional electricity are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 31: Sector wise investments in Akola District

Sector Name	Proposed investment (in INR Million)	No. of Projects
Irrigation	1,64,567.7	6
Railway transport infrastructure services	98,430.4	4
Conventional electricity	26,924	1
Road transport infrastructure services	25,314.8	6
Cosmetics, toiletries, soaps & detergents	3,600	1
Electricity transmission	2,911.3	5
Storage & distribution	1,750	1
Education	747.5	1
Diversified cotton textile	229	1
Others	10	6
Grand Total	**3,24,484.7**	**32**

Source: CMIE

2.4 Labor force Aspiration

The main findings of the youth aspirations include
Respondent Profile

Table 32: Distribution of Respondents of Akola

Profile	Details	
Urban vs. Rural	Urban	50%
	Rural	50%
Gender Profile	Male	64%
	Female	36%
Age Group	15-25 years	36%
	26-35 years	30%
	36-45 years	24%
	46-55 years	9%
	56-59 years	1%
Educational Level	Up to Xth	54%
	Up to XIIth	33%
	Any Graduation	13%
Occupational Profile	Worker	60%
	Non-Worker	40%
Average monthly household income for those working		INR 6226

Figure 29: Past/Current participation in training, % for Akola

- Have attended in the past
- Currently attending
- Haven't attended in the past

18%
9%
73%
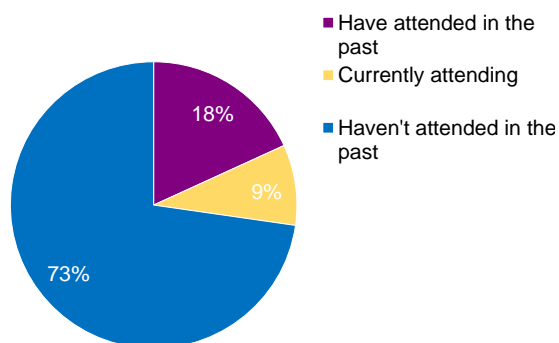
As can be seen in the figure 29, significant number of respondents (73%) shared that they hadn't attended any technical/ non-technical job related training in the past. 18% reported that they have undergone some training in the past and 9% mentioned that they are currently undergoing training. From those who did not attend the training, 69% held lack of awareness as the reason and those who knew, shared that inconvenient location, high fees and lack of time were the main root for not participating in the training.

Of those who underwent vocational training in the past, the trainings were attended at government training institutes and private training institutes, as can be seen in the figure.

Figure 30: Type of training provider, in % for Akola
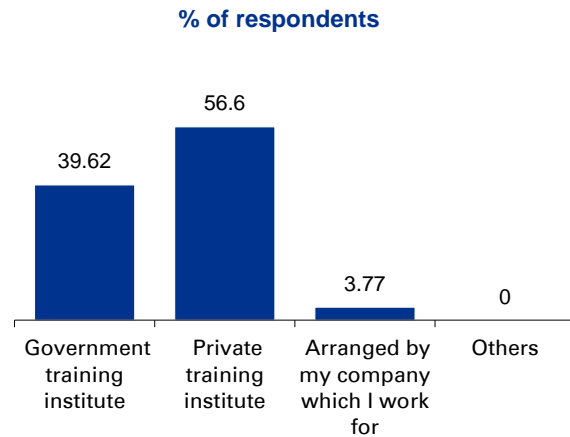
% of respondents

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

Figure 31: Key Findings related to educational attainment of the labour force of Akola district
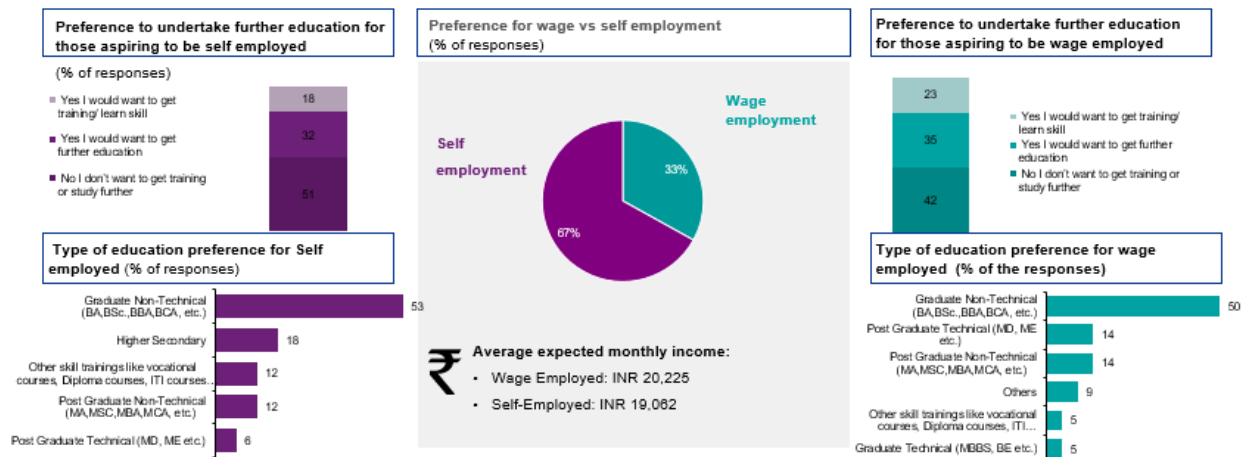
As per the figure 31, in the district, majority (67%) of the respondents aspire to be self-employed and 33% reported a preference for being wage employed. Amongst the respondents, more than 50% of wage employment aspirants have an inclination towards undertaking further education and training and under both the categories more than 50% of the aspirants are keen on undertaking graduate non-technical trainings. A positive correlation can be observed between people seeking wage employment and interested in taking training to upgrade their skills to open better employment opportunities or for better wages.

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

For wage employment	For self-employment
Governance & Administration	Art & Culture
Railways	Retail
Finance, Banking & Insurance	Food Processing industry
Healthcare & Family Welfare Services	Agriculture and allied activities
Agriculture and allied activities	

Some respondents chose 'other' sectors, which includes preferences for exploring the Beauty Wellness and Personal Health Sector.

Amongst the aspirants looking to be self-employed, an interest was expressed in opening a retail or a wholesale shop for grocery/stationery/medical/pan/clothes. They are also willing to engage into production of handicraft or food products, which can be managed working from their homes itself.

95% of the respondents have expressed that they would prefer to work within their state, Maharashtra but 37% of the respondents shared that they are willing to work outside their state if they are being paid relatively higher than their wages in Maharashtra.

Perceived benefits of acquiring training:

Out of those who attended the training, 70% felt that the training has reaped benefit such as increase in income. However, the respondents also faced challenges after attending the training, such as a gap was felt in the skill levels expected by the employers and those imparted in the trainings leading to low hiring even after attending the training. Secondly, the employers were not providing in-house training programs to develop the skill sets of the trainees and contribute to their development.

2.5 Incremental Demand & Estimation of Manpower Supply

Crop and animal production, transportation services, financial and insurance services, healthcare and social work activities, administrative and support service activities, professional, scientific & technical activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of machinery and equipment, textiles and food products and beverages.

Table 34: Incremental Demand estimates (2019-2028); in persons for Akola district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	21,425	22,264
Forestry & Logging	75	78
Fishing & Aquaculture	53	55
Sub-Total	21,553	22,397
Registered Manufacturing		
Food processing	137	144
Textiles	158	254
Chemicals and Pharmaceuticals	77	86
Metal products (except machinery and equipment)	85	83
Machinery and Equipment	511	652

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Construction	1,633	1,715
Services		
Wholesale and Retail Trade	702	892
Transportation	5,433	6,550
Logistics	682	822
IT/ITES	1,138	1,373
Hospitality	334	357
BFSI	2,036	2,648
Real Estate	407	530
Professional, Scientific & Technical Activities	1,064	1,383
Public Administration & Administrative services	8,861	11,527
Education	5,325	6,927
Healthcare	7,123	9,266
Other Services	17,950	23,350
Sub-Total	51,054	65,623

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1. *Agriculture sector* focussing on food processing and dairy
2. *Tourism & Hospitality Sector* is a relevant area due to religious temples present in the district.
3. *Fabrication and construction sector*
4. *Counselling of students and labour force* is an upcoming sector
5. Limited focus on Beauty & Wellness and IT&ITes was mentioned by the district officials

Estimation of Manpower Supply

According to KPMG estimates, Akola district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 7.01 lakh work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 35: Manpower Supply for Akola District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Akola	11,51,934	7,34,906	7,01,318

The workforce is further split across the educational attainment within the district as shown below in the Table 36.

Education level	Projected work force
Illiterate	99,392
Literate but below matric/secondary	3,06,233
Matric/secondary but below graduate	1,77,540
Technical degree or diploma equal to degree or post-graduate degree	13,854
Technical diploma or certificate not equal to degree	3,676
Graduate and above other than technical degree	38,702
Literate others	61,921

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~30,331 annually.

Table 37:Size of Target Population for Akola District

Particular	Numbers
Enrolment in VIII	32,562
Enrolment in X	32,083
Enrolment in XII	12,579
Dropout at VIII	3,533
Passing out of VIII*	29,029
Students not transitioned to IX	4,778
Dropout at X	5,672
Passing out of X*	26,411
Students not transitioned to XI	4,347
Passing out at XII**	22,843
Students not transitioned to Higher Education	15,533
Total Target population	30,331

Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 38: Vocational Education annual capacity for Akola district

Particular	Annual Capacity in Numbers
Short Term Skilling	8,926
ITI (Government & Private)	3,636

2.6 Recommendations

Akola, being one of the strategically located districts in the state, is an agrarian district predominantly driven by secondary and tertiary sectors. It has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 39: Sector specific economic growth, employment potential and aspirations for Akola district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	🟥	🟩	🟧
Forestry & Logging	🟥	🟥	🟧
Fishing & Aquaculture	🟧	🟥	🟧

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Food processing	Green	Red	Amber
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Amber
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Green
Education	Green	Green	Red
Healthcare	Green	Green	Amber
Other Services	Green	Green	Green

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; below top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Paper & Paper products, Chemicals & Pharmaceuticals, Machinery & Equipment, Automotive (including transport equipment), IT & ITeS, Real estate, Professional, scientific & technical activities, education, healthcare and other services
- **High incremental employment potential sectors**: Agriculture, Transportation, Public Administration, Education & Healthcare.

- **High Aspiration Sectors**: Public Administration & administrative services and Other services

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 40: Priority sectors for MSSDS in Akola district

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture & Allied		✓	✓
2	Food Processing	✓		✓
3	Retail	✓		✓
4	Transportation	✓	✓	
5	Healthcare	✓	✓	✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Public Administration & Administrative Services
- BFSI
- Education
- Other Services
- Machinery & Equipment

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in Table 41. The basis of selecting the job roles is through primary inputs while consulting various district officials and employers.

Table 41: Job roles across high demand sectors for Akola district

High demand sectors	Identified Job Roles
Agriculture and Allied	- Dairy Farmer - Cotton Cultivator - Micro Irrigation Technician - Greenhouse Operator - Poultry Farmer - Agriculture machinery operator

High demand sectors	Identified Job Roles
Transportation	- Transport Coordinator - Transport Duty Manager - Liquid Transport Operator - Transport Consolidator - Tank Lorry Driver
Food Processing	- Supervisor: Fruits and vegetable processing - Milling Technician - Baking Technician - Multi skill technician (food processing) - Dairy products processor
Healthcare	- Nursing - General Duty Assistant - Anesthesia technician - Home Health Aide - Emergency Medical Technician – Basic - Pharmacy Assistant
Wholesale & Retail Trade	- Retail trainee associate - Retail sales associate - Cashier - Distributor salesman - Individual sales professional / self-employed retailer
Machinery & Equipment	- CNC Operator – Turning - Fitter – fabrication - Service engineer – installation - Metal Arc Welder - Fitter – electrical and electronic assembly

3. Amravati

3.1 About the district

Amravati district is located towards the eastern side of the Maharashtra state with the district headquarters in Amravati City. The district is divided into 15 sub-districts and 1637 inhabited villages.

Amravati has a total land area of 12210 sq.km. and constitutes 3.97% of the total state area. The district lies in the western side of Vidarbha region. It is bordered by Betul district of Madhya Pradesh on the north, Nagpur on the Northeast, Wardha on the east, Yavatmal on the south, Washim on the southwest and Akola and Buldhana on the west.

The district has good connectivity with railways and roads which connects it to the bigger cities such as Mumbai, Jalgaon, Nagpur, Delhi, Chennai and Kolkata which makes markets accessible and helping trade and businesses.

The district is rich in natural resources featuring hills and vales and dense forests. Chikhaldara and Dharni talukas form the Melghat region which boasts of thick forests spread over Satpura mountain range. The forest in Dharni has mostly teak as compared to Chikhaldara which has mostly bamboo. Chikhaldhara hill station, Melghat Tiger Reserve and Gurukunj Ashram at Mozari are popular destinations among tourists.

Table 42: Comparison of Amravati District with Maharashtra

Indicator	Amravati	Maharashtra
Area in sq.km.	12,210	3,07,713
Percentage share in state geographical area, %	3.9	100
No. of Sub-districts	14	353
No. of inhabited villages	1,637	40,959
No. of households	6,44,922	24,421,519
Forest area as a % of total geographical area	26.1	16.94

Source: Census 2011

3.2 Demography

According to latest census data, the district has a population of nearly 28.8 lakh persons which is ~2.57% of the state. Of the total population, 64.09% are residing in the rural areas whereas 35.91% are residing in the urban areas of the district. The density of population according to 2011 census is 237 persons/Sq. Km.

The district's literacy rate is at 87.38% which is higher than the state average of 83%. Amravati has sex ratio (no. of females per 1000 males) of 951 which is higher than the state average of 925. While 58% of the population in the district are in the working age group (i.e. 15-59 years), about 42% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 43: Demographic Indicators of Amravati district

Indicator	Amravati	Maharashtra
Population, No.	28,87,826	11,23,74,333
Decadal growth rate of population, %	9.73	16
Urban Population as a percentage of total population, %	35.91	45.2
SC Population, %	17.13	10.2
ST Population, %	13.68	8.8
Sex ratio, No. of females per 1000 males	951	925
Population density, per sq.km.	273	365
Literacy rate, %	87.38	83
Working age population* as a percentage of total population, %	58	59
Work participation rate^, %	42	44
HDI Index	0.72	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 12.3 lakh persons. Of this, nearly 70.81% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 8.47% of workers are working in secondary sector and 20.72% workers are working in tertiary sector. As shown in the figure 32, Amravati's unemployment (per 1000) in rural areas is slightly less than the state average, whereas in urban areas it is similar. Additionally, if we compare male and female unemployment (per 1000) of Amravati to the state, both male and female unemployment rate is slightly less than the state average.

Figure 32: Share of workforce & Employment Rate for Amravati District
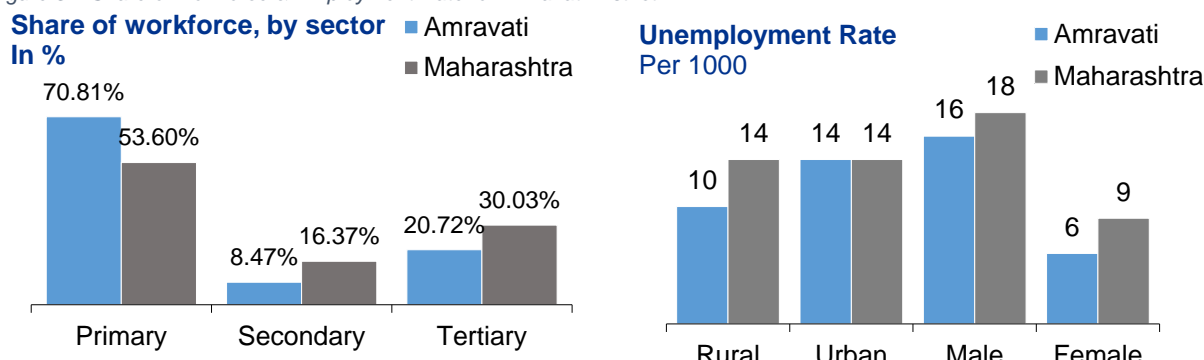
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 33: Type of employment in Amravati district
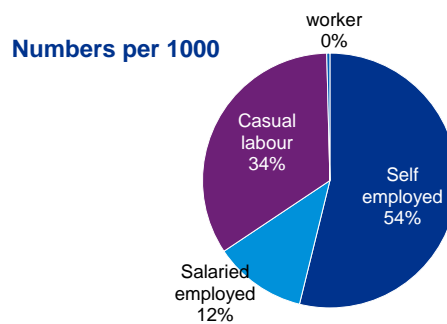
As per figure 33, maximum persons are self- employed in the district which is slightly higher than the state average followed by casual labours which is significantly higher than the state average and salaried employees which is significantly lower than the state average.

Source: Ministry of Labour & Employment

Education Profile of the District:

Traditional Education:

Amravati district has a total of 2,807 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 3.66 lakh students. The student teacher ratio is 19:1. The district also has 124 general and technical colleges in the district with the enrolment of aprrox.60, 000 students.

Table 44: Educational Profile of Amravati District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	2,135	2,26,694
Secondary Schools (IX to XII)	672	1,39,780
General Colleges & Technical Education	124	~60,000[32]

Source: AISHE, U-DISE

---

[32] Enrolment figures at State run general and technical education colleges only

Vocational Education:

The district has a total of 29 ITIs with an annual capacity of 5,414 students. There are 18 government ITIs and 13 private ITIs in the district. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Transport & Logistics, Beauty & Wellness, Agriculture, Healthcare, Information & Communication Technology and Banking & Accounting.

Table 45: Total no. of ITI and there training number in Amravati district

Particular	Number
ITIs (Government & Private)	29
Trainee Count	5,414

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 11,168 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Electrical and Garment Making. Table below illustrates sector-wise annual training numbers in the district.

Table 46: Sector wise short- term skilling trained numbers in PMKUVA for Amravati district

Sectors	Trained
Information and communication technology	2,119
Electrical	2,028
Garment making	1,247
Banking and accounting	496
Beauty culture and hair dressing	1,280
Fabrication	320
Soft skills	316
Medical and nursing	836
Automotive repair	563
Construction	30
Fashion design	1,080
Bamboo fabrication	30
Refrigeration and air conditioning	265
Agriculture	120
Remaining sectors	438
Total	11,168

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employmenta// are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

3.3 Economy
As of 2016-17, Amravati district had the 14th highest Gross District Value Added (GVA) at current prices in the state at Rs. 29,212 crores at current prices. The per capita GVA of the district is Rs. 1,17,954.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 70% towards the GDDP. Secondary sector is at 16% and primary sector is at 14%.

As per the Figure 34 indicated below, major contributors to the GDDP of the district are Trade, Hotel & Restaurant, Real Estate, Ownership of dwellings and business services, Banking & Insurance and Agriculture and allied activities.

Figure 34: Sector wise GDDP Distribution of Amravati District
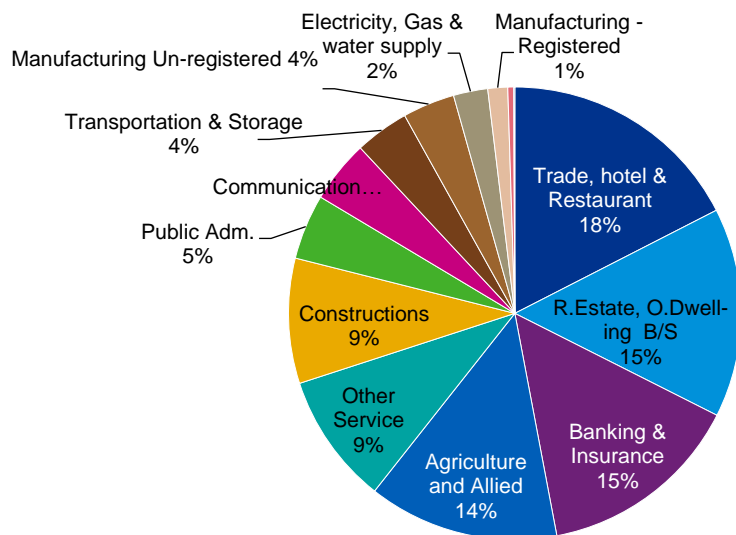
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

Agriculture and allied activities contributes to 14% of the GDDP in the district. Food grains occupy the largest cultivable area, out of which, Sorghum occupies nearly 50%. It is mainly cultivated in Tivsa, Nandgaon-Kandeshwar, Morshi, Warud and Chandur talukas. Cotton is also an important crop in the district as the soil present in the district is suitable for its cultivation. Red gram, wheat, green chickpea, sugarcane, green chilies, oranges, sweet lime and betel leaves are other crops grown in the district. The forests in Dharni and Chikhaldara talukas have bamboo and teak trees in plenty. Chikhaldara also grows coffee and is the only region to have coffee plantations in the entire State.

Amravati district has 47 registered large and medium enterprises. The district also has nearly 2572 Micro, Small and Medium Enterprises (MSME). Major manufacturing industries include textiles, food products, wholesale and retail trade and repair of motor vehicles and motorcycles and manufacture of machinery and equipment.

Manufacturing of textiles is the major industry in the district. It includes spinning, weaving and finishing of textiles and manufacture of other textiles which employs nearly 1600 persons. This constitutes nearly 39% of the employment in the registered manufacturing sector. The district also boasts a 1000 hectare textile park which has major players like Siyaram Silk Mills, Donear Industries, Raymond Luxury Cotton Ltd and many more.

Manufacturing of food products is also an important industry in the district which employs nearly 830 persons. This includes processing and preserving of fruit and vegetables, manufacturing of dairy products, manufacturing of vegetables, and animal oils and fats and manufacturing of grain mill products, starches and starch products. Bhaskar Food Pvt Ltd, CITROP India Private Limited and Khetan Agro Industries Pvt Ltd are major players in the sub-sector of the district.

Wholesale and retail trade; repair of motor vehicles and motorcycles is also an important industry in the district which employs nearly 350 persons. Major activity in this sector is the repair and maintenance of motor vehicles.

Manufacture of machinery & equipment and manufacture of other non-metallic mineral products also provides employment in the district. These two included constitutes 13% of the employment in the registered manufacturing sector.

Other important manufacturing industries include repair and installation of machinery & equipment, manufacture of chemicals and chemical products and manufacture of rubber and rubber products.

Table 47: Employment in registered manufacturing sector in Amravati district as of 2017-18

Sector	Employment
Manufacture of textiles	1,607
Manufacture of food products	829
Wholesale and retail trade; repair of motor vehicles and motorcycles	349
Manufacture of machinery & equipment n.e.c	287
Manufacture of other non-metallic mineral products	244
Repair and installation of machinery and equipment	201
Manufacture of chemicals and chemical products	135
Manufacture of rubber and rubber products	124
Manufacture of beverages	77
Manufacture of basic metals	66
Manufacture of electrical equipment	47
Other Manufacturing	42
Manufacture of leather and leather products	30
Manufacture of fabricated metal products, except machinery & equipment	22
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting minerals	19
Printing and reproduction of recorded media	17

Source: Annual Survey of Industries 2017-18

As shown above in the figure 34, Tertiary Sector is the largest contributor towards the GDDP of the district. Of all the services Trade, Hotel & Restaurant is the highest at 18%, followed by Real estate, ownership of dwellings and business services with banking and insurance at 14%. Other services, public administration, communication and transportation and storage are at 9%, 5%, 4% and 4% respectively.

Investments in the districts:

Amravati district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Irrigation, Natural Gas trading & distribution and conventional electricity are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 48: Sector wise investments in Amravati District

Sector Name	Proposed investment (in INR million)	No. of Projects
Irrigation	173,937.7	6
Natural gas trading & distribution	1,37,040	1
Conventional electricity	74,933.3	1
Road transport infrastructure services	69,800.9	12

Sector Name	Proposed investment (in INR million)	No. of Projects
Railway transport infrastructure services	27,688	2
Renewable electricity	27,338.9	4
Other textiles	18,583.2	5
Cotton & blended yarn	7,855.7	4
Housing construction	4,620.9	22
Cloth	3,980	2
Miscellaneous manufactured articles	3,300	2
Transport logistics services	1,326.8	2
Storage & distribution	1,220	1
Air transport infrastructure services	1,115.5	1
Health services	1,000	1
Other agricultural products	910.1	3
Textile processing	903.8	2
Others	264.7	9
Grand Total	**5,55,819.5**	**80**

Source: CMIE

3.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 49: Distribution of Respondents for Amravati district

Profile	Details	
Urban vs. Rural	Urban	49%
	Rural	51%
Gender Profile	Male	62%
	Female	38%
Age Group	15-25 years	31%
	26-35 years	36%
	36-45 years	22%
	46-55 years	10%
	56-59 years	1%
Educational Level	Upto Xth	59%
	Upto XIIth	29%
	Any Graduation	12%
Occupational Profile	Worker	58%
	Non-Worker	42%

Figure 35: Past/Current participation in training, % in Amravati

- Have attended in the past
- Currently Attending
- Have not attended

20%

77%

3%
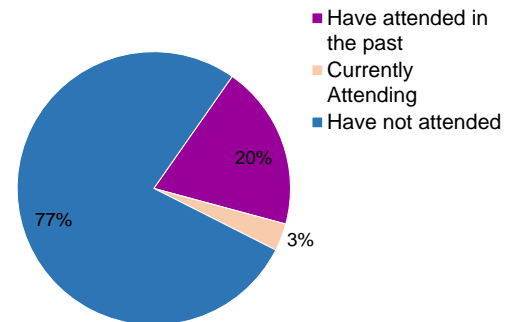
In addition to the above in figure 35, most respondents (77%) responded that they hadn't attended any technical/ non-technical job-related training in the past. 19% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings (~49 %) were attended at Private training institutes as well as government training institutes.

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 37, in the district, majority (64%) of the respondents aspire to be self-employed and 36% reported a preference for being wage employed. Amongst the respondents there is a preference to undertake further education/ learn skill for those aspiring to be wage employed as compared to those aspiring to be self-employed. Additionally, there is preference for acquiring non-technical graduation degree or complete higher secondary education amongst both wage and self-employed respondents.
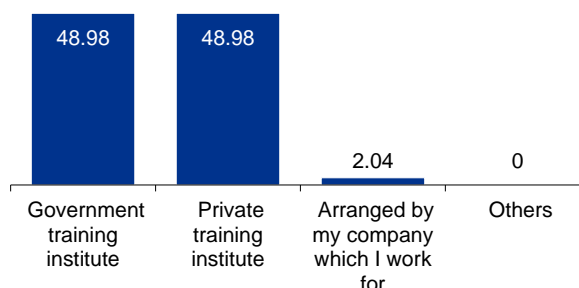
Figure 37: Key Findings related to educational attainment of the labour force of Amravati district
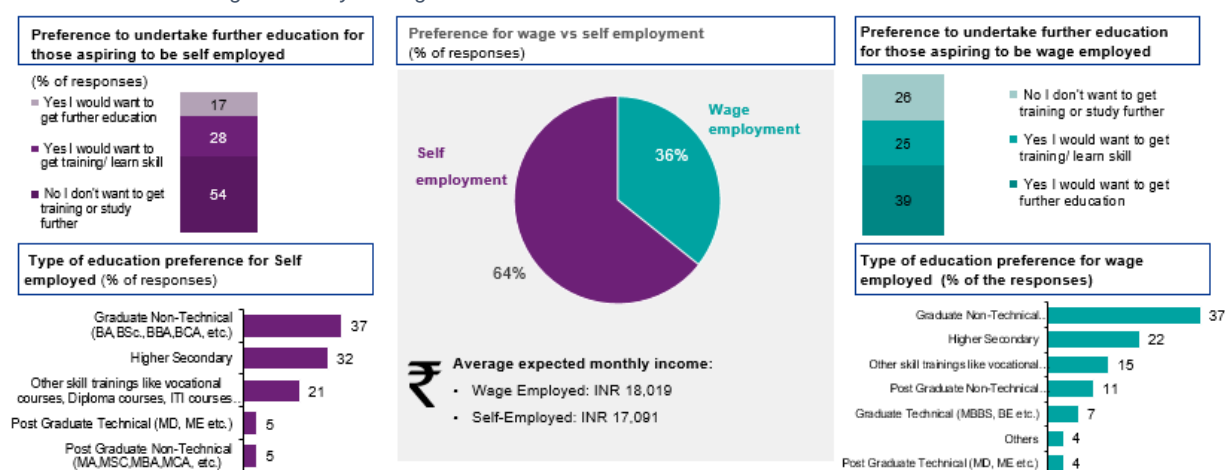
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 50: Aspirational sub-sectors for labour force in Amravati

For wage employment	For self-employment
Governance & Administration	Retail
Railways	Food Products & Handicrafts
Healthcare & Family Welfare Services	Skill Based Business (Plumbing. Mechanic etc.)
Rural Development & Panchayati Raj	Agriculture & Allied
Finance, Banking & Insurance	Garment Making

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, marketing and selling of products and handicrafts, skill based business (Plumbing, mechanic etc.), Agriculture & Allied with more interest in dairy farming, poultry farming and forestry & logging and Garment Making.

For those aspiring to be wage-employed, there was a preference towards getting jobs in governance & administration, Railways, Healthcare & family welfare services, Rural Development & Panchayati Raj and Finance, Banking & Insurance sub-sectors.

Many respondents also selected other which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 18,019 and Rs. 17,091 respectively.

Additionally, all the respondents would like to work within Maharashtra. However, 68% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

69% of those who attended a training programme stated they actually benefit from attending the training, majority state increase in income and getting a certification. Whereas, among those who didn't benefit from the training, majority state that employers are not able to provide training programs in house.

3.5 Incremental Demand & Estimation of Manpower Supply

Crop and animal production, finance and insurance activities, transportation, healthcare, manufacture of equipment machinery & equipment and construction are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of machinery and equipment and textiles.

Table 51: Incremental Demand estimates (2019-2028); in persons for Amravati district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	35,943	37,351
Forestry & Logging	126	131
Fishing & Aquaculture	89	93
Sub-Total	**36,158**	**37,575**
Registered Manufacturing		
Food processing	48	50
Textiles	1,069	1,716
Metal products (except machinery and equipment)	45	44
Machinery and Equipment	1,496	1,910
Construction	**2,769**	**2,906**
Services		
Wholesale and Retail Trade	956	1,215
Transportation	7,168	8,641
Logistics	899	1,084
IT/ITES	1,502	1,811
Hospitality	447	477
BFSI	2,725	3,545
Real Estate	545	709
Professional, Scientific & Technical Activities	1,424	1,852
Public Administration & Administrative services	14,870	19,344

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Education	8,500	11,058
Healthcare	11,371	14,792
Others	24,995	32,515
Sub-Total	**75,402**	**97,043**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1. BFSI sector with job roles like ***Insurance Agent, Banking correspondent, ATM operator, Cash collection** etc.*

2. Tourism & Hospitality Sector is also an important sector within the district

3. Agriculture Sector with ***job roles related to poultry & dairy farming***

4. Apparel Sector with job roles related to garment making, DES check for approval, loom fitter and sewing machine operator.

Estimation of Manpower Supply

According to KPMG estimates, Amravati district has a significant opportunity in terms of a favourable demographic dividend- with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 12.39 lakhs work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 52: Manpower Supply for Amravati District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce 2023
Amravati	18,50,602	12,60,861	12,39,085

The workforce is further split across the educational attainment within the district as shown below in the Table 53.

Table 53 Educational Attainment of projected workforce for Amravati District

Educational Level	Projected Workforce
Illiterate	1,90,037
Literate but below matric/secondary	6,03,510
Matric/secondary but below graduate	3,03,051
Technical degree or diploma equal to degree or post-graduate degree	26,092
Technical diploma or certificate not equal to degree	7,546
Graduate and above other than technical degree	77,678
Literate others	31,172

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~45240 annually.

Table 54: Size of Target Population for Amravati District

Particular	Numbers
Enrolment in VIII	48,326
Enrolment in X	47,669
Enrolment in XII	18,772
Dropout at VIII	**6,384**
Passing out of VIII*	41,942
Students not transitioned to IX	**6,904**
Dropout at X	**10,783**
Passing out of X*	36,886
Students not transitioned to XI	**6,071**
Passing out at XII**	31,592
Students not transitioned to Higher Education	21,482
Total Target population	**45,240**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 55: Vocational Education annual capacity for Amravati district

Particular	Annual Capacity in Numbers
Short Term Skilling	13,740
ITI (Government & Private)	9,768

3.6 Recommendations

Amravati, being one of the regional headquarter of the state is predominantly driven by secondary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 56: Sector specific economic growth, employment potential and aspirations for Amravati district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Orange
Forestry & Logging	Red	Red	Orange
Fishing & Aquaculture	Orange	Red	Orange
Food processing	Green	Red	Orange
Tobacco	Green	Red	Red
Textiles	Orange	Red	Red
Apparel	Orange	Red	Orange
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Orange	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Amber
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Green
Education	Green	Green	Red
Healthcare	Green	Green	Amber
Other Services	Green	Amber	Green

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses-medium; below top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Chemical & Pharmaceuticals, Machinery & equipment, Automotive including transport equipment, IT & ITeS, Real estate, Professional, Scientific & Technical activities, Public Administration & Administrative services, Education & Healthcare
- **High incremental employment potential sectors**: Agriculture, Transportation, Education & Healthcare
- **High Aspiration Sectors**: Public Administration & Administrative services and Other services

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 57: Priority sectors for MSSDS for Amravati district

Sl. No.	Sector	High Growth	High Economic Potential	High aspiration
1	Food Processing	✓		✓
2	Healthcare	✓	✓	✓
3	BFSI	✓	✓	✓
4	Transportation	✓	✓	
5	Wholesale and Retail Trade	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Textiles
- Education
- Agriculture and Allied
- Public Administration & Administrative services
- Other services

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in Table 58. The basis of selecting the job roles is through the primary inputs while consulting various district officials and employers

Table 58: Top Job Roles Identified for the district as per incremental demand & aspiration of the labourforce for Amravati district

Sector Name	Top Job Roles
Agriculture & Allied	Cotton Cultivator
	Dairy Farmer
	Citrus Fruit Cultivator
	Micro Irrigation Technician
	Greenhouse Operator
BFSI	Accounts Executive (Accounts Payable & Receivable)
	Business Correspondent & Business Facilitator
	ATM Operator
	Insolvency Associate
	Insurance Agent
Transportation	Transport Coordinator
	Transport Duty Manager
	Liquid Transport Operator
	Transport Consolidator
	Tank Lorry Driver
Healthcare	General Duty Attendant
	Home Health Aide
	Assistant Physiotherapist
	Emergency Medical Technician- Basic
	Pharmacy Assistant
Machinery & Equipment	Fitter- Mechanical Assembly
	Manual Metal Arc Welding
	CNC Operator- Turning
	Draughtsman- Mechanical

Sector Name	Top Job Roles
	Lab Technician- Metal Tester
Textiles	Fitter- Spinning Preparatory
	Knitting Machine Operator
	Loom Fitter
	Sewing Machine Operator
	Assistant Ginning Fitter
Food Processing	Supervisor: Fruits and vegetable processing
	Milling Technician
	Multi skill technician (food processing)
	Dairy products processor

4. Aurangabad

4.1 About the district

Aurangabad district is located centrally in Maharashtra, in the Godavari and north-west part of Tapi River basins. The district is divided into 9 sub districts and 1314 inhabited villages.

Aurangabad has a total land area of 10,107 sq. km. and constitutes 3.28% of the total state area. The district is land locked, and bordered by districts of Nashik, Ahmadnagar, Jalna, and Jalgaon.

The district is well connected to major cities of India by air, rail and road. The city has its own international airport. It is the regional headquarter of the Aurangbad region, comprising of the districts of Jalna, Beed, Osmanadbad, Nanded, Latur, Parbhani, Hingoli.

Aurangabad is a tourism hub and witnesses a huge tourist traffic due to world heritage sights Ajanta and Ellora Caves and historical monuments from the Mughal era.

Table 59: Comparison of Aurangabad District with Maharashtra

Indicator	Aurangabad	Maharashtra
Area in sq.km.	10,107	3,07,713
Percentage share in state geographical area, %	3.28%	100
No. of Sub-districts	9	353
No. of inhabited villages	1,314	40,959
No. of households	7,36,587	24,421,519
Forest area as a % of total geographical area	5.51%	16.94

Source: Census 2011

4.2 Demography

The population of Aurangabad is 37, 01, 282 per census 2011, with urban population of 43.77 %.

The district has a literacy rate of 79% and sex ratio of 923 females per 1000 males, which is lower than state average of 83% and 925 respectively.

While close to 60% of the district's population is in the working age group (15-59 years), 44% is actually working.

Table 60: Demographic Indicators of Aurangabad district

Indicator	Aurangabad	Maharashtra
Population, No.	37,01,282	11,23,74,333
Decadal growth rate of population, %	27.76	16
Urban Population as a percentage of total population, %	43.77	45.2
SC Population, %	4.06	10.2
ST Population, %	1.36	8.8
Sex ratio, No. of females per 1000 males	923	925
Population density, per sq.km.	366	365
Literacy rate, %	79.02	83
Working age population* as a percentage of total population, %	59.78	59
Work participation rate^, %	43.69	44
HDI Index	0.727	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a total workforce of 15.7 lakh persons, of which 61% are engaged in primary sector (agriculture and allied activities and mining), 16% in the secondary sector and 24% in the tertiary sector. As indicated in the figure 38 below, Aurangabad has a higher rate of unemployment compared to the state.

72 per 1000 people the labour force are unemployed in urban areas in Aurangabad compared to 14 per 1000 for Maharashtra

Figure 38: Share of workforce & Employment Rate for Aurangabad district
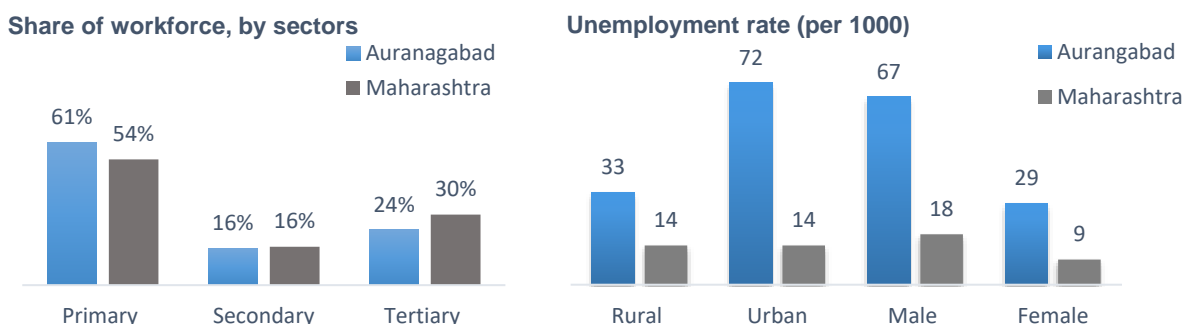
Share of workforce, by sectors
- Auranagabad
- Maharashtra

Primary: 61% / 54%
Secondary: 16% / 16%
Tertiary: 24% / 30%

Source: Census 2011

Unemployment rate (per 1000)
- Aurangabad
- Maharashtra

Rural: 33 / 14
Urban: 72 / 14
Male: 67 / 18
Female: 29 / 9

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 39: Type of employment in Aurangabad district

As per figure 39, maximum persons are self- employed in the district which is slightly higher than the state average followed by casual labours which is also higher than the state average. 10 % are salaried employees which is significantly lower than the state average.
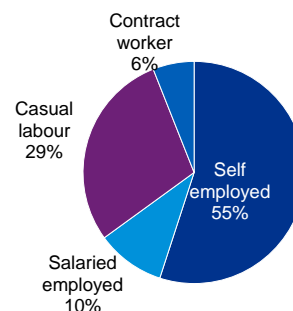
Contract worker 6%
Casual labour 29%
Self employed 55%
Salaried employed 10%

Source: Ministry of Labour & Employment

*Education Profile of the District***:**

Traditional Education:

The district has 4969 schools of which 3963 are primary. Total enrolment in schools was 947487. The student-teacher ratio in the district is 24:1.

The district also has 206 general and technical colleges in the district with the enrolment of approx. 97500 students as shown in the table below:

Table 61: Educational Profile of Aurangabad District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,963	6,80,912
Secondary Schools (IX to XII)	1,006	2,66,575
General Colleges & Technical Education	206	~97,500[33]

Source: AISHE, U-DISE

---

[33] Enrolment figures at State run general and technical education colleges only

Vocational Education:

Aurangabad district has a total of 17 ITIs Government and Private with 2150 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Auto and Auto Components, Beauty and Wellness, Tourism and Hospitality.

Table 62: Total no. of ITI and there training number in Aurangabad district

Particular	Number
ITIs (Government & Private)	17
Trainee Count	2,150

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 16,512 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making and Beauty and Wellness. Table below illustrates sector-wise annual training numbers in the district.

Table 63: Sector wise short- term skilling trained numbers in PMKUVA for Aurangabad district

Sectors	Trained
Information and communication technology	6,675
Garment making	2,994
Beauty culture and hair dressing	3,769
Fashion design	1,140
Business and commerce	30
Soft skills	649
Medical and nursing	828
Plastic processing	217
Production and manufacturing	60
Travel and tourism	150
Total	**16,512**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Majority of the surveyed respondents in the district stated receiving their training from a private training institute.

4.3 Economy

At 62,915 crore, Aurangabad district has the 9th highest GVA (at current prices) in the state as of 2016-17. Per capita GVA of Aurangabad is Rs. 137,291 in the same year, ranking 11th in the state.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 70% towards the GDDP. Secondary sector is at 16% and primary sector is at 14%.

As per the figure 40, major contributors to the GDDP of the district are Registered Manufacturing, Trade, Hotel & Restaurant, Agriculture and Allied activities and Banking & Insurance services.

Figure 40: Sector wise GDDP Distribution of Aurangabad District
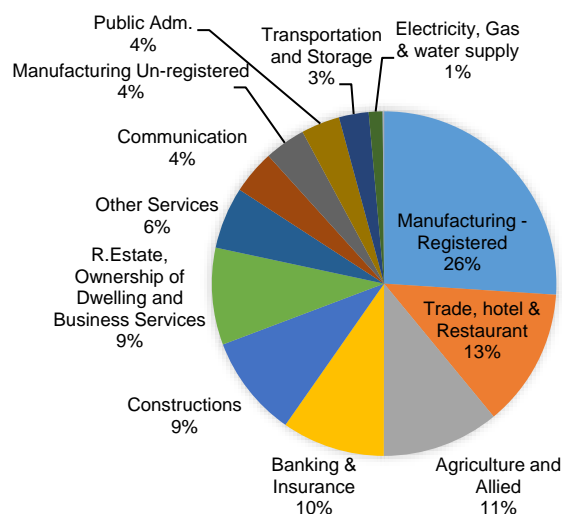
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

Agriculture and allied activities contribute to 11% of the district's GDDP. Major crops grown in the district include Jowar, Pearl Millet, Wheat and Gram and Soyabeen. Cotton is the major cash crop of the district. Sweet lime, mangoes, onion and ginger are the other major fruit and vegetable crops of the district.

Industry accounts for over 40% of the districts GDDP, with registered manufacturing being the single largest contributor, accounting for 26% of the district's economy followed by constructions with 9% share.

The district has over 13,000 large and, micro, small and medium industrial units. 4 major manufacturing industries of the district are: Auto and Auto components, pharmaceuticals, plastics and food processing.

Auto and Auto components is the major industry in the district. Manufacture of transport equipment alone employs over 27,800 people. About 9,300 are engaged in manufacture of motor vehicles, trailers and semi-trailers. Together these two industries account for 34% of the employment in registered manufacturing. The district has hosts manufacturing plants for major automotive players Skoda and Bajaj Auto Ltd.

The district also has a major **pharmaceutical industry**.14, 776 people are engaged in the manufacture of chemical, and chemical products, pharmaceuticals, and other medicinal products of which about 12,000 are engaged in pharmaceutical and medicinal products alone. Manufacturing plants for major pharma players – Lupin Ltd. and Ajanta Pharma, among others are located in Aurangabad.

Plastic is another important industry of the district. Manufacture of rubber and plastics together employs 13,335 people of which 75% are engaged in plastic products manufacturing. The industry is however, declining gradually in the recent years.

Food and beverage processing is also a major industry in the district employing over 11,000 people. Of these majority are engaged in meat processing, processing of grain mill products such as flour, rice and dal milling, other grain milling, vegetable milling, manufacture of breakfast cereals, flour mixes etc, processing and blending or tea and coffee, processing of edible nuts and spices. The beverage manufacturing employs close to 4500 people mainly engaged in distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials, manufacture of malt liquors and malt.

Other important manufacturing industries include manufacturing of machinery and equipment, fabricated metal products, electrical equipment, computer electronic and electrical products and basis metals.

Table 64: Employment in registered manufacturing sector in Aurangabad district 2017-18

Sector	Employment
Manufacture of other transport equipment	27,862
Manufacture of chemicals and chemical products, pharmaceuticals, medicinal chemical and botanical products	14,776
Manufacture of rubber and plastics products	13,335
Manufacture of food products and beverages	11,176
Manufacture of motor vehicles, trailers and semi-trailers	9,337
Manufacture of machinery and equipment n.e.c.	7,438
Manufacture of fabricated metal products, except machinery and equipment	6,800
Manufacture of electrical equipment	6,734
Manufacture of computer, electronic and electrical products	4,573
Manufacture of basic metals	3,935
Manufacture of other non-metallic mineral products	1,999
Manufacture of paper and paper products	1,676
Publishing, printing and reproduction of recorded media	876
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	233
Manufacture of textiles	90
Manufacture of tobacco products	57

Source: Annual Survey of Industries, 2017-18

Service sector contributing to over 48% of the district's economy, is led by Trade, Hotels and Restaurants, followed by banking and insurance services and Real estate, ownership of dwellings and business services.

Investments in the districts:

Aurangabad district being one of the industrial districts in the state has attracted a lot of investment in various sectors.. Electricity transmission, Road transport infrastructure services and development of commercial complexes are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 65: Sector wise investments in Aurangabad District

Sector Name	Proposed Investment (in INR Million)	No of projects
Electricity transmission	3,34,790	11
Road transport infrastructure services	1,54,106.5	22
Commercial complexes	1,10,018.4	4
Steel	68,737.2	4
Irrigation	63,619.6	4
Storage & distribution	20,750	3
Wires & cables	17,750	5
Tyres & tubes	16,395	6
Drugs & pharmaceuticals	13,431.8	22
Man-made filaments & fibres	13,100	2
Passenger vehicles	11,720	6
Others	1,07,766	219
Total	**9,32,184.7**	**308**

Source: CMIE

4.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 66: Distribution of Respondents in Aurangabad

Profile	Details	
Urban vs. Rural	Urban	54%
	Rural	46%
Gender Profile	Male	70%
	Female	30%
Age Group	15-25 years	32%
	26-35 years	46%
	36-45 years	18%
	46-55 years	4%
	56-59 years	42%
Educational Level	Upto Xth	32%
	Upto XIIth	26%
	Any Graduation	68%
Occupational Profile	Worker	32%
	Non-Worker	54%

Figure 41: Past/Current participation in training, %

- Have attended in the past (15%)
- Currently attending (3%)
- Haven't attended in the past (82%)

In addition to the above in figure 41, most respondents (77%) responded that they hadn't attended any technical/ non-technical job related training in the past. 19% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings (~59 %) were attended at Private training institutes as well as government training institutes.

Figure 42: Type of training provider, in % Aurangabad district

Government training institute	Private training institute	Arranged by my company which I work for	Others
40.63	59.38	0	0

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 43, in the district, majority (57%) of the respondents aspire to be self-employed and 43% reported a preference for being wage employed. Amongst the respondents, the self-employment aspirants have a higher preference to undertake further education and training.

Additionally, there is preference for acquiring vocational education amongst both wage and self-employed respondents.

Figure 43: Key Findings related to educational attainment of the labour force in Aurangabad district
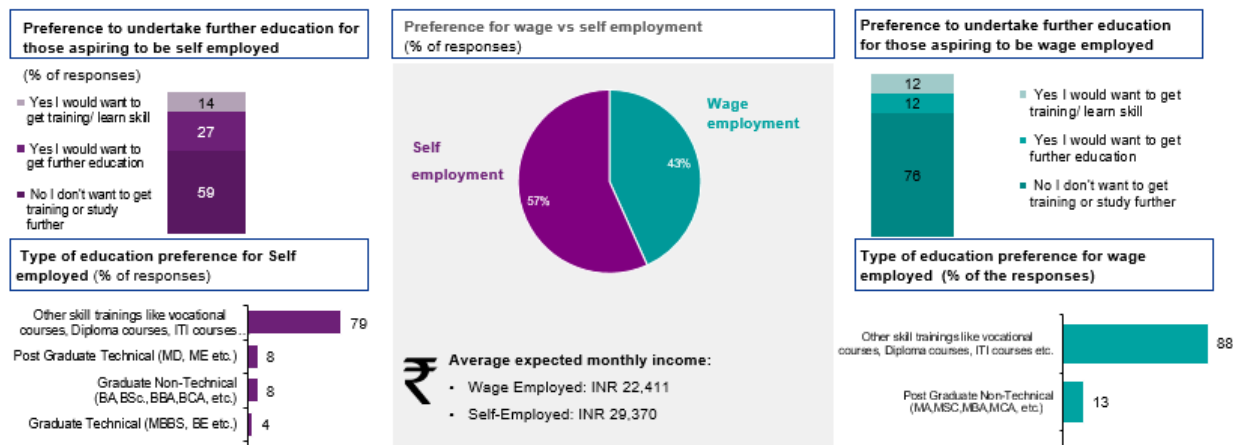
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 67: Aspirational sub-sectors for labour force for Aurangabad district

For wage-employment	For self employment
Governance & Administration	Retail
Automobiles and auto ancillaries	Other Manufacturing
Finance, Banking & Insurance	Agriculture and allied activities
Engineering and capital goods	Food Processing
Healthcare & Family Welfare Services	

Some respondents chose 'other' sectors which included preferences for opening a kirana store or working as a housekeeping staff.

For those aspiring to be self-employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, outlets for offering beauty and wellness services and setting up of a manufacturing unit.

Additionally, 98% of the respondents would like to work within Maharashtra. However, 41% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home. This is lower compared to many other districts in the state and may indicate willingness to take up better work opportunities in other districts.

Perceived benefits of acquiring training:

68% of those who attended a training programme stated no benefit from attending the training. Among those who did benefit from the training, majority state increase in income as the main benefit. There was a mixed response when the respondents were asked to highlight the major challenges after attending the training programmes.

4.5 Incremental Demand & Estimation of Manpower Supply

Manufacture of machinery and equipment, crop and animal production, manufacture of fabricated metal products, other transport and equipment, transportation services, banking and financial services and healthcare are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of machinery and equipment and metal products and transport equipment, even though a high proportion of the current workforce is also engaged in manufacture of motor vehicles, trailers and semi-trailers.

Table 68: Incremental Demand estimates (2019-2028); in persons for Aurangabad District

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	39,332	40,874
Forestry & Logging	138	144
Fishing & Aquaculture	98	101
Sub-Total	**39,568**	**41,118**
Registered Manufacturing		
Food processing	590	621
Textiles	60	96
Wood work	24	26
Chemicals and Pharmaceuticals	1,806	2,022
Rubber and Plastics	436	450
Iron and Steel	188	197
Metal products (except machinery and equipment)	13,808	13,482
Machinery and Equipment	38,769	49,507
Automotive	701	753
Automotive (transport equipment)	8,830	11,484
Construction	**4,704**	**4,938**
Services		
Wholesale and Retail Trade	1,332	1692
Transportation	10,921	13,166
Logistics	1,370	1,652
IT/ITES	2,288	2,759
Hospitality	989	1,055
BFSI	4,682	6,090
Real Estate	936	1,218
Professional, Scientific & Technical Activities	2,446	3,182
Public Administration & Administrative services	21,843	28,415
Education	10,802	14,053
Healthcare	14,450	18,798
Others	35,788	46,555
Sub-Total	**1,07,848**	**1,38,635**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing
The registered manufacturing subsectors above, account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Medical Tourism (Healthcare) Sector with job roles like **Nursing, General Duty Attendant, X-ray/dialysis technician, trauma care and Yoga trainers** etc.

- BFSI sector with job roles like **Insurance Agent, Banking correspondent, ATM operator, Cash collection** etc.

- **Tourism & Hospitality Sector** is also an important sector within the district

- Agriculture Sector with **job roles related to scientific agriculture such as Surface coating, Soil Testing & Crop Technician**

Estimation of Manpower Supply

Aurangabad district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 18.34 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 69: Manpower Supply for Aurangabad District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Aurangabad	26,28,533	19,77,734	18,34,508

Table 70: Projected workforce by education levels for Aurangabad District

Education level	Projected work force
Illiterate	4,66,545
Literate but below matric/secondary	6,72,833
Matric/secondary but below graduate	4,49,517
Technical degree or diploma equal to degree or post-graduate degree	41,748
Technical diploma or certificate not equal to degree	18,019
Graduate and above other than technical degree	1,42,255
Literate others	43,590

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~64503 annually.

Table 71: Size of target population in Aurangabad district

Particular	Numbers
Enrolment in VIII	81,391
Enrolment in X	70,682
Enrolment in XII	23,866
Dropout at VIII	**8,193**
Passing out of VIII*	73,198
Students not transitioned to IX	**12,048**
Dropout at X	**6,524**
Passing out of X*	64,158
Students not transitioned to XI	**10,560**
Passing out at XII**	52,016
Students not transitioned to Higher Education	35,371
Total Target population	**64,503**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 72: Vocational Education annual capacity for Aurangabad district

Particular	Annual Capacity in Numbers
Short Term Skilling	28,260
ITI (Government & Private)	4,240

4.6 Recommendations

As highlighted in the above analysis, registered manufacturing sub sectors - machinery and equipment and fabricated metal products and services – BFSI, healthcare, transportation, administrative and education services have a high employment potential in the district. These are also the sectors with high economic growth.

However, economic growth of the district is also driven by presence of sectors such as auto and auto ancillaries, food processing, pharmaceuticals, and services such as tourism and hospitality, wholesale and retail trade, logistics, arts, entertainment and recreation. Agriculture, although a low economic growth sector, also has a high employment potential, especially in rural areas.

The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below -

Table 73: Sector specific economic growth, employment potential and aspirations for Aurangabad district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Orange
Forestry & Logging	Red	Red	Orange
Fishing & Aquaculture	Orange	Red	Orange
Food processing	Green	Red	Orange
Tobacco	Green	Red	Red
Textiles	Orange	Red	Red
Apparel	Orange	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Orange	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Orange	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Orange	Green	Orange
Machinery and Equipment	Green	Green	Orange
Automotive	Green	Red	Orange
Automotive (transport equipment)	Green	Orange	Orange
Construction	Red	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Wholesale and Retail Trade	Amber	Red	Green
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Green
Education	Green	Amber	Red
Healthcare	Green	Green	Amber
Other Services	Green	Green	Red

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the above analysis of the district and keeping in view the primary insights from field visits the sectors, the following sectors are proposed to be taken on priority by MSSDS:

Table 74: Priority sectors for MSSDS for Aurangabad district

Sl. No.	Sector	High or Medium Economic Growth	High or Medium Employment Potential	High or medium Aspiration
1	Automotive (including transport equipment)	✓	✓	✓
2	BFSI	✓	✓	✓
3	Machinery and equipment, metal products	✓	✓	✓
4	Healthcare	✓	✓	
5	Transportation	✓	✓	

Apart from the above priority sectors, MSSDS can also explore the potential of following sectors in the district

- Tourism and Hospitality
- Agriculture and Allied
- Food processing
- Retail
- Public Administration & Administrative services
- Education

These sectors have additional employment generation potential, capacity to support economic growth, and aspirational value in the district.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in Table 75. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 75: Job Roles across high demand sectors for Aurangabad district

High demand sectors	Identified Job Roles
Machinery & Equipment	• Fitter- Mechanical Assembly • Manual Metal Arc Welding • CNC Operator- Turning • Draughtsman- Mechanical • Lab Technician- Metal Tester
Transportation	• Transport Coordinator • Transport Duty Manager • Liquid Transport Operator • Transport Consolidator • Tank Lorry Driver • Heavy Vehicle Driver
BFSI	• Insurance Agent • Banking Correspondent • ATM operator • Cash Collection • Accounts Executive • Micro-Finance Executive • Goods & Services Tax (GST)
Healthcare	• Nursing • General Duty Assistant • X-ray/dialysis technician • Home Health Aide • Diet Assistant • Emergency Medical Technician – Basic • Pharmacy Assistant
Automotive (including transport equipment)	• Vehicle Assembly Fitter/ Technician • Automotive Service Technician • Maintenance Technician Mechanical • Auto Component Assembly Fitter • Automotive Engine Repair Technician • E-vehicle related job roles • E-vehicle charging stations related job roles
Construction & Real Estate	• Mason • Bar bender & Steel fixer • Construction UT Tester • Assistant Surveyor • Draughtsman • Scaffolder

High demand sectors	Identified Job Roles
Logistics	• Loader/Unloader • Reach Truck Operator • Shipment Bagging Agent • Rail Mounted Quay Crane (RMQC) Operator • Port Operation-Signalman
Tourism & Hospitality	• Heritage Tour Guide • Tour Vehicle Driver • Meet & Greet Officer • Front Office Associate
Food Processing	• Cold Storage Technician • Dairy Processing Equipment Technician • Industrial Production Worker-Food Processing • Mixing Technician
Multi-purpose Job Roles	• Electrician • Electronics • Plumber • AC Service Technician • Crane Operator • JCB Operator

5. Bhandara

5.1 About the district

Bhandara district is located in the eastern region of the Maharashtra state with the district headquarters in Bhandara City. The district is included in Nagpur division. Bhandara is divided into 7 sub-districts and 870 inhabited villages.

Bhandara constitutes 1.2% of the total state area with a land area of ~3,717 sq.km. It is bordered by Nagpur district to the West, Chandrapur district to the South, Gondia district to the East and Balaghat district (Madhya Pradesh) to the North. With several ancient temples and historical monuments, along with lakes, parks and sanctuaries, Bhandara attracts many tourists. The popular tourist destinations include Ambagad Fort, Brahmi, Chinchgad, and Dighodi.

Bhandara is known as the mining district of the state for its rich mineral resources. It is known as the "District of Lakes". Bhandara is also known for its large production of rice.

Table 76: Comparison of Bhandara District with Maharashtra

Indicator	Bhandara	Maharashtra
Area in sq.km.	3,717	3,07,713
Percentage share in state geographical area, %	1.21	100
No. of Sub-districts	7	353
No. of inhabited villages	870	40,959
No. of households	2,77,266	24,421,519
Forest area as a % of total geographical area	36.16	16.94

Source: Census 2011

5.2 Demography

According to 2011 census data, the district has a population of over 11.3 lakh persons which is ~1% of the state. There are two villages in the district having population of 10,000 and above. Bhandara is one of the least urbanized district having about one-fifth of its population living in urban areas where as more than two-fifth of the state population lives in urban areas. With a population density of 306 persons/Sq. Km which is lower than the state average, the district is one of the medium-intensity regions in the state.

Table 77 lists down multiple demographic indicators of the district. Bhandara district fares well in human development indicators like sex ratio and literacy rate. The district has higher sex ratio (number of female per 1000 males) of 982 as compared to the state. About three-fifth of the district's population falls in the working age group (i.e. 15-59 years) while about 34% of its population is actually working i.e. % of total workers (main and marginal workers) to the total population. The workforce participation rate in the district is significantly lower than the state. As large as ~65% of the district's population are non-workers.

Table 77: Demographic Indicators of Bhandara district

Indicator	Bhandara	Maharashtra
Population, No.	11,36,146	11,23,74,333
Decadal growth rate of population, %	5.65	16
Urban Population as a percentage of total population, %	19.48	45.2
SC Population, %	16.69	10.2
ST Population, %	7.41	8.8
Sex ratio, No. of females per 1000 males	982	925
Population density, per sq.km.	306	365
Literacy rate, %	83.76	83
Working age population* as a percentage of total population, %	58	59
Work participation rate^, %	34.48	44
HDI Index	0.781	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 5.96 lakh persons. Figure 44, suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by tertiary and secondary sector. 74% of the workforce is engaged in the primary sector whereas 10% of the total workforce is engaged in the secondary sector in the district. As shown in the Figure 44 below, the rate of unemployment (per 1000) in the district is significantly higher than the state average across all the categories. The rate of unemployment (per 1000) in urban areas of the district is as much as twice of the state average rate of unemployment which presents a stark difference.

Figure 44: Share of workforce & Employment Rate for Bhandara District
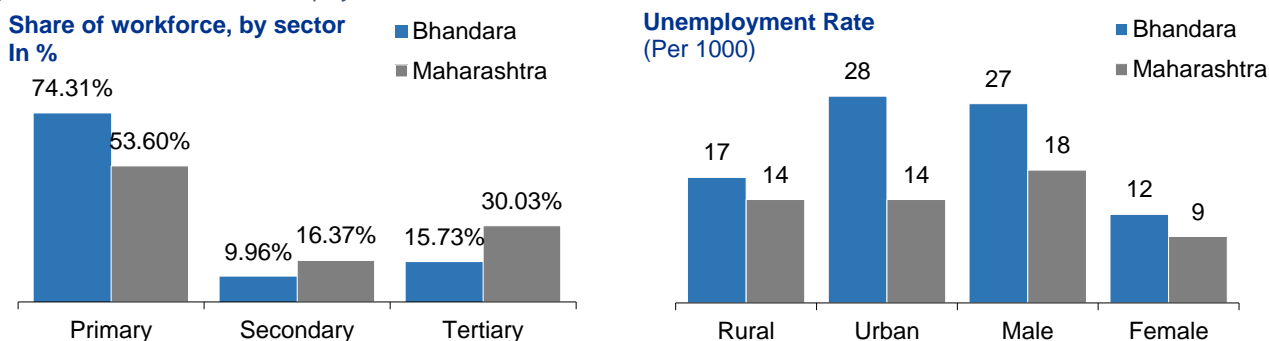
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in figure 45, about 70% of the working population in Bhandara is self-employed. Percentage of self-employment in the workforce is the highest in Bhandara district when compared against other districts of the state. 14% of the workforce is engaged in the district as casual labor which is significantly higher than the state average of 3%. Proportion of salaried employment in the district is almost half of the state average.
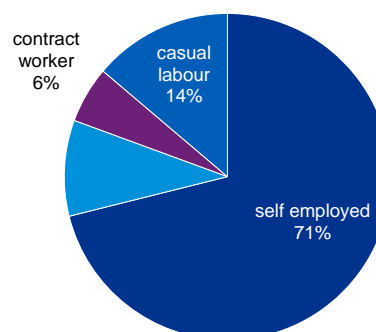
Figure 45: Type of employment in the district
Source: Ministry of Labour & Employment

Education Profile of the district:

Traditional Education:

Bhandara district has a total of 1,623 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of over 1.4 lakh students. The Pupil-Teacher ratio of the district is 18. The district also has 72 general and technical colleges with an enrolment of about 25,000 students in state-run general and technical colleges.

Table 78: Educational Profile of Bhandara District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1,288	1,44,598
Secondary Schools (IX to XII)	335	80,381
General Colleges & Technical Education	72	25,000[34]

Source: AISHE, U-DISE

---

[34] Enrolment figures at State run general and technical education colleges only

Vocational Education:

The district has a total of 45 ITIs with an annual capacity of 3,672 students. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY,DDU-GKY and NSDC Fee Based) are Healthcare, Retail, Tourism and Hospitality, Information and Communication technology, Textiles and Clothing, Telecom and Electronics.

Table 79: Total no. of ITI and there training number in Bhandara district

Particular	Number
ITIs (Government & Private)	45
Trainee Count	3,672

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 3,788 students are trained annually in the district under the scheme. Top Sectors include Beauty and Wellness, Information and Communication Technology and Medical & Nursing. Table below illustrates sector-wise annual training numbers in the district.

Table 80: Sector wise short- term skilling trained numbers in PMKUVA for Bhandara district

Sectors	Trained
Information And Communication Technology	698
Garment Making	210
Ssc Apparel	141
Ssc Construction	81
Ssc Electronics	180
Fashion Design	120
Beauty Culture And Hair Dressing	849
Medical And Nursing	473
Banking And Accounting	90
Electrical	260
Fabrication	230
Automotive Repair	120
Production And Manufacturing	55
Electronics	60
Remaining Sectors	221
Total	**3,788**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

It is to be noted that about three-fifth of the respondents stated receiving their training from a private training institute. The district also has government training providers to enhance the skills of the people and about two-fifth of the respondents were found to be receiving their training from them. A few respondents mentioned receiving trainings organized by their employers.

5.3 Economy

As of 2016-17, Bhandara district was amongst the bottom five districts of the state in terms of Gross District Value Added (at current prices) with the figure at Rs. 13,763 crores. In Maharashtra, the district accounting for the highest contribution to the GDVA (at current prices) in 2016-17 contributes as much as twenty-eight times of Bhandara. The per capita GDVA (at current prices) for 2016-17 was recorded at Rs. 1,09,097. It is interesting to note that Bhandara is one of the twelve districts in Maharashtra currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

In Bhandara, the service sector contributes to 59% of the district economy despite employing only around ~16% of the district's workforce. The agriculture and allied activities contribute to 14% and the industry sector contributes to 27% of the GDDP.

In Bhandara district, most of the cropped area is under rice cultivation revealing that rice is king crop of the district. Tumsar, a tahsil town, is a noted rice market. Bhandara is also referred to as 'Rice Bowl of Maharashtra'. Other major crops grown in the district include Pigeon Pea, Wheat, Groundnut, Soyabean and Gram.

Trade and Hospitality and Banking and Insurance services are the sub-sectors which account for the largest contribution to the GDDP of Bhandara as can be seen in figure 46.

Bhandara district has 7 registered large and medium enterprises which employs approximately 2,856 persons. The economy of the district is mainly depending on agriculture, mining and forest products. Bhandara town is also known as "Brass City" owing to the presence of a large brass products industry. Sunflag Iron Steel company and Shivmangal Ispat Pvt. Ltd. are major industrial undertakings in the district.
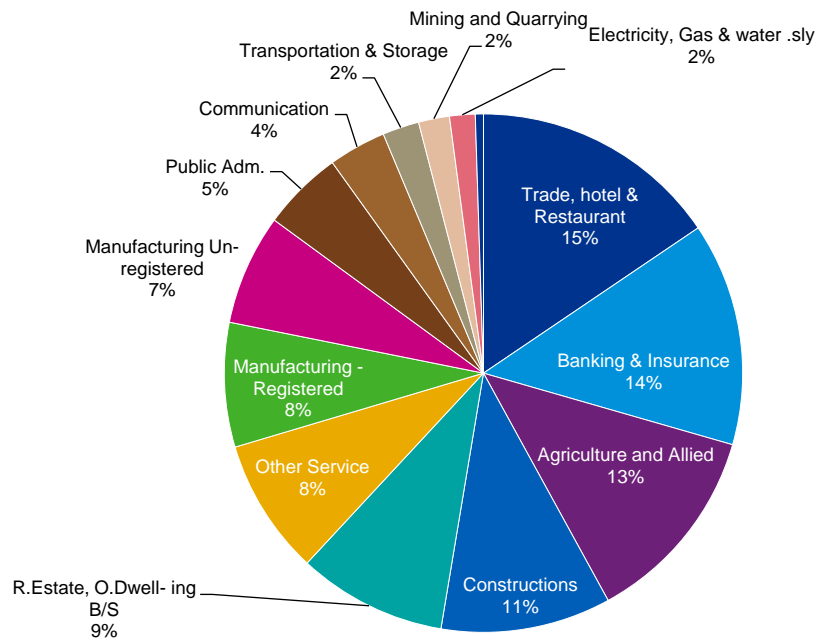
Figure 46: Sector wise GDDP Distribution of Bhandara District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

Top major manufacturing industries of the district are: Basic metals, Motor vehicles, trailers and semi-trailers and Food products and beverages.

Manufacture of basic metals is the major industry in the district. It accounts for about 40% of the employment in registered manufacturing. Under this sector, manufacture of basic metal and steel alone accounts for 32% of the employment in registered manufacturing.

Manufacture of motor vehicles, trailers and semi-trailers is the second largest registered manufacturing industry in the district in terms of employment. It is pertinent to note that the sub-industry which employs over 97% of the workforce in this industry in Bhandara is Manufacture of parts and accessories for motor vehicles.

Food and beverage processing is also a major industry in the district employing around 1,000 people. Of these around 42% are engaged in processing of dairy products. The beverage manufacturing employs a small proportion as compared to food processing industry.

Other less prominent manufacturing industries in the district include manufacture of chemicals and chemical products, pharmaceuticals, medicinal chemical and botanical products, tobacco products, and fabricated metal products, except machinery and equipment.

Table 81: Employment in major registered manufacturing sub-sectors in Bhandara district 2017-18

Sector	Employment
Manufacture of basic metals	2,469
Manufacture of motor vehicles, trailers and semi-trailers	1,494
Manufacture of food products and beverages	1,000
Manufacture of chemicals and chemical products, pharmaceuticals, medicinal chemical and botanical products	292
Manufacture of tobacco products	190
Manufacture of fabricated metal products, except machinery and equipment	178
Manufacture of paper and paper products	126
Manufacture of other non-metallic mineral products	124
Manufacture of rubber and plastics products	44

Investments in the District:

Irrigation, Road transport infrastructure services and Railway transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 82: Sector wise investments in Bhandara District

Sector Name	Proposed investment (in INR Million)	No. of Projects
Irrigation	3,49,065.5	4
Road transport infrastructure services	30,582.7	10
Railway transport infrastructure services	24,280.6	4
Steel	15,100	1
Organic chemicals	15,000	1
Other ferrous metal products	2,641.7	1
Sugar	2,000	1
General purpose machinery	1,000	1
Minerals	583.3	3
Renewable electricity	480	1
Diversified cotton textile	229	1
Wood & wood products	210.2	1
Beer & alcohol	75.7	1
Others	70	3
Grand Total	**4,41,318.7**	**33**

Source: CMIE

5.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 83: Distribution of Respondents of Bhandara district

Profile	Details	
Urban vs. Rural	Urban	55%
	Rural	45%
Gender Profile	Male	62%
	Female	38%
Age Group	15-25 years	40%
	26-35 years	31%
	36-45 years	22%
	46-55 years	6%
	56-59 years	1%
Educational Level	Upto Xth	46%
	Upto XIIth	37%
	Any Graduation	17%
Occupational Profile	Worker	61%
	Non-Worker	39%

Figure 47: Past/Current participation in training, %, in Bhandara

About 69% of the respondents in Bhandara stated that they hadn't attended any technical/ non-technical job related training in the past while 28% reported having attended a training programme in the past.

Around 58% of the respondents reported having attended the training at private training institutes while 40% stated government training institute as the training provider.

Figure 48: Type of training provider, in % in Bhandara

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure 49, 51% of the respondents in Bhandara aspire to be self-employed and 49% reported a preference for being wage-employed. Amongst the respondents who aspire to be wage-employed, there is a higher preference to undertake further education/ training as compared to self-employment aspirants. There is preference for acquiring non-technical education and vocational education amongst both wage-employment and self-employment aspirants.

Figure 49: Key Findings related to educational attainment of the labour force of Bhandara

Preference to undertake further education for those aspiring to be self employed (% of responses)
- Yes I would want to get further education: 23
- Yes I would want to get training/ learn skill: 25
- No I don't want to get training or study further: 52

Type of education preference for Self employed (% of responses)
- Graduate Non-Technical..: 38
- Other skill trainings like vocational..: 26
- Post Graduate Non-Technical..: 17
- Higher Secondary: 9
- Post Graduate Technical (MD, ME..: 4
- Graduate Technical (MBBS, BE..: 4
- Others: 2

Preference for wage vs self employment (% of responses)
- Self employment: 51%
- Wage employment: 49%

Average expected monthly income:
- Wage Employed: INR 17,231
- Self-Employed: INR 18,154

Preference to undertake further education for those aspiring to be wage employed (% of responses)
- Yes I would want to get further education: 30
- Yes I would want to get training/ learn skill: 34
- No I don't want to get training or study further: 36

Type of education preference for wage employed (% of the responses)
- Graduate Non-Technical..: 37
- Other skill trainings like..: 21
- Post Graduate Non-Technical..: 19
- Post Graduate Technical (MD,..: 10
- Graduate Technical (MBBS,..: 7
- Others: 4
- Higher Secondary: 0

Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 84: Aspirational sub-sectors for labour force in Bhandara

For wage employment	For self-employment
Railways	Agriculture & Allied activities
Governance & Administration	Own business/ Kirana store
Others	Automobiles and auto ancillaries
Coal & Mine	Coal & Mine
Energy and Power	Rural Development & Panchayat Raj

For those aspiring to be self-employed, there was a preference towards opening a retail or wholesale shop (grocery, stationery, medical shop, pan shop, clothes). The second most stated type of business was Agriculture or Animal Husbandry related work.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Railways, Governance and Administration, Coal and Mine, Energy and Power sectors. Many respondents also selected the category 'others' which includes Teaching, Housekeeping, Electricals, Manual wage labor for wage- employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 19,750 and Rs. 18,359 respectively.

Additionally, 99% the respondents would like to work within Maharashtra. As many as 87% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra at a lower wage and expressed a lower inclination towards migrating to other regions outside the state for better economic opportunities.

Perceived benefits of acquiring training:

As many as 71% of the respondents who attended a training programme stated that they actually benefited from attending the training. The primary benefits which were highlighted by the respondents included smooth movement to a new sector and acquisition of a new skill or upgradation in the existing skill set. Other stated benefits include getting certification and increase in income after attending the training. The

primary challenge reported by majority of the respondents after attending the training was that the employers are not providing such trainings within the organization which disables them to keep the skills attained during the training sustained and updated. It is found that among the respondents who reported not having attended any training programme, as many as 71% of them stated having no awareness on any employment oriented training programs that help gain expertise/ enhance job skills.

5.5 Incremental demand and Estimation of Manpower supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities. Finance and Insurance services, Crop and animal production, Human health & social work activities, Transportation, Administrative and support service activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sector of manufacture of fabricated metal products, except machinery and equipment, even though a high proportion of the current workforce is also engaged in the sub-sector of manufacture of basic metals.

Table 85: Incremental Demand estimates (2019-2028); in persons for Bhandara district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	18,085	18,793
Forestry & Logging	64	66
Fishing & Aquaculture	45	47
Sub-Total	**18,193**	**18,906**
Registered Manufacturing		
Food processing	53	56
Iron and Steel	118	124
Metal products (except machinery and equipment)	361	353
Machinery and Equipment	47	60
Automotive	112	120
Construction	**1,211**	**1,271**
Services		
Wholesale and Retail Trade	293	373
Transportation	1,983	2,391
Logistics	249	300
IT/ITES	416	501
Hospitality	161	171
BFSI	1,156	1,504
Real Estate	231	301
Professional, Scientific & Technical Activities	604	786
Public Administration & Administrative services	5,431	7,065
Education	3,383	4,401
Healthcare	4,526	5,887

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Others	11,389	14,816
Sub-Total	**29,822**	**38,495**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- **Agriculture & Allied sector** with focus on food storage, agriculture machinery handling and bamboo fabrication
- **Automotive sector** with focus on job roles like LMV driver etc.
- **Construction sector** is also emerging sector within the district
- **Hospitality sector** with job roles like Receptionist, Front office associate etc. is emerging within the district
- **Industry Electrician** job role is also important and upcoming within the district

Estimation of Manpower Supply

Bhandara district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 5.81 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 86: Manpower supply for Bhandara district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Bhandara	7,47,197	5,97,224	5,81,712

Table 87: Projected workforce by education levels for Bhandara district

Education level	Projected work force
Illiterate	1,05,436
Literate but below matric/secondary	2,76,673
Matric/secondary but below graduate	1,44,596
Technical degree or diploma equal to degree or post-graduate degree	9,021
Technical diploma or certificate not equal to degree	3,001
Graduate and above other than technical degree	28,487
Literate others	14,498

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~19,872 annually.

Table 88: Size of Target Population for Bhandara District

Particular	Numbers
Enrolment in VIII	19,378
Enrolment in X	21,307
Enrolment in XII	10,130

Particular	Numbers
Dropout at VIII	**1,126**
Passing out of VIII*	18,252
Students not transitioned to IX	**3,004**
Dropout at X	**2,344**
Passing out of X*	18,963
Students not transitioned to XI	**3,121**
Passing out at XII**	16,769
Students not transitioned to Higher Education	11,403
Total Target population	**19,872**

Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
*** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force*
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 89: Vocational Education annual capacity for Bhandara district

Particular	Annual Capacity in Numbers
Short Term Skilling	7,500
ITI (Government & Private)	6,648

5.6 Recommendations

The economic growth of Bhandara district is predominantly driven by the secondary and tertiary sectors. Manufacturing along with services forms the core of the employment generation activities in the district. Agriculture, Finance and Insurance services and Education have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 90: Sector specific economic growth, employment potential and aspirations for Bhandara district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Amber
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Amber
Transportation	Amber	Amber	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Green
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Red

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Food Processing, Chemical & chemical products, machinery & equipment, Automotive including transport equipment, IT & ITeS, Real estate, Education & Healthcare
- **High incremental employment potential sectors**: Agriculture – crop and animal production, Metal products, machinery & equipment, Transportation, Public Administration & Administrative services and Healthcare
- **High Aspiration Sectors**: Agriculture & Allied and Public Administration & Administrative services

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 91: Priority sectors for MSSDS for Bhandara district

Sl. No.	Sector	High / Medium Growth	High / Medium Employment Potential	High / Medium aspiration
1	Food Processing	✓		✓
2	Healthcare	✓	✓	✓
3	Agriculture and Allied	✓	✓	
4	Automotive (including transport equipment)	✓	✓	✓
5	Retail	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Metal products (except machinery & equipment)
- Transportation
- Public Administration & Administrative services
- Education
- Other services

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 92. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 92: Job Roles across high demand sectors for Bhandara district

High demand sectors	Identified Job Roles
Food Processing	• Dairy products processor • Dairy processing machine operator • Multi skill technician (food processing) • Baking technician
Wholesale and Retail Trade	• Retail trainee associate • Retail sales associate • Cashier • Distributor salesman • Individual sales professional / self-employed retailer
Machinery & Equipment	• CNC Operator – Turning • Fitter – fabrication • Service engineer – installation • Fitter – electrical and electronic assembly
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Microfinance Executive

High demand sectors	Identified Job Roles
	• Insurance Agent • Mutual Fund Agent
Agriculture & Allied	• Goat Farmer • Soyabean Cultivator • Dairy Farmer • Micro Irrigation Technician • Greenhouse Operator • Poultry Farmer

6. Beed

6.1 About the district

Beed district is located in the central region of the Maharashtra state with the district headquarters in Beed City. The district falls under the Aurangabad division. Beed is divided into 11 sub-districts and 1357 inhabited villages.

Beed constitutes 3.47% of the total state area with a land area of 10693 sq.km. The district is situated on the Deccan Plateau on the banks of the Bensura river, a sub-tributary of Godavari river. Beed is bordered by the districts of Jalna, Aurangabad, Ahmednagar, Osmanabad, Latura and Parbhani.

Table 93: Comparison of Beed District with Maharashtra

Indicator	Beed	Maharashtra
Area in sq.km.	10,693	3,07,713
Percentage share in state geographical area, %	3.47	100
No. of Sub-districts	11	353
No. of inhabited villages	1,357	40,959
No. of households	98,959	24,421,519
Forest area as a % of total geographical area	1.64	16.94

Source: Census 2011

6.2 Demography

According to 2011 census data, the district has a population of over 25.8 lakh persons which is ~2.3% of the state. With 80.1% of its population residing in the rural areas, the district has a much smaller proportion of population residing in the urban areas as against the state average of 45.2%. The density of population according to 2011 census is 242 persons/Sq. Km which is lower than the state average.

Table 94 lists down multiple demographic indicators for the district. A cursory glance at the table reveals that the district fares poorly on human development indicators such as sex ratio and literacy rate as compared to the state. The district's literacy rate is at 76.99% which is lower than the state average of 82.91%. Beed has sex ratio (no. of females per 1000 males) of 916 which is lower than the state average of 925. While around 58% of the population in the district are in the working age group (i.e. 15-59 years), 48.5% are actually working i.e. % of total workers (main and marginal workers) to the total population. The workforce participation rate in the district is higher than the state average of 44%.

Table 94: Demographic Indicators of Beed district

Indicator	Beed	Maharashtra
Population, No.	25,85,049	11,23,74,333
Decadal growth rate of population, %	19.61	16
Urban Population as a percentage of total population, %	19.9	45.2
SC Population, %	2.65	10.2
ST Population, %	0.31	8.8
Sex ratio, No. of females per 1000 males	916	925
Population density, per sq.km.	242	365
Literacy rate, %	76.99	83
Working age population* as a percentage of total population, %	57.89	59
Work participation rate^, %	48.5	44
HDI Index	0.678	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 12.5 lakh persons. Of this, nearly 79% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 6% of workers are working in secondary sector and 15% workers are working in tertiary sector. As shown in the figure 50 below, the rate of unemployment (per 1000) in rural areas in the district is lower than the state average, whereas in urban areas it is higher. Additionally, if we compare male and female unemployment (per 1000) of Beed to the

state, both male and female unemployment rate is less than the state average. The rate of unemployment among males is higher than among females of the district.

Figure 50: Share of workforce & Employment Rate for Beed District
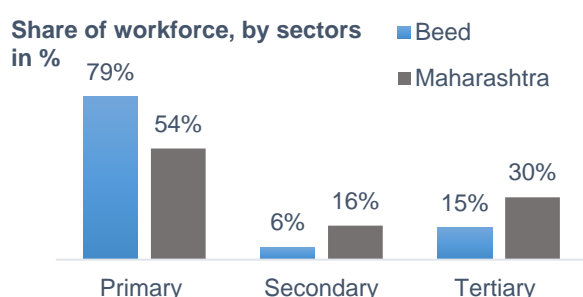
Share of workforce, by sectors in %
- Beed
- Maharashtra

Primary: 79% / 54%
Secondary: 6% / 16%
Tertiary: 15% / 30%

Source: Census 2011

Unemployment rate (per 1000)
- Beed
- Maharashtra

Rural: 5 / 14
Urban: 18 / 14
Male: 10 / 18
Female: 6 / 9

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As per figure 51, maximum people are self- employed in Beed. 27% are working as casual labor and the percentage of salaried employees in the district is almost half of the state average.

casual labour 27%
contract worker 1%
self employed 62%
wage/ salried employeee 10%
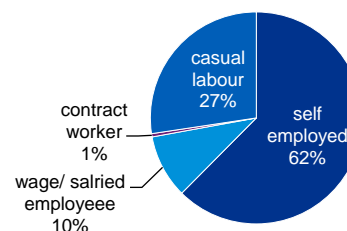
Figure 51 Type of employment in the district
Source: Ministry of Labour & Employment

Education Profile of the district:

Traditional Education:

Beed district has a total of 4,341 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 6.1 lakh students. The Pupil-Teacher ratio of the district is 19. The district also has 94 general and technical colleges with an enrolment of approx. 57,800 students in state-run general and technical colleges.

Table 95: Educational Profile of Beed District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,599	4,31,356
Secondary Schools (IX to XII)	742	1,79,243
General Colleges & Technical Education	94	~57,800[35]

Source: AISHE, U-DISE

Vocational Education:

The district has a total of 22 ITIs with an annual capacity of 2,356 students. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY,DDU-GKY and NSDC Fee Based) are Information & Communication Technology and Electronics.

---

[35] 1Enrolment figures at State run general and technical education colleges only

Table 96: Total no. of ITI and there training number in Beed district

Particular	Number
ITIs (Government & Private)	22
Trainee Count	2,356

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 22,166 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making and Beauty and Wellness. Table below illustrates sector-wise annual training numbers in the district.

Table 97: Sector wise short- term skilling trained numbers in PMKUVA for Beed district

Sectors	Trained
Information and communication technology	8,482
Garment making	6,158
Fashion design	540
Beauty culture and hair dressing	2,597
Construction	690
Electrical	987
Soft skills	494
Medical and nursing	557
Banking and accounting	350
Electronics	150
Production and manufacturing	120
Hospitality	109
Automotive repair	360
Printing	330
Food processing and preservation	30
Spa and wellness	90
Remaining sectors	122
Total	**22,166**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Whereas, state level scheme (i.e. PMKUVA) offers training in Accounting, Desktop Publishing, Beauty Therapy and Garment Making within the district.

A small proportion of 14% of the respondents reported receiving training in government training institutes.

6.3 Economy

As of 2016-17, Gross District Value Added (at current prices) of Ratnagiri district was at Rs. 26,647 crores. Per capita GDVA (at current prices) of Beed was reported at Rs. 98,052 for 2016-17.

In Beed, service sector is the main contributor to the district's economy, accounting for 59% of the output. The agriculture and Allied activities contribute to 22% and industry sector contributes to 19% of the GDDP.

As shown above in figure 52, of all the services, contribution of Trade, Hotel & Restaurant is the highest at 16%, followed by Real estate, ownership of dwellings and business services at 12% and Banking and Insurance at 10%.

Cotton, Jowar and Soya bean are the major crops grown in Beed.

Figure 52: Sector wise GDDP Distribution of Beed District
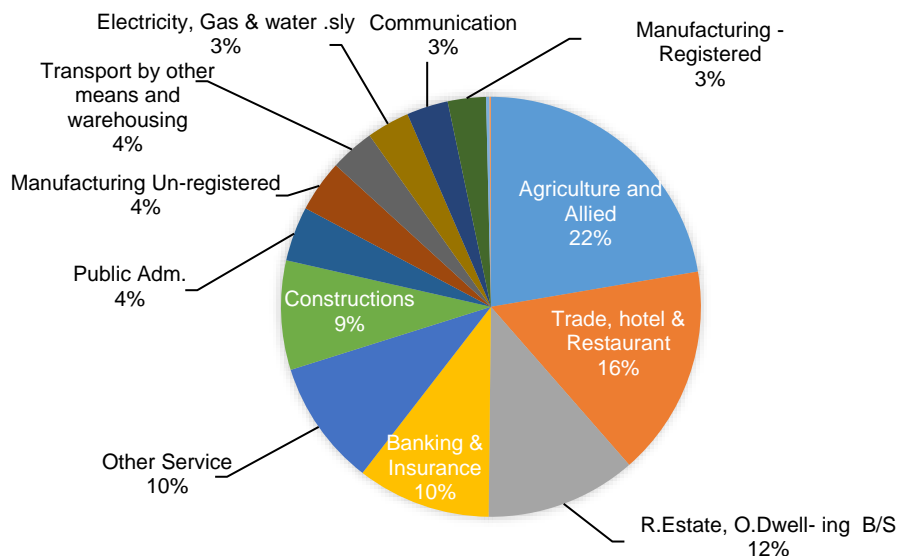
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

Beed district has 20 registered large and medium enterprises which employs approximately 5,835 persons. Manufacturing of food products is a major registered manufacturing industry in the district employing about 1,255 persons which constitutes 77% of the employment in registered manufacturing in Beed. The employment in the industry is primarily concentrated in **manufacturing of sugar**. 76% of the workforce engaged in registered manufacturing is engaged in manufacturing of sugar. The second established industry offering employment in the district is manufacturing of other non-metallic mineral products. In this industry, the activity which is primarily being taken up by the people in the district is **manufacturing of cement, lime and plaster.**

Another registered manufacturing industry offering limited employment in the district is manufacture of fabricated metal products, except machinery and equipment. A deeper look in the industry reveals that the activities absorbing all the employment in this industry are **forging, pressing, stamping and roll-forming of metal.**

Table 98: Employment in major registered manufacturing sub-sectors in Beed district 2017-18

Sector	Employment
Manufacture of food products and beverages	1,255
Manufacture of other non-metallic mineral products	191
Manufacture of fabricated metal products, except machinery and equipment	99
Manufacture of chemicals and chemical products, , pharmaceuticals, medicinal chemical and botanical products	60
Manufacture of rubber and plastics products	18

Investments in the district:

Electricity transmission, Road transport infrastructure services and development of commercial complexes are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 99: Sector wise investments in Beed District

Sector Name	Proposed investment (in INR million)	No. of Projects
Railway transport infrastructure services	43,879.3	4
Conventional electricity	40,813	2
Electricity transmission	30,814.1	9
Renewable electricity	11,188.3	7
Irrigation	10,460	1
Sugar	4,770	4
Road transport infrastructure services	3,400.4	1
Beer & alcohol	817.1	3
Drugs & pharmaceuticals	241.8	1
Grand Total	**1,46,384**	**36**

Source: CMIE

6.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 100: Distribution of Respondents in Beed district

Profile	Details	
Urban vs. Rural	Urban	51%
	Rural	49%
Gender Profile	Male	72%
	Female	28%
Age Group	15-25 years	47%
	26-35 years	35%
	36-45 years	16%
	46-55 years	1%
	56-59 years	0%
Educational Level	Upto Xth	46%
	Upto XIIth	39%
	Any Graduation	15%
Occupational Profile	Worker	64%
	Non-Worker	36%

Figure 53: Past/Current participation in training, % in Beed District

- ■ Have attended in the past — 13%
- ■ Currently attending — 9%
- ■ Haven't attended in the past — 78%
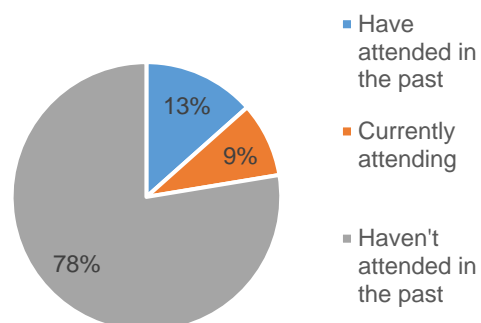
Most respondents (78%) stated that they hadn't attended any technical/ non-technical job related training in the past. 13% reported that they have undergone some training in the past.

As per figure 54, private training institutes have emerged as the largest training provider in the district with 54% of the trainings being provided by them while government training institutes contributed towards ~14% of the trainings.

Figure 54: Type of training provider, in % for Beed district
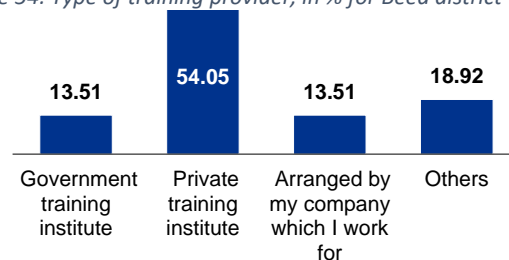
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 55, in the district, 70% of the respondents aspire to be self-employed and 30% reported a preference for being wage employed. Amongst the respondents who aspire to be wage-employed, there is a higher preference to undertake further education/ training as compared to self-employment aspirants. Additionally, there is preference for acquiring non-technical education amongst those who aspire to be wage-employed.

Figure 55: Key Findings related to educational attainment of the labour force for Beed District
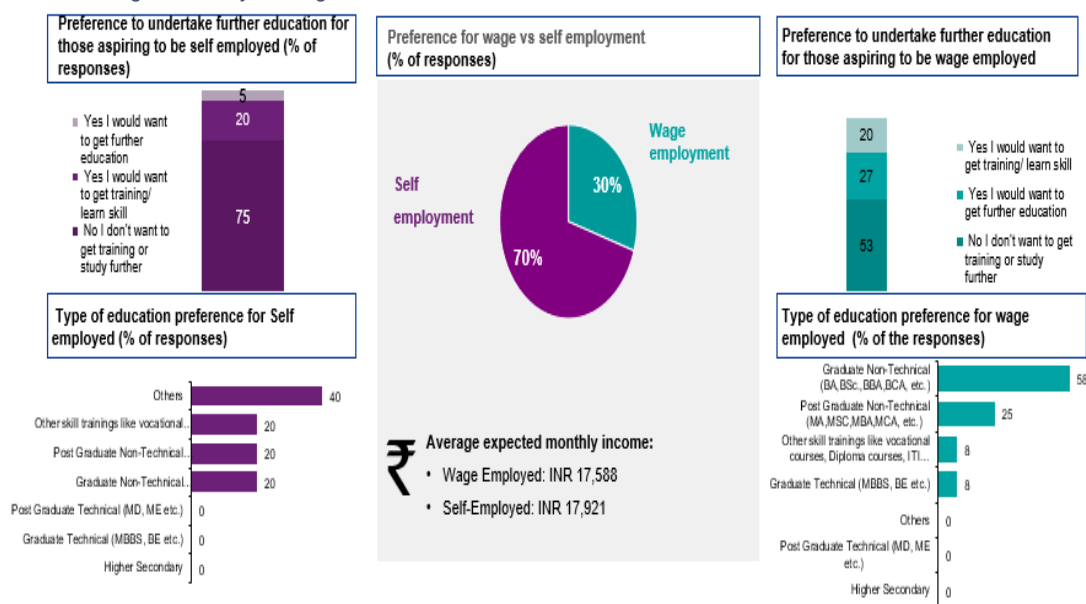
Key Findings related to employment:

All the respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 101: Aspirational sub-sectors for labour force in Beed

For wage employment	For self-employment
Agriculture and allied activities	Own business/ Kirana store
Governance and Administration	Retail
Automobiles and auto ancillaries	Food Products & Handicrafts
Cement	Automobiles and auto ancillaries
Finance, Banking and Insurance	Agriculture and allied activities

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a kirana store, retail shop, selling of food products and handicrafts, agriculture and allied activities.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Agriculture and allied activities, Governance and Administration, Automobiles, Cement, Banking & Insurance sub-sectors. Many respondents also selected the category 'others' which includes manual wage work for wage-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 17,588 and Rs. 17,921 respectively.

Additionally, all the respondents would like to work within Maharashtra. However, only 44% of the surveyed respondents in the district would be willing to accept the employment near their home at a lower wage indicating that the remaining might migrate outside for want of better livelihood/economic opportunities.

Perceived benefits of acquiring training:

As large as 90% of the respondents who attended a training programme stated that they actually benefited from attending the training and increase in income was stated as the primary benefit by the majority of them. The respondents reported that the challenge they face after attending the training programme is that the employers are not providing such trainings within the organization which disables them to keep their skills attained in the training sustained and updated.

6.5 Incremental Demand and Estimation of Manpower Supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities. Industry sector is expected to play a nominal role in driving incremental labor demand in Beed. Crop and animal production, Finance and Insurance services, Transportation, Human health & social work activities, Administrative and support service activities, Other Service Activities and Professional, Scientific & Technical Activities are expected to be the major drivers of incremental labour demand in the district. The limited incremental registered manufacturing sector demand is expected in high growth sub sector of manufacture of fabricated metal products, except machinery and equipment, even though at present, 77% of the current workforce is engaged in the sub-sector of manufacture of food products and beverages.

Table 102: Incremental Demand estimates (2018-2029); in persons for Beed District

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	40,469	42,055
Forestry & Logging	142	148
Fishing & Aquaculture	100	104
Sub-Total	40,712	42,307
Registered Manufacturing		
Food processing	66	70
Metal products (except machinery and equipment)	201	196
Construction	1,676	1,760

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Services		
Wholesale and Retail Trade	585	743
Transportation	5,259	6,340
Logistics	660	795
IT/ITES	1,102	1,328
Hospitality	414	441
BFSI	1,530	1,991
Real Estate	306	398
Professional, Scientific & Technical Activities	799	1,040
Public Administration & Administrative services	8,280	10,771
Education	7,146	9,297
Healthcare	9,560	12,436
Others	24,969	32,482
Sub-Total	60,610	78,062

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 100% of employment in registered manufacturing.

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- In **food processing sector,** soyabeen production with a potential for grading and packaging activities is in demand.
- Manufacturing in **Textiles and apparel sector** is also in demand. Manufacturing of table cloth and product marketing is in demand.

Estimation of Manpower Supply

Beed district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be about 12.8 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 103: Manpower supply for Beed district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Beed	16,64,978	13,02,591	12,88,776

Table 104: Projected workforce by education levels for Beed district

Education level	Projected work force
Illiterate	3,71,187
Literate but below matric/secondary	4,51,858
Matric/secondary but below graduate	24,0204

Education level	Projected work force
Technical degree or diploma equal to degree or post-graduate degree	22,991
Technical diploma or certificate not equal to degree	5,828
Graduate and above other than technical degree	70,388
Literate others	1,26,320

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~46,048 annually.

Table 105: Size of Target Population for Beed District

Particular	Numbers
Enrolment in VIII	53,784
Enrolment in X	49,069
Enrolment in XII	15,769
Dropout at VIII	**4,002**
Passing out of VIII*	49,782
Students not transitioned to IX	**8,194**
Dropout at X	**7,297**
Passing out of X*	41,772
Students not transitioned to XI	**6,876**
Passing out at XII**	34,825
Students not transitioned to Higher Education	23,681
Total Target population	**46,048**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 106: Vocational Education annual capacity for Beed district

Particular	Annual Capacity in Numbers
Short Term Skilling	32,760
ITI (Government & Private)	4,216

6.6 Recommendations

The economic growth of the district is predominantly driven by the secondary and tertiary sectors. Manufacturing forms the core of the employment generation activities in the district with a growth rate of more than 10% for manufacturing of food products, chemical and chemical products, machinery, motor vehicles, etc. However, agriculture, transportation, BFSI and education have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 107: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	🟥	🟩	🟩
Forestry & Logging	🟥	🟥	🟩
Fishing & Aquaculture	🟧	🟥	🟩

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Food processing	🟩	🟥	🟧
Tobacco	🟩	🟥	🟥
Textiles	🟧	🟥	🟥
Apparel	🟧	🟥	🟥
Leather	🟥	🟥	🟥
Wood work	🟥	🟥	🟥
Paper and Paper products	🟩	🟥	🟥
Publishing, printing and recorded media	🟧	🟥	🟥
Hydrocarbons	🟥	🟥	🟥
Chemicals and Pharmaceuticals	🟩	🟥	🟥
Rubber and Plastics	🟧	🟥	🟥
Non-metallic mineral products	🟥	🟥	🟧
Iron and Steel	🟥	🟥	🟥
Metal products (except machinery and equipment)	🟧	🟥	🟥
Machinery and Equipment	🟩	🟥	🟥
Automotive	🟩	🟥	🟧
Automotive (transport equipment)	🟩	🟥	🟧
Construction	🟥	🟥	🟥
Wholesale and Retail Trade	🟧	🟥	🟩
Transportation	🟧	🟩	🟥
Logistics	🟧	🟥	🟥
IT/ITES	🟩	🟥	🟥
Hospitality	🟧	🟥	🟥
BFSI	🟧	🟥	🟧
Real Estate	🟩	🟥	🟥
Professional, Scientific & Technical Activities	🟩	🟥	🟥
Public Administration & Administrative Services	🟧	🟩	🟧
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟥
Other Services	🟩	🟩	🟧

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Food Processing, Chemical & chemical products, machinery & equipment, Automotive including transport equipment, IT & ITeS, Real estate, Education & Healthcare
High incremental employment potential sectors: Agriculture, transportation, BFSI, Education, Public Administration & Administrative services and healthcare.

- **High Aspiration Sectors**: Retail and Agriculture

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 108: Priority sectors for MSSDS for Beed district

Sl. No.	Sector	High or medium Growth	High Economic Potential	High aspiration
1	Agriculture & Allied		✓	✓
2	Food Processing	✓		✓
3	Wholesale and Retail trade	✓		✓
4	Automotive (including transport equipment)	✓		✓
5	Healthcare	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Transportation
- BFSI
- Textile and apparel
- Education
- Public Administration & social security
- Other services (media & entertainment)

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in Table 109. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 109: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force for Beed district

High demand sectors	Identified Job Roles
Agriculture & Allied	- Dairy farmer - Goat farmer - Soyabeen cultivator - Micro irrigation technician - Small poultry farmer - Green house operator
Food Processing	- Supervisor: Fruits and vegetable (& sugarcane) processing

High demand sectors	Identified Job Roles
	• Multi skill technician (food processing) • Dairy products processor • Industrial production worker – food processing
Wholesale and Retail trade	• Retail trainee associate • Retail sales associate • Cashier • Distributor salesman • Individual sales professional / self-employed retailer
Automotive (including transport equipment)	• Vehicle Assembly Fitter/ Technician • Automotive Service Technician • Maintenance Technician Mechanical • Auto Component Assembly Fitter • Automotive Engine Repair Technician
Healthcare	• Nursing • General Duty Assistant • Yoga Trainers • Diet Assistant • Emergency Medical Technician – Basic • Pharmacy Assistant

7. Buldhana

7.1 About the district

Buldhana district is located in the central part of Maharashtra and is surrounded by Madhya Pradesh on the north, Akola, Washim, and Amravati districts on the east, Jalna district on the south and Jalgaon and Aurangabad districts on the west with Tapti River and the Godavari River passing through the district.

Holding a land area of 9661 sq. km., Buldhana constitutes 3.1% of the total state area. It has 14 sub districts and a total of 1,297 inhabited villages (Table 110).

The climate of district is mainly tropical and it has 3 types of soils dominating the ground and influencing the agricultural output - Shallow and gravelly reddish soil of Satpudas; deep and clayey black soil of Purna Alluvium and shallow and black, brown or reddish soils of Ajanta ranges

Known for its scenic beauty and charming atmosphere, Buldhana district has numerous tourist attractions. It hosts the second largest impact crater in basaltic rock in the world – Lonar Crater Lake, and is home to Sindkhed Raja, Temple of Shri Renuka Devi in Chikhli and Balaji Temple in Mehkar.

Table 110: Comparison of Buldhana District with Maharashtra

Indicator	Buldhana	Maharashtra
Area in sq. km.	9,661	3,07,713
Percentage share in State geographical area, %	3.1%	100%
No. of Sub-districts	14	353
No. of inhabited villages	1,297	40,959
No. of households	4,45,634	24,421,519
Forest area as a % of total geographical area	6.11%	16.94%

Source: Census 2011

7.2 Demography

The population of Buldhana is 25,88,039 per census 2011, with almost 80% of the population, settled in the rural areas, as can be analysed from data represented in Table 111. Buldhana's human development indicators are representative of the state numbers in certain aspects such as the sex ratio which stands at 928 and the literacy rate at 82%. Though close to 55% of the district's population is in the working age group (15-59 years), however, 46% of the population is actively working and contributing to the economy.

Table 111: Demographic Indicators of Buldhana district

Indicator	Buldhana	Maharashtra
Population, No.	25,88,039	11,23,74,333
Decadal growth rate of population, %	15.9%	16%
Urban Population as a percentage of total population, %	21%	45.2%
SC Population, %	10.8%	10.2%
ST Population, %	5.15%	8.8%
Sex ratio, No. of females per 1000 males	928	925
Population density, per sq.km.	268	365
Literacy rate, %	82.09%	83%
Working age population* as a percentage of total population, %	55%	59%
Work participation rate^, %	46%	44%
HDI Index	0.684	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a total workforce of 12.19 lakh persons, of which 81% are engaged in primary sector (agriculture and allied activities and mining) possibly due to heavy clustering in the rural areas. 5% of workforce is involved in the secondary sector and 14% in the tertiary sector. As indicated in the figure 56 below, Buldhana overall has a lower rate of unemployment as compared to the state. 12 per 1000 people the labor force are unemployed in rural areas in Buldhana compared to 14 per 1000 for Maharashtra, and there is no unemployment in the urban areas, which could be due to overwhelming service workforce; with manufacturing employment concentrated in food products and chemical & chemical products.

Figure 56: Share of workforce & Employment Rate for Buldhana district
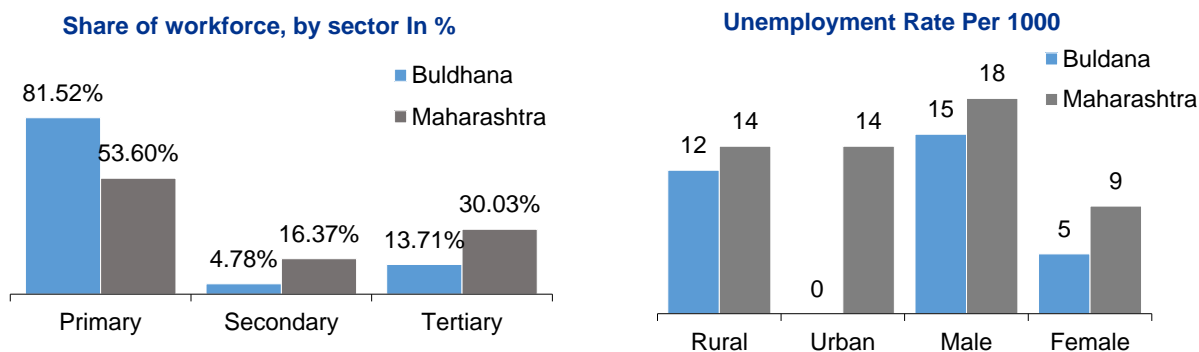
Share of workforce, by sector In %

Unemployment Rate Per 1000

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 57: Type of employment in the district for Buldhana
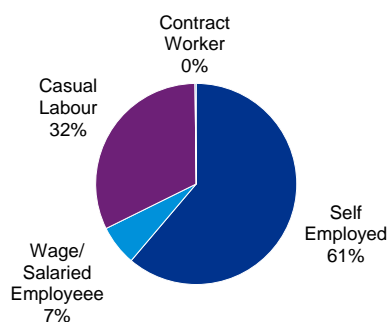
As can be seen in figure 57, 61% of the population is reported to be self-employed in the district, 7% of the workforce is reported to be salaried/wage employed, 32 % of the workforce is reported to be casual workers and almost 0% of the workforce is reported to be contract workers. Considering the division of workforce under the three sectors, the possibility of high % of self-employed and casual labor can be inferred to be contributing to the primary sector.

Source: Ministry of Labor & Employment

Education Profile of the district:

Traditional Education:

The district has 2938 schools out of which around 67% are government schools and 80% are primary. Total enrolment in schools is 5,38,256 with a student-teacher ratio in the district is 23:1. The district also has 84 general and technical colleges with the enrolment of approx. 45,000 students. With approximately 40% of the students enrolled in secondary from primary, a significant decline can be observed in the percentage of students enrolled in the higher schools, one reason of which could be that only 8.1% of secondary school are government schools.

Table 112: Educational Profile of Buldhana District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	2,333	3,80,443
Secondary (9-12th)	605	1,57,813
Colleges (General and Technical)	84	45,000[36]

Source: AISHE, U-DISE

Vocational Education:

The district has 22 ITIs Government and Private with 3,319 students currently enrolled in them. Top sectors in which the trainings are offered in Buldhana as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are garment making, retail, beauty and wellness, food processing and electronics.

Table 113: Total no. of ITI and there training number in Buldhana district

Particular	Number
ITIs (Government & Private)	22
Trainee Count	3,319

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 7,386 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making and Electrical. Table below illustrates sector-wise annual training numbers in the district.

Table 114: Sector wise short- term skilling trained numbers in PMKUVA for Buldhana district

Sectors	Trained
Information And Communication Technology	2,150
Garment Making	891
Electrical	1,346
Beauty Culture And Hair Dressing	536
Construction	369
Banking And Accounting	505
Fashion Design	150
Automotive Repair	299
Production And Manufacturing	83
Fabrication	268
Medical And Nursing	50
Industrial Electrical	270
Hospitality	179
Soft Skills	30
Remaining Sectors	**260**
Total	**7,386**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as

---

[36] *Enrolment figures at State run general and technical education colleges only*

Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Trainings are offered by private training centers in the district across various courses for enhancing the skills of the persons.

7.3 Economy

Buldhana district has the 23rd highest GDP in the state as of 2016-17 of INR 23192 crore at current prices. It has seen a growth of approx. 26% in GDP from 2015-16 to 2016-17. It also has a per capita GDDP of Buldhana is INR. 85,227 Crore.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 62% towards the GDDP, followed by secondary sector at 20% and primary sector at 18%.

Figure 58: Sector wise GDDP Distribution of Buldhana District
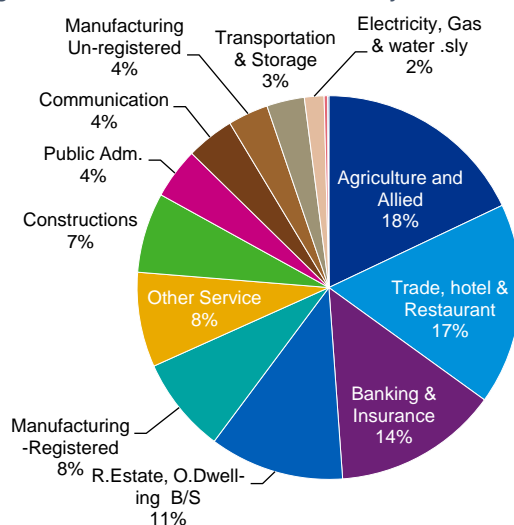
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

Under primary sector, activities allied to agriculture and its associated sectors contribute to the district's GDDP. The activities are around the major crops grown in the district, which include wheat, jowar, maize, cotton (Khamgaon and Malkapur are the major cotton trading towns in the district), oilseeds and pulses. Buldhana also has many minor and medium size irrigation projects, out of which the important ones are Nalganga and Vaan. There also exists Agriculture Produce Market Committees (APMC) - Main Market, one in each tehsil to ensure that farmers are not exploited by intermediaries (or money lenders) and that all food produce is first brought to the market yard and then sold through auction.

Under the secondary sector, which accounts for almost 20% of the district's GDDP, the registered manufacturing contributes around 8%, construction around 7% and manufacturing unregistered around 4%. The district has over 23 large and, micro, small and medium industrial units, employing 5573 people, out of which the 4 vital manufacturing industries are: Manufacture of Food Products and Beverages; Manufacture of Chemicals and Chemical Products; Manufacture of Textiles and Manufacture of Paper and Paper Products.

Manufacture of food products and beverages is the major industry engaging people in economic activities in Buldhana. A vast sector with significant diversifications to offer, the sub - sector which employees maximum people (almost 52%) is the manufacture of vegetable and animal oils and fats,

followed by manufacture of bakery products, and manufacture of grain mill products including flour, rice, dal milling. Though most of the employees are divided almost equally amongst several employees, Shivangi Bakers Pvt.Ltd, has contributed significantly in the bakery sector with respect to employment. Other employing sectors in this industry include - manufacture of soft drinks; production of mineral waters and other bottled waters; processing and preserving of meat, and manufacture of dairy products and Manufacture of wines.

Manufacture of chemicals and chemical products is the second major employment generating industry. In this sector, manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations employees the maximum percentage (45%) of employees, mostly employed by Hindustan Unilever Ltd. Followed by this sub - sector, manufacture of basic chemicals has the second highest employment of 644 people, mainly by Benzo Chem Industries Pvt Ltd and Benzochem Industries Pvt Ltd. Apart from these, the other sub sectors generating employment are - manufacture of fertilizers and nitrogen compounds and manufacture of pharmaceuticals, medicinal chemical and botanical products.

Manufacture of textiles is the third largest industry, with sub sectors, such as, preparation and spinning of textile fibers employing 60% of the people employed in this industry, followed by weaving of textiles sector employing the remaining. Shri Mungsaji Maharaj and Birla Cotsyn (India) Ltd are the known employers of this sector in Buldhana.

Manufacture of paper and paper products is the fourth most significant employer. Manufacture of corrugated paper and paperboard and containers of paper and paperboard provides employment to 56% of the people employed in this sector, with M/S Megna Pack and S.N.G. Packaging PVT. LTD being the main players.

Other noteable manufacturing industries include manufacture of fabricated metal products; manufacture of rubber and plastics products; manufacture of machinery and equipment n.e.c.; manufacture of other non-metallic mineral products, of wood and of products of wood and cork, except furniture.

Table 115: Employment in registered manufacturing sector in Buldhana district 2017-18

Sector	Employment
Manufacture of food products and beverages	2,375
Manufacture of chemicals and chemical products	1,549
Manufacture of textiles	741
Manufacture of paper and paper products	736
Manufacture of fabricated metal products, except machinery and equipment	115
Manufacture of rubber and plastics products	105
Manufacture of machinery and equipment n.e.c.	89
Manufacture of other non-metallic mineral products	70
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	51
Manufacture of basic metals	1

Source: Annual Survey of Industries, 2017-18

As can be viewed from the figure 58, tertiary sector which contributes highest to the GDDP, comprises of services spread across several domains such as Trade, Hotel and Restaurant; Banking & Insurance services; and Real Estate and Dwelling Business services.

Investments in the district:

Irrigation, Road transport infrastructure services and Railway transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 116: Sector wise investments in Buldhana District

Sector Name	Proposed investment (in INR million)	No. of Projects
Irrigation	3,25,768.6	5
Road transport infrastructure services	1,14,080.5	12
Railway transport infrastructure services	38,626	3
Renewable electricity	22,250	1
Organic chemicals	15,000	1
Other textiles	3,150	2
Cloth	2,000	1
Vegetable oils & products	720	1
Other agricultural products	323	2
Electricity transmission	126.8	1
Others	141.7	5
Grand Total	**5,22,186.6**	**34**

Source: CMIE

7.4 Labor force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 117: Distribution of Respondents for Buldhana

Profile	Details	
Urban vs. Rural	Urban	62%
	Rural	38%
Gender Profile	Male	71%
	Female	29%
Age Group	15-25 years	37%
	26-35 years	27%
	36-45 years	22%
	46-55 years	12%
	56-59 years	2%
Educational Level	Up to Xth	58%
	Up to XIIth	32%
	Any Graduation	10%
Occupational Profile	Worker	77%
	Non-Worker	23%
Average monthly household income for those working		6,541

Figure 59: Past/Current participation in training, % for Buldhana

- Have attended in the past
- Currently Attending
- Have not attended

69%
21%
10%
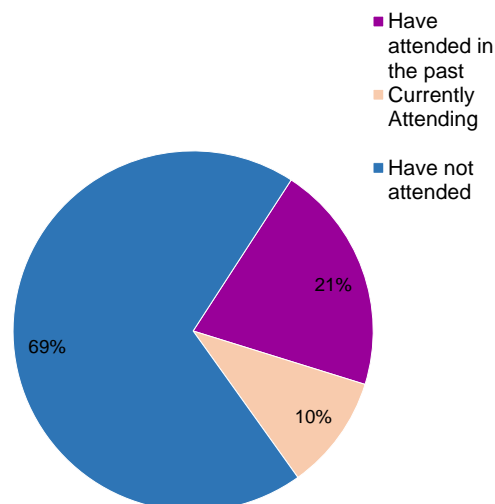
As can be seen in figure 59, significant number of respondents (69%) shared that they hadn't undergone any technical/ non-technical job related training in the past. 21% reported that they have undergone some training in the past and 10% mentioned that they are currently undergoing training. 85% of those who did not attend the training, shared lack of awareness as the main reason, and amongst those who knew, high fees was the reason for not attending the training.

Of those who underwent vocational training in the past, majority of the trainings were arranged by either the private training institutes or the government training institutes, as can be seen in figure 60.

Figure 60: Type of training provider, in % for Buldhana
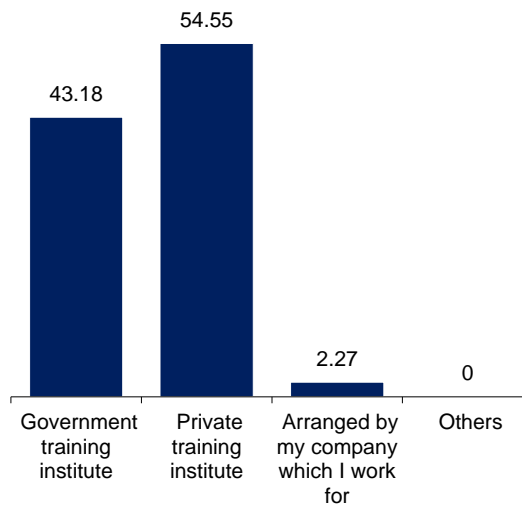
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 61, in the district of Buldhana, majority (59%) of the respondents aspire to be self-employed and 41% reported a preference for being wage employed. One reason for this could be the difference in the average expected monthly income, which is seen to be higher in self-employment as compared to wage employment. Amongst the respondents, almost double % of wage employment aspirants, than, self-employment aspirants have an inclination towards undertaking further education and training. More than 50% in both categories are keen on undertaking graduate non-technical trainings. A positive correlation can be observed that people seeking wage employment are keen on upgrading their skills, as this may open better employment opportunities or for better wages for them in future.

Figure 61: Key Findings related to educational attainment of the labor force of Buldhana district
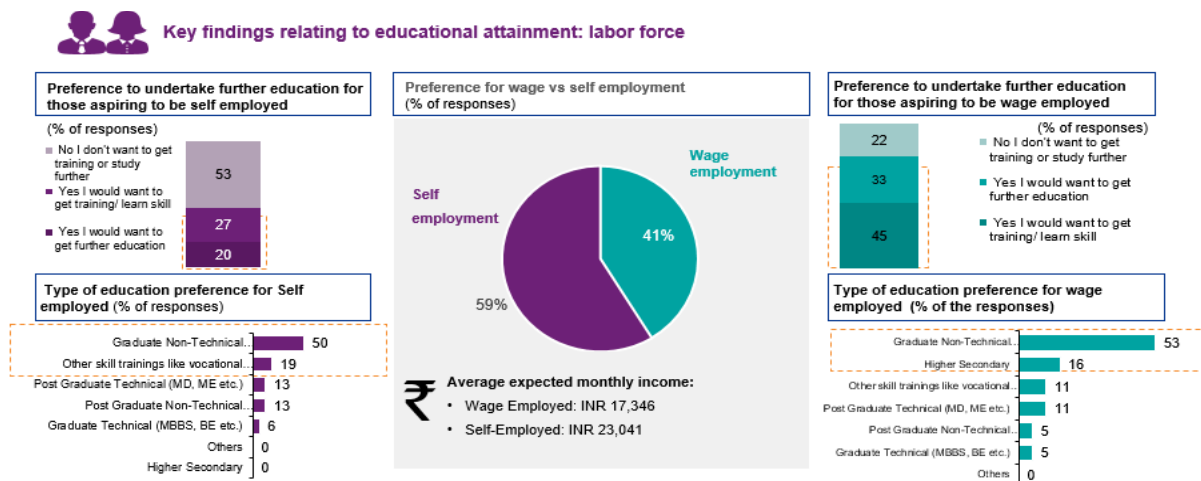
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 118: Aspirational sub-sectors for labor force of Buldhana district

For wage employment	For self-employment
For wage- employment	Retail
Governance & Administration	Food Products & Handicrafts
Agriculture & Allied	Agriculture & Allied
Art & Culture	Skill Based Business

Some respondents chose 'other' sectors, which included preferences for opening a kirana store.

Amongst the aspirants looking to be self-employed, an interest in either opening a retail or a wholesale shop for grocery/stationery/medical/pan/clothes etc. was expressed. The second preference was given to entering into agriculture or animal husbandry field or willingness to engage into production of handicraft or food products, which can be managed working from their homes itself.

99% of the respondents expressed that they would prefer to work within their state, Maharashtra and 35% of the respondents shared that they are willing to work outside their state if they are being paid relatively higher than the wages in Maharashtra.

Perceived benefits of acquiring training:

Out of those who have attended trainings in past, 69% felt that the training has reaped benefits such as increase in income, acknowledgement through certificate, and the development of skill sets which may open new avenues or improve work performance. However, the respondents also faced challenges after attending the training, as a gap was felt in the skill levels expected by the employers and those imparted in the trainings, lack of recruitment as the employers were not hiring such trained personnel. Besides, the attendees raised concerns that the employer's did not organise such trainings in house. From the challenges faced, one can infer that because the employers are not interested in these skill sets, they do not provide such trainings in house and don't hire people with these skill sets. Therefore, the requisite is to understand the needs of the employers and accordingly design the module of the training program.

7.5 Incremental Demand & Estimation of Manpower Supply

Agriculture - Crop and Animal Production, Finance & Insurance Activities, Human health & Social Work activities, Transpiration, Administrative and Support Service activities, Professional, Scientific & Technical Activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of machinery and equipment, textile, and manufacture of fabricated metal products and metal products and transport equipment, as can be seen in the Table 79.

Table 119: Incremental Demand estimates (2019-2028); in persons for Buldhana district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	40,842	42,442
Forestry & Logging	143	149
Fishing & Aquaculture	101	105

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Sub-Total	41,086	42,696
Registered Manufacturing		
Food processing	125	132
Textiles	493	791
Chemicals and Pharmaceuticals	189	212
Metal products (except machinery and equipment)	234	228
Machinery and Equipment	464	592
Construction	1,381	1,450
Services		
Wholesale and Retail Trade	586	744
Transportation	4,035	4,865
Logistics	506	610
IT/ITES	845	1,019
Hospitality	277	295
BFSI	1,715	2,231
Real Estate	343	446
Professional, Scientific & Technical Activities	896	1,165
Public Administration & Administrative services	8,298	10,795
Education	5,803	7,549
Healthcare	7,763	10,098
Others	19,882	25,863
Sub-Total	50,949	65,681

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- **Tourism & Hospitality sector** with specific job roles such as Guides and Tourist Assistant
- **Banking, Finance & Insurance Services**
- **Agriculture Sector** in areas related to seed production, poultry farming, micro-irrigation, cold storage and warehousing.

Estimation of Manpower Supply

Buldhana district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 12.17 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 120: Manpower supply for Buldana district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Buldhana	16,57,864	12,31,318	12,17,637

Table 121: Projected workforce by education levels for Buldhana district

Education level	Projected work force
Illiterate	2,39,340
Literate but below matric/secondary	5,43,119
Matric/secondary but below graduate	2,39,162
Technical degree or diploma equal to degree or post-graduate degree	18,069
Technical diploma or certificate not equal to degree	4,957
Graduate and above other than technical degree	43,187
Literate others	1,29,802

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~42095 annually.

Table 122: Size of Target Population for Buldhana District

Particular	Numbers
Enrolment in VIII	49,510
Enrolment in X	44,627
Enrolment in XII	14,529
Dropout at VIII	**7,258**
Passing out of VIII*	42,252
Students not transitioned to IX	**6,955**
Dropout at X	**10,545**
Passing out of X*	34,082
Students not transitioned to XI	**5,610**
Passing out at XII**	27,919
Students not transitioned to Higher Education	18,985
Total Target population	**42,095**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 123: Vocational Education annual capacity for Buldhana district

Particular	Annual Capacity in Numbers
Short Term Skilling	5,520
ITI (Government & Private)	5,930

7.6 Recommendations

The economic growth of Buldana district is predominantly driven by the secondary and tertiary sectors. Manufacturing along with services forms the core of the employment generation activities in the district. Agriculture, Finance and Insurance services and Education have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental

employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 124: Sector specific economic growth, employment potential and aspirations of Buldhana

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Amber
Forestry & Logging	Red	Red	Amber
Fishing & Aquaculture	Amber	Red	Amber
Food processing	Green	Red	Green
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Green (dark)
Transportation	Amber	Amber	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Amber
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Amber

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low

The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Food Processing, Chemical & chemical products, machinery & equipment, Automotive including transport equipment, IT & ITeS, Real estate, Education & Healthcare
- **High incremental employment potential sectors**: Agriculture – crop and animal production, Public Administration & Administrative services, Healthcare and Education.
- **High Aspiration Sectors**: Agriculture & Allied and Food Processing

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 125: Priority sectors for MSSDS for Buldhana district

Sl. No.	Sector	High / Medium Growth	High / Medium Employment Potential	High / Medium aspiration
1	Agriculture & Allied		✓	✓
2	Food Processing	✓		✓
3	Wholesale and Retail Trade	✓		✓
4	Transportation	✓	✓	
5	BFSI	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Public Administration & Administrative services
- Education
- Healthcare
- Other service activities

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 126: Job roles across high demand sectors for Buldhana

High demand sectors	Identified Job Roles
Agriculture & Allied	- Dairy farmer - Fisheries extension associate - Micro irrigation technician - Small poultry farmer - Aquaculture worker

High demand sectors	Identified Job Roles
Food Processing	• Supervisor: Fruits and vegetable processing • Milling technician • Baking technician • Multi skill technician (food processing) • Grain mill operator • Dairy products processor
Wholesale and Retail Trade	• Retail trainee associate • Retail sales associate • Cashier • Store ops assistant • Individual sales professional / self-employed retailer
Transportation	• Transport consolidator • Courier delivery executive • Cargo surveyor • Ground operation associate • Courier branch sales executive
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent • Microfinance executive

8. Chandrapur

8.1 About the district

Chandrapur district is located in the eastern part of Maharashtra and is surrounded by rich Godchiroli forest reserve, Wardha River and the Painganga River. The district is a part of Nagpur region and is bordered by districts of Bhandara, Nagpur, Wardha, Yavatmal, Gadchiroli in Maharashtra and Adidabad district in Telangana. Holding a land area of 11,443 sq. km., Chandrapur constitutes 3.71% of the total state area. It has 15 sub districts and a total of 1463 inhabited villages as has been represented in table 85.

The district lies on a terrain rich in coal, and is a centre for coal mining. It is known for the Chandrapur Thermal Power Station which is the largest power plant in Maharashtra.

The district sees a significant tourist footfall because of the Tadoba National Tiger Reserve (one of the 28 Project Tiger Reserves in India), Mahakali Mandir and the Chandrapur Fort. A forest heavy district, the forest area in the district has around 120 tigers and abounds in forest products, major ones being Bamboo, Firewood and Tendu (Bidi) leaves and Mahua flowers.

Table 127: Comparison of Chandrapur District with Maharashtra

Indicator	Chandrapur	Maharashtra
Area in sq. km.	11,443	3,07,713
Percentage share in State geographical area, %	3.71	100%
No. of Sub-districts	15	353
No. of inhabited villages	1463	40,959
No. of households	5,29,612	24,421,519
Forest area as a % of total geographical area	35.59	16.94%

Source: Census 2011

8.2 Demography

The population of Chandrapur is 22,04,307 per census 2011 (Table 128), with approx. 35% constituting the urban population. The district has a literacy rate of 80.01% and a sex ratio of 961, which is higher than that of the state at 925. Though close to 65% of the district's population is in the working age group (15-59 years), however, only 48% of the population is actively working and contributing to the economy, which can be further expanded with efficient and planned skilling. The HDI of the district is higher than that of India and from many other districts of the state.

Table 128: Demographic Indicators of Chandrapur district

Indicator	Chandrapur	Maharashtra
Population, No.	22,04,307	112,374,333
Decadal growth rate of population, %	6.43	16%
Urban Population as a percentage of total population, %	35.18	45.2%
SC Population, %	2.62	10.2%
ST Population, %	3.71	8.8%
Sex ratio, No. of females per 1000 males	961	925
Population density, per sq.km.	193	365
Literacy rate, %	80.01	83%
Working age population* as a percentage of total population, %	65.4	59%
Work participation rate^, %	48	44%
HDI Index	0.718	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012
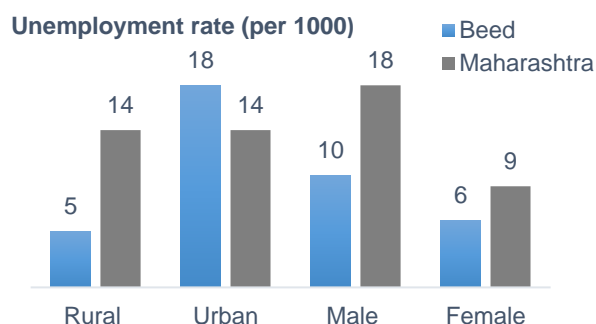
The district has a total workforce of 10.5 lakh persons, of which 69% are engaged in primary sector (agriculture and allied activities and mining), 12% in the secondary sector and 19% in the tertiary sector. As indicated in the figure 62 below, Chandrapur overall has a lower rate of unemployment as compared to the state, with urban area being the only exception with a higher unemployment rate as compared to Maharashtra and other segments. One reason for the development of service sector and status of unemployment rate could be the active presence of the thermal power plants in the district over a period of time.

Figure 62: Share of workforce & Employment Rate for Chandrapur district
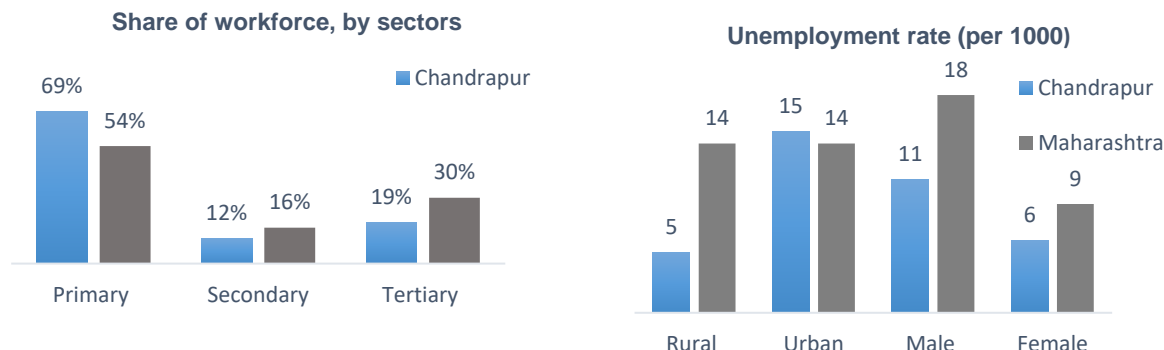
Share of workforce, by sectors

Source: Census 2011

Unemployment rate (per 1000)

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 63: Type of employment in Chandrapur district
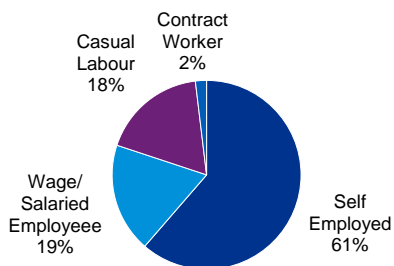
Source: Ministry of Labor & Employment

As can be seen in figure 63, more than 50% of the respondents are reported to be self-employed in the district, 19% of the workforce is reported to be salaried/wage employed, 18 % of the workforce is reported to be casual workers and 2% of the workforce is reported to be contract workers.

*Education Profile of the district***:**

Traditional Education:

The district has 2868 schools of which 2281 are primary schools comprising of 70% government schools. The student-teacher ratio in the district is 19:1. The total enrolment in schools has been 4,04,446, however, a 50% decline has been observed between the enrollment of students in primary and secondary schools, one reason of which could be that only 8.1% of secondary school are government schools. The district also has 112 general and technical colleges with the enrolment of approx. 50,000 students

Table 129: Educational Profile of Chandrapur District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	2,281	2,70,643
Secondary (9-12th)	587	1,33,803
Colleges (General and Technical)	112	~50,000[37]

Source: AISHE, U-DISE

Vocational Education:

The district has 52 ITIs Government and Private with 5,515 students currently enrolled in them. Top sectors in which the trainings are offered in Chandrapur as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Power, Healthcare and courier and logistics.

Table 130: Total no. of ITI and there training number in Chandrapur district

Particular	Number
ITIs (Government & Private)	52
Trainee Count	5,515

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 5,087 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Fashion Design and Garment Making. Table below illustrates sector-wise annual training numbers in the district.

Table 131: Sector wise short- term skilling trained numbers in PMKUVA for Chandrapur district

Sectors	Trained
Information and communication technology	3,128
Fashion design	1,065
Garment making	630
Soft skills	90
Industrial electrical	174
Total	**5,087**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Trainings are offered by private training centers in the district across various courses for enhancing the skills of the persons.

8.3 Economy

Chandrapur district has the 16th highest GDP in the state as of 2016-17 of 30,063 crore and has seen a growth of approx.15% in GDP from 2015-16 to 2016-17. It also has a per capita GDDP of INR 1,28,472.

---

[37] *Enrolment figures at State run general and technical education colleges only*

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 52% towards the GDDP, secondary sector 39% and primary sector 9%.

Figure 64: Sector wise GDDP Distribution of Chandrapur District
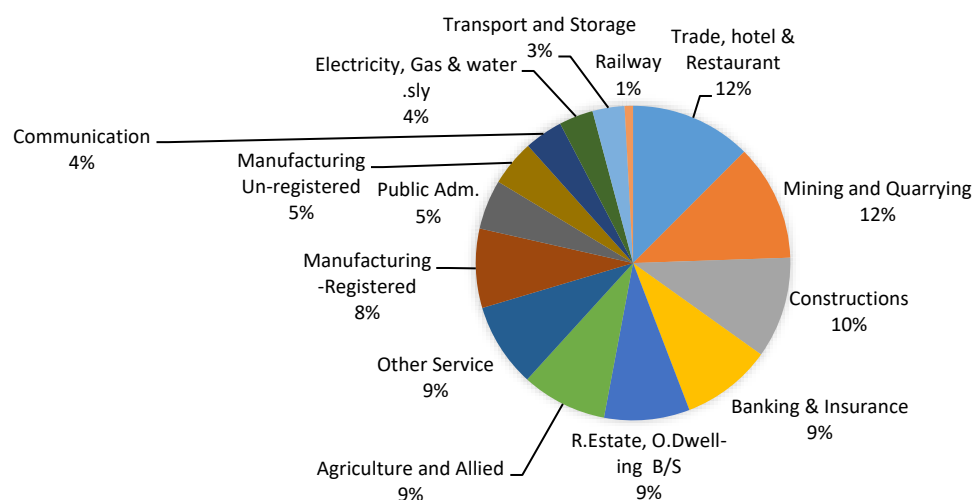
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

Under primary sector, activities allied to agriculture and its associated sectors contribute to the district's GDDP. The major crops grown in the district include rice, black rice, soybean, cotton, and pulses and an effort has been made to bring National Agriculture Market (e-NAM) portal to the farmers to ensure transparency in transactions and best price to the farmer. The forest in the district are rich in production of bamboo, tendu leaves, firewood, mahua flowers are other medicinal products. In fact, the district has Bamboo Research and Training Centre set up to create a sustainable livelihood opportunities through the bamboo produce and has engaged self-help groups who are being trained in production of bamboo products. Besides, poultry farming is another activity creating primary as well tertiary employment in Chandrapur by way of employing manpower for transportation and other logistic support.

A district rich in coal, Chandrapur's industry accounts for over 39% of the districts GDDP, with mining and quarrying accounting for 12% of the contribution and registered manufacturing accounting for 8% of the district's economy.

The district has over 34 large and, micro, small and medium industrial units employing 6525 people, out of which the 3 major manufacturing industries of the district are: Manufacture of other Non-Metallic Mineral products; Manufacture of Basic Metals and Manufacture of Paper and Paper Products.

Manufacture of other non-metallic mineral products is the major industry of the district, with sub-sector - Manufacture of cement, lime and plaster alone employing 3800 people, that is approximately 88% of the people engaged within the sector. The other sub sectors that provide livelihood opportunities to people across various rungs of the heterogeneous society are manufacture of refractory products, manufacture of clay building materials, manufacture of articles of concrete, cement, plaster and mica products. Some of the prominent employers are ACC Limited, Ultratech Cement Limited and Manigarh Cement in this sector in Chandrapur.

Manufacture of basic metals such as manufacture of basic iron and steel is the second highest industry in the district employing 2333 people, with employers such as Chandraur Ferro Alloy Plant, Lloyd Metals and Energy Limited and Gopani Iron and Power (India) Private Limited taking lead.

Manufacture of paper and paper products is the third prominent industry with manufacture of pulp, paper and paperboard employing almost 2319 people. The manufacture of corrugated paper/paperboard and containers of paper/paperboard is the second sub - sector contributing to the employment, with BGPPL (Bilt Graphic Paper Products Ltd) employing creating considerable number of jobs.

Other noteable manufacturing industries include manufacturing of chemicals and chemical products, food products and beverages and manufacture of coke, refined petroleum products and nuclear fuel in Chandrapur.

Table 132: Employment in registered manufacturing sector in Chandrapur district 2017-18

Sector	Employment
Manufacture of other non-metallic mineral products	4,326
Manufacture of basic metals	2,333
Manufacture of paper and paper products	2,326
Manufacture of chemicals and chemical products	621
Manufacture of food products and beverages	587
Manufacture of coke, refined petroleum products and nuclear fuel	242
Manufacture of motor vehicles, trailers and semi-trailers	22

Source: Annual Survey of Industries, 2017-18

Laslty, service sector, which contributes maximum to the district's economy is led by Trade, Hotels and Restaurants, followed by Banking and Insurance services and Real estate, Ownership of Dwellings and Business Services.

Investments in the district:

Electricity transmission, Road transport infrastructure services and development of commercial complexes are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 133: Sector wise investments in Chandrapur District

Sector Name	Proposed investment (in INR Million)	No. of Projects
Irrigation	2,17,685.8	4
Conventional electricity	1,94,179.1	13
Electricity transmission	1,55,392.3	12
Road transport infrastructure services	75,620.3	14
Railway transport infrastructure services	52,152.4	5
Cement	48,110	10
Coal & lignite	38,857.9	17
Steel	13,600	4
Renewable electricity	7,870.2	7
Paper products	7,500	1
Minerals	5,750	5
Others	10,884.4	29
Grand Total	**8,27,602.4**	**121**

8.4 Labor force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 134: Distribution of Respondents of Chandrapur

Profile	Details	
Urban vs. Rural	Urban	57%
	Rural	43%
Gender Profile	Male	77%
	Female	23%
Age Group	15-25 years	40%
	26-35 years	34%
	36-45 years	19%
	46-55 years	6%
	56-59 years	1%
Educational Level	Up to Xth	47%
	Up to XIIth	40%
	Any Graduation	13%

Figure 65: Past/Current participation in training, % for Chandrapur

- Have attended in the past
- Currently attending
- Haven't attended in the past

28%
7%
65%
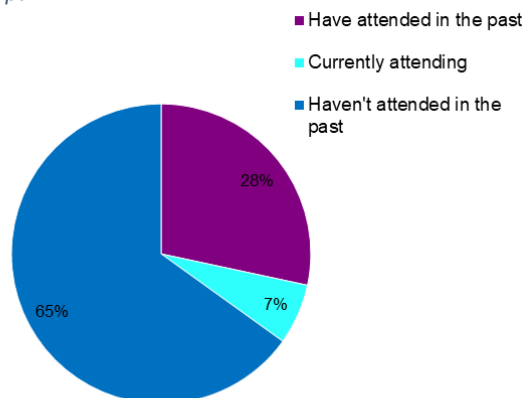
As can be seen in the figure 65, significant number of respondents (65%) shared that they had not undergone any technical/ non-technical job related training in the past. 28% reported that they have taken some training in the past and 7% mentioned that they are currently undergoing training.

Of those who underwent vocational training in the past, almost an equal number of trainings (~47 %) were attended at private training institutes as well as government training institutes. The trainees shared that word of mouth has been the main source of information about the scheduled training, followed by newspaper advertisement.

Figure 66: Type of training provider, in % for Chandrapur
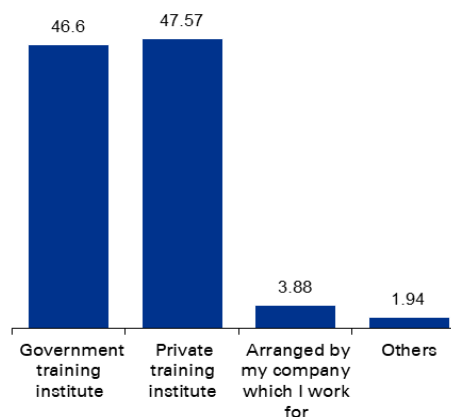
Government training institute	Private training institute	Arranged by my company which I work for	Others
46.6	47.57	3.88	1.94

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 67, in the district, majority (59%) of the respondents aspire to be wage-employed and 41% reported a preference for being self-employed. The preference can also be explained by the difference in the expected monthly income, which is higher in wage employment than self-employment. Amongst the respondents, almost double % of wage employment aspirants than self-employment aspirants have an inclination towards undertaking further education and training. Further 36% are keen on undertaking graduate non-technical trainings and 26% are interested in post graduate non-technical training. A positive correlation can be observed between people seeking wage employment and showing interest in taking training, to upgrade their skills and possible open better employment opportunities or for better wages.

Figure 67: Key Findings related to educational attainment of the labor force for Chandrapur
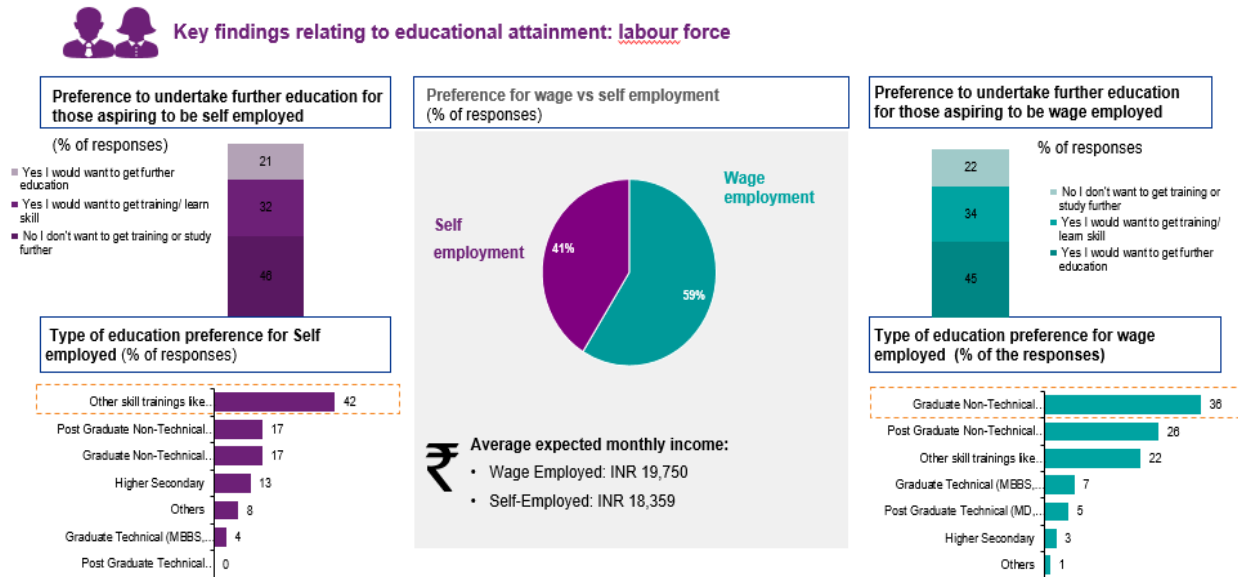
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 135: Aspirational sub-sectors for labor force of Chandrapur

For wage employment	For self-employment
Railways	Agriculture & Allied
Governance & Administration	Automobiles and auto ancillaries
Coal & Mine	Coal & Mine
Energy and Power	Rural Development & Panchayat Raj

Some respondents chose 'other' sectors for future economic activity. The preferences shared include opening a kirana store or exploring the Beauty Wellness and Personal Health Sector. Amongst the aspirants looking to be self-employed specifically, they expressed an interest in entering into agriculture or animal husbandry field or are willing to engage into production of handicraft or food products, which can be managed working from their homes itself.

99% of the respondents have expressed that they would prefer to work within their state, Maharashtra and 13% of the respondents shared that they are willing to work outside their state if they are being paid relatively higher than their wages in Maharashtra.

Perceived benefits of acquiring training:

Out of those who attended the training, 55% felt that the training has reaped benefit such as increase in income and acknowledgement through certificate, which an official affirmation of the job aspirant undergoing a training. However, the respondents also faced challenges after attending the training, such as a gap was felt in the skill levels expected by the employers and those imparted in the trainings, lack of

support from employers during the training program and by not recruiting the trained students. Amongst those who did not attend the training, 66% shared lack of awareness about the training as the main reason.

8.5 Incremental Demand & Estimation of Manpower Supply

Crop and animal production, transportation services, finance and insurance services and human health and social work activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in manufacture of basic metals. However, a significant decline has been noticed in the manufacture of non-metallic mineral products.

Table 136: Incremental Demand estimates (2019-2028); in persons for Chandrapur district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	29,001	30,137
Forestry & Logging	102	106
Fishing & Aquaculture	72	75
Sub-Total	**29,174**	**30,318**
Registered Manufacturing		
Food processing	31	33
Iron and Steel	112	117
Construction	2,743	2,879
Services		
Wholesale and Retail Trade	689	875
Transportation	6,296	7,591
Logistics	790	952
IT/ITES	1,319	1,591
Hospitality	391	417
BFSI	1,946	2,532
Real Estate	389	506
Professional, Scientific & Technical Activities	1,017	1,323
Public Administration & Administrative services	10,842	14,104
Education	6,603	8,589
Healthcare	8,832	11,489
Other services	20,847	27,119
Sub-Total	59,961	77,088

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- **Tourism & Hospitality sector** with specific job roles such as Guides and Tourist Assistant
- **Mining Sector**
- **Agriculture Sector** in areas related to forest produces.

Estimation of Manpower Supply

According to KPMG estimates, Chandrapur district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 10.31 lakh work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 137: Manpower Supply for District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Chandrapur	13,94,707	10,42,474	10,31,299

The workforce is further split across the educational attainment within the district as shown below in the table 138.

Table 138: Projected workforce by education levels

Education level	Projected work force
Illiterate	2,55,378
Literate but below matric/secondary	4,48,179
Matric/secondary but below graduate	2,27,584
Technical degree or diploma equal to degree or post-graduate degree	15,277
Technical diploma or certificate not equal to degree	6,572
Graduate and above other than technical degree	50,913
Literate others	27,396

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~34086 annually.

Table 139: Size of Target Population for Chandrapur District

Particular	Numbers
Enrolment in VIII	35,628
Enrolment in X	37,412
Enrolment in XII	14,659
Dropout at VIII	**3,242**
Passing out of VIII*	32,386
Students not transitioned to IX	**5,331**
Dropout at X	**6,379**
Passing out of X*	31,033
Students not transitioned to XI	**5,108**
Passing out at XII**	25,395
Students not transitioned to Higher Education	17,269
Total Target population	**34,086**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Particular	Annual Capacity in Numbers
Short Term Skilling	9,090
ITI (Government & Private)	11,332

8.6 Recommendations

Chandrapur being known for its thermal power plants, is dominantly primary in nature, and with service sector contributes highest to the economy, it has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below

Table 141: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Yellow	Red	Green
Food processing	Green	Red	Red
Tobacco	Green	Red	Red
Textiles	Yellow	Red	Red
Apparel	Yellow	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Yellow	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Yellow	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Yellow	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Yellow
Automotive (transport equipment)	Green	Red	Yellow
Construction	Red	Yellow	Red
Wholesale and Retail Trade	Yellow	Red	Red
Transportation	Yellow	Green	Red
Logistics	Yellow	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Yellow	Red	Red
BFSI	Yellow	Red	Red
Real Estate	Green	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Professional, Scientific & Technical Activities	🟩	🟥	🟥
Public Administration & Administrative Services	🟨	🟩	🟩
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟨
Other Services	🟩	🟩	🟥

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Chemical & chemical products, machinery & equipment, Automotive including transport equipment, IT & ITeS, Real estate, Education & Healthcare
- **High incremental employment potential sectors**: Agriculture, Transportation, Public Administration & Administrative services, Education and Healthcare.
- **High Aspiration Sectors**: Public Administration & Administrative services and Agriculture & Allied.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 142: Priority sectors for MSSDS for Chandrapur district

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Automotive including transport equipment	✓		✓
2.	Transportation	✓	✓	
3	Healthcare	✓	✓	
4	Agriculture and Allied		✓	✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Tourism and Hospitality
- Retail
- Education
- Public Administration & Administrative services
- Other Services

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 143: Job roles across high demand sectors for Chandrapur district

High Demand sectors	Identified Job Roles
Agriculture and Allied	Bamboo Grower
	Dairy Farmer
	Micro Irrigation Technician
	Greenhouse Operator
	Poultry Farmer
	Scientific agriculture – surface coating, soil testing, Crop Technician
Transportation	Transport Coordinator
	Transport Duty Manager
	Liquid Transport Operator
	Transport Consolidator
	Tank Lorry Driver
Automotive including transport equipment	Vehicle Assembly Fitter/ Technician
	Automotive Service Technician
	Maintenance Technician Mechanical
	Auto Component Assembly Fitter
	Automotive Engine Repair Technician
	Loading and Unloading Operator/Loader
	Vehicle Assembly Fitter/ Technician
Healthcare	Nursing
	General Duty Assistant
	Home Health Aide
	Diet Assistant
	Emergency Medical Technician – Basic
	Hospital Front Desk Coordinator
	Pharmacy Assistant

9. Dhule

9.1 About the district

Dhule district is located in northern Maharashtra. The district is divided into 4 sub districts and 678 inhabited villages.

Dhule has a total land area of 7195 sq. km. and constitutes 2.3% of the total state area. The district is a part of Nashik region and is bordered by districts of Nandurbar, Nashik and Jalgaon in Maharashtra and state of Gujarat and Madhya Pradesh in west and north respectively.

The district is mainly connected to bordering and other bordering cities by road and railways.

Table 144: Comparison of Dhule District with Maharashtra

Indicator	Dhule	Maharashtra
Area in sq. km.	7,195	3,07,713
Percentage share in State geographical area, %	2.3	100
No. of Sub-districts	4	353
No. of inhabited villages	678	40,959
No. of households	4,08,700	24,421,519
Forest area as a % of total geographical area	4.40	16.94

Source: Census 2011

9.2 Demography

The population Dhule is 20,50,862 as per census 2011, of which about 72% is rural. The district has a literacy rate of 72.8% which is lower than the state average of 82% and sex ratio of 946 females per 1000 males, higher than the state average of 925. At 47%, the district has a higher work participation rate compared to the state average.

Table 145: Demographic Indicators of Dhule district

Indicator	Dhule	Maharashtra
Population, No.	20,50,862	11,23,74,333
Decadal growth rate of population, %	20.08	16
Urban Population as a percentage of total population, %	27.84	45.2
SC Population, %	6.2	10.2
ST Population, %	31.5	8.8
Sex ratio, No. of females per 1000 males	946	925
Population density, per sq.km.	285	365
Literacy rate, %	72.8	83
Working age population* as a percentage of total population, %	59.4	59
Work participation rate^, %	47.12	44
HDI Index	0.786	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district, with a total workforce of 9.4 lakh persons, is predominantly agrarian with 72% of its workforce engaged in primary sector (agriculture and allied activities and mining), higher compared to 54% for Maharashtra. The district has higher rate of unemployment in urban areas.

Share of workforce, by sectors

Source: Census 2011

Unemployment rate (per 1000)
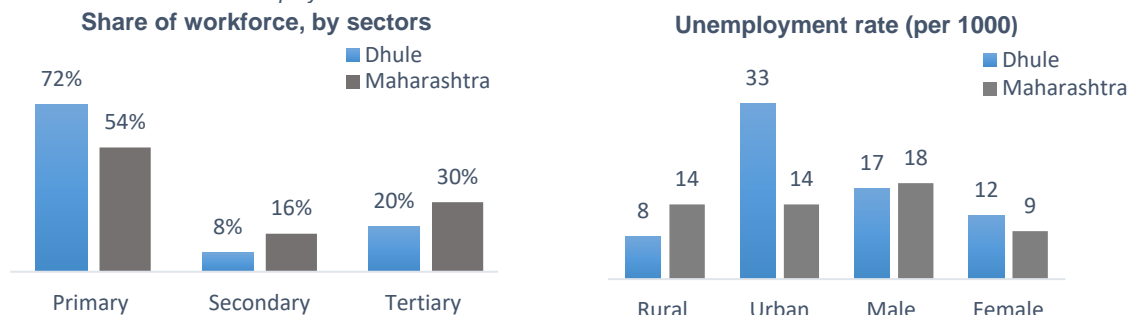
Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 69: Type of employment in Dhule district

As per figure 69, at 68% higher proportion of the workforce is self-employed compared to 52.8% of the workforce and a lower percentage of salaried employees compared to the state.
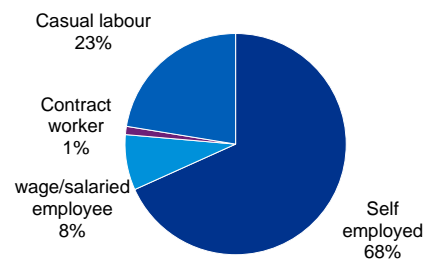
Source: Ministry of Labour & Employment

*Education Profile of the district***:**

Traditional Education:

The district has 2432 schools of which 1940 are primary. Total enrolment in schools was 947487. The student-teacher ratio in the district is 25:1.

The district also has 70 general and technical colleges in the district with the enrolment of approx. 32900 students.

Table 146: Educational Profile of Dhule District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1,940	3,35,585
Secondary Schools (IX to XII)	492	1,20,420
General Colleges & Technical Education	70	32,900[38]

Source: AISHE, U-DISE

---

[38] Enrolment figures at State run general and technical education colleges only

Vocational Education:

The district has a total of 17 ITIs with an annual capacity of 2249 students. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Banking and Accounting, Beauty and Wellness, Information and Communication technology.

Table 147: Total no. of ITI and there training number in Dhule district

Particular	Number
ITIs (Government & Private)	17
Trainee Count	2,249

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 7,238 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making and Beauty and Wellness. Table below illustrates sector-wise annual training numbers in the district.

Table 148: Sector wise short- term skilling trained numbers in PMKUVA for Dhule district

Sectors	Trained
Information And Communication Technology	2,009
Garment Making	1,672
Fashion Design	504
Beauty Culture And Hair Dressing	1,321
Ssc Electronics	155
Construction	89
Electrical	180
Electronics	410
Banking And Accounting	432
Automotive Repair	180
Industrial Electrical	30
Ssc It Ites	83
Ssc Bfsi	23
Remaining Sectors	**150**
Total	**7,238**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Majority of private training centers in the district offer various courses for enhancing the skills of the persons. Under the state scheme, majority of the trainings are focused on ICT and banking and electronics.

9.3 Economy

At 24,885 Crore, Dhule ranks 21 in the state in terms of GVA as of 2016-17 at current prices. Per capita GVA of Dhule is Rs. 114,834 as of 2016-17.

As per the figure 70, major contributors to the GDDP of the district are Agriculture and Allied activities, Trade, Hotel & Restaurant, Banking & Insurance services.

Figure 70: Sector wise GDDP Distribution of Dhule District
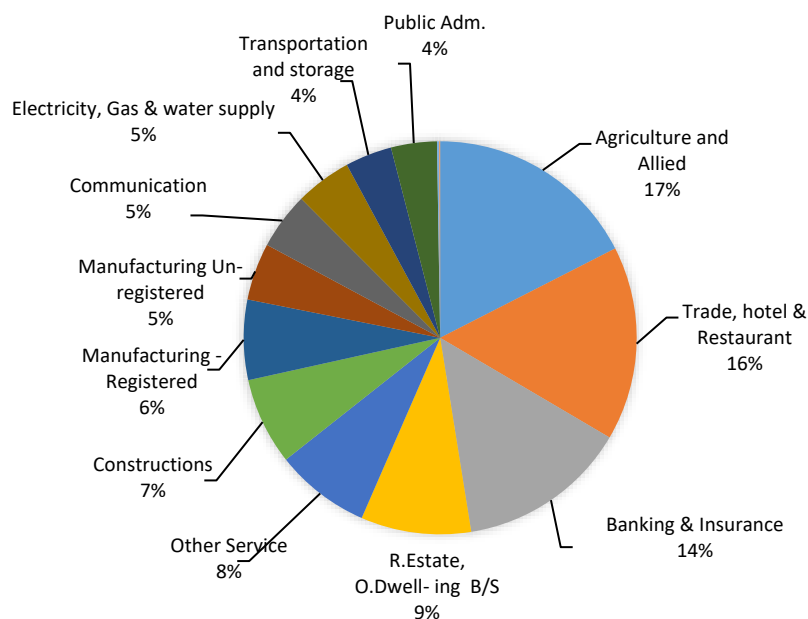
Source: District Domestic Product of Maharashtra 2013-14 (Base 2004-05), published by DES Maharashtra

Agriculture and allied activities contribute to 17% of the district's GDDP. Major crops grown in the district include Jowar, Bajra, Maize, Wheat, Gram, Groundnut, Soya been, Cotton, Onion and Pomegranate.

Industry accounts for over 23% of the district's GDDP with construction, registered and unregistered manufacturing being the major contributors.

The district India's third largest wind production facility 'Brahmanvel windfarm', is located in the district.

The district has over 1600 large and, micro, small and medium industrial units in the manufacturing sector. 4 major manufacturing industries of the district are: Textiles, food processing and chemicals

Textile is the major industry in the district employing over 4500 persons in the district. Over 3000 persons are engaged in preparation and spinning of textile fibres and remaining in weaving and finishing of textiles. The district is the one of the upcoming hubs of textile in the state.

Food processing is another major industry in the district engaging about 2800 persons. Of these majority are engaged in the manufacture of vegetable and animal oils. Groundnut and Soyabeen are major crops grown in the district which are used for oil extraction. Manufacture of starch and starch products is another food processing activity in the district has strong linkages with the agricultural produce in the district.

Chemicals industry is the third largest in terms of employment. The industry is concentrated in the manufacture of soaps, detergents, cleaning and polishing preparations etc.

Table 149: Employment in registered manufacturing sector in Dhule district 2017-18

Sector	Employment
Manufacture of textiles	4,540
Manufacture of food products and beverages	2,806
Manufacture of chemicals and chemical products	1,121
Manufacture of rubber and plastics products	668

Sector	Employment
Manufacture of fabricated metal products, except machinery and equipment	599
Manufacture of basic metals	413
Manufacture of wearing apparel; dressing and dyeing of fur	215
Manufacture of other non-metallic mineral products	148
Publishing, printing and reproduction of recorded media	103

Source: Annual Survey of Industries, 2017-18

Service sector contributing to over 48% of the district's economy, is led by Trade, Hotels and Restaurants, followed by banking and insurance services and Real estate, ownership of dwellings and business services.

Investments in the district:

Electricity transmission, Road transport infrastructure services and development of commercial complexes are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 150: Sector wise investments in Dhule District

Sector Name	Proposed investment (in INR Million)	No. of Projects
Railway transport infrastructure services	1,03,673.5	2
Irrigation	76,389.5	3
Road transport infrastructure services	66,699.5	10
Electricity transmission	40,548.2	4
Renewable electricity	23,849.5	11
Transport logistics services	8130	1
Cement	7820	2
Other agricultural products	3,181.4	3
Minerals	2,570	1
Aluminium & aluminium products	2,500	1
Starches	1,624.9	2
Wires & cables	1,529	1
Processed foods	1,000	1
Cotton & blended yarn	250	1
Others	281.5	8
Grand Total	**3,40,047**	**51**

Source: CMIE

9.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile
Table 151: Distribution of Respondents in Dhule district

Profile	Details	
Urban vs. Rural	Urban	59%
	Rural	41%
Gender Profile	Male	72%
	Female	28%
Age Group	15-25 years	34%
	26-35 years	39%
	36-45 years	19%
	46-55 years	8%
	56-59 years	0%

Figure 71: Past/Current participation in training, % in Dhule

- Have attended in the past
- Currently attending
- Haven't attended in the past

1%
9%
90%
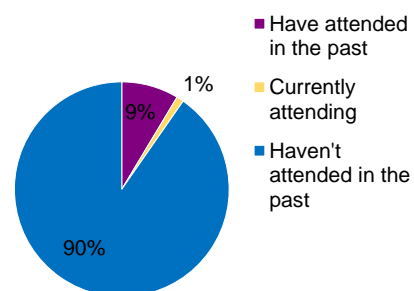
Profile	Details	
Educational Level	Upto Xth	59%
	Upto XIIth	30%
	Any Graduation	11%
Occupational Profile	Worker	59%
	Non-Worker	41%

In addition to the above in figure 71, most respondents (82%) responded that they hadn't attended any technical/ non-technical job related training in the past. 15% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings (70 %) were attended at Private training institutes as well as government training institutes.

Figure 72: Type of training provider, in % for Dhule district
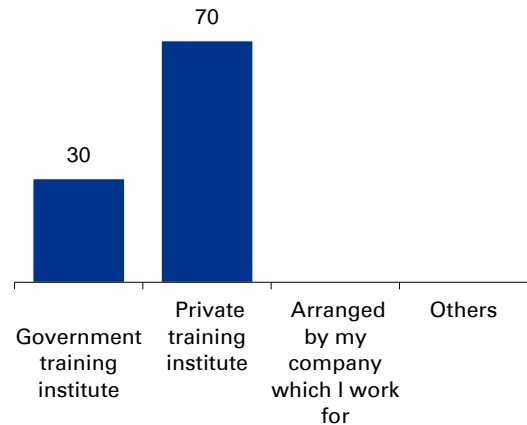
**Employment, Training and Educational Aspiration**

Key findings related to educational attainment: As per the figure 73, in the district, majority (53%) of the respondents aspire to be self-employed and 47% reported a preference for being wage employed. Amongst the respondents, the wage-employment aspirants have a higher preference to undertake further education and training.

Additionally, there is preference for acquiring graduate non-technical education amongst both wage and self-employed respondents. Among the wage employment aspirants, those who would like to undertake further training, expressed a preference for undertaking technical skills training pertaining to the job.

Figure 73: Key findings related to educational attainment of labourforce for Dhule district
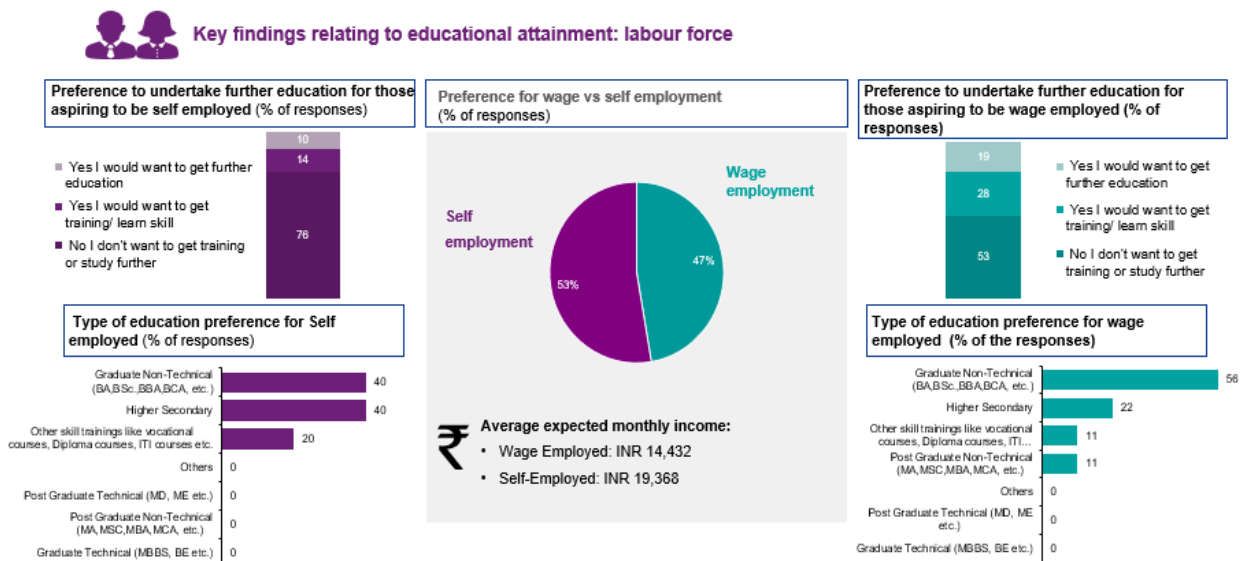
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 152: Aspirational sub-sectors for labour force of Dhule district

For wage-employment	For self-employment
Agriculture and allied activities	Own business/kirana store
Finance, Banking and Insurance	Agriculture and allied activities
Other Manufacturing	Food Processing
Art & Culture	Art and Culture
IT& ITES	Other manufacturing

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, skill based business (mechanic, plumbing, electrician etc).

Additionally, 96% of the respondents would like to work within Maharashtra. 74% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

89% of those who attended a training programme stated no benefit from attending the training. Among those who did benefit from the training, majority state increase in income as the main benefit, followed by mobility to a new sector and getting a certification. When the respondents were asked to highlight the major challenges after attending the training programmes, they stated 'no hiring by the employers even after attending training' as the main challenge.

9.5 Incremental Demand & Estimation of Manpower Supply

Crop and animal production, manufacture of textiles and fabricated metal products are expected to generate highest incremental demand in the agriculture and registered manufacturing sector.

Within services, transportation, banking and financial services, healthcare, education and public administration, are expected to be the major drivers of incremental labour demand in the district.

Table 153: Incremental Demand estimates (2019-2028); in persons for Dhule district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	27,684	28,769
Forestry & Logging	97	101
Fishing & Aquaculture	69	71
Sub-Total	**27,850**	**28,941**
Registered Manufacturing		
Food processing	148	156
Textiles	3,021	4,849
Chemicals and Pharmaceuticals	137	153
Metal products (except machinery and equipment)	1,216	1,188

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Machinery and Equipment	120	153
Construction	1,506	1,581
Services		
Wholesale and Retail Trade	620	788
Transportation	4,903	5,911
Logistics	615	742
IT/ITES	1,027	1,239
Hospitality	297	317
BFSI	1,569	2,041
Real Estate	314	408
Professional, Scientific & Technical Activities	820	1,066
Public Administration & Administrative services	8,432	10,969
Education	5,686	7,397
Healthcare	7,607	9,895
Other Services	24,708	32,142
Sub-Total	**56,597**	**72,914**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Agriculture sector was highlighted as the most important in the district with focus on basic agro based **food processing such as papad making and maize processing for animal feed**
- The district also has a growing **oil extraction industry** (oil extracted from Soyabeen and Groundnut)
- Other major industries in the district are manufacture of garments, ropes and mats
- Need for 'multi-skilling' was highlighted with training of a single person across multiple skill sets such as driving and skills for performing basic banking tasks

Estimation of Manpower Supply

Dhule district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 9.59 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 154: Manpower Supply for District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Dhule	25,54,412	9,80,907	9,59,760

Table 155: Projected workforce by education levels

Education level	Projected work force
Illiterate	3,42,072
Literate but below matric/secondary	3,11,532
Matric/secondary but below graduate	1,81,351
Technical degree or diploma equal to degree or post-graduate degree	17,758
Technical diploma or certificate not equal to degree	8,362
Graduate and above other than technical degree	42,933
Literate others	55,753

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~31304 annually.

Table 156: Size of Target Population for Dhule District

Particular	Numbers
Enrolment in VIII	39,551
Enrolment in X	33,518
Enrolment in XII	10,376
Dropout at VIII	**5,312**
Passing out of VIII*	34,239
Students not transitioned to IX	**5,636**
Dropout at X	**7,056**
Passing out of X*	26,462
Students not transitioned to XI	**4,356**
Passing out at XII**	20,965
Students not transitioned to Higher Education	14,256
Total Target population	**31,304**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 157:Vocational Education annual capacity for Dhule district

Particular	Annual Capacity in Numbers
Short Term Skilling	14,790
ITI (Government & Private)	4,516

9.6 Recommendations

The district has potential for incremental demand generation in agriculture and allied activities, transportation, healthcare, education and public administration & administrative services.

Agriculture, although low on economic growth is highly aspirational in the district and is closely aligned with food processing, a high economic growth and aspirational activity in the district.

The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Amber
Tobacco	Green	Red	Red
Textiles	Amber	Amber	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Amber
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Amber
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Red
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Green

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the above analysis of the district and keeping in view the primary insights from field visits the sectors, the following sectors are proposed to be taken on priority by MSSDS:

Table 158: Priority sectors for MSSDS for Dhule district

Sl. No.	Sector	High or Medium Economic Growth	High or Medium Employment Potential	High or medium Aspiration
1	Agriculture and Allied		✓	✓
2	Food processing (oil extraction, starch)	✓		✓
3	Banking, Insurance, and Financial Services	✓		✓
4	Textiles	✓	✓	
5	Healthcare	✓	✓	
6	Transportation	✓	✓	

Apart from the above priority sectors, MSSDS can also explore the potential of following sectors in the district –

- IT & ITeS
- Administrative and Support services
- Automotive including transport equipment
- Education

These sectors although low on aspirational value, have a growth or employment generation potential in the district

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in Table 159. The basis of selecting the job roles is through the primary inputs while consulting various district officials and employers.

Table 159: Job Roles across high demand sectors for Dhule district

High demand sectors	Identified Job Roles
Agriculture & Allied	- Goat Farmer - Dairy Farmer - Micro Irrigation Technician - Greenhouse Operator - Poultry Farmer - Scientific agriculture – surface coating, soil testing, Crop Technician - Maize Cultivator - Feed Technician - Essential Oil Extractor

High demand sectors	Identified Job Roles
Textiles	• Fitter- Spinning Preparatory • Knitting Machine Operator • Loom Fitter • Sewing Machine Operator • Assistant Ginning Fitter • Knotting machine operator
Transportation	• Transport Coordinator • Transport Duty Manager • Liquid Transport Operator • Transport Consolidator • Tank Lorry Driver
BFSI	• Insurance Agent • Banking Correspondent • ATM operator • Cash Collection • Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • Operations Executive
Healthcare	• General Duty Assistant • Home Health Aide • Diet Assistant • Emergency Medical Technician – Basic • Pharmacy Assistant • Dental Technician
Food processing	• Machine operator • Milling Technician • Corn Starch Manufacturing Technician • Grain Mill Operator • Fruit ripening technician

10. Gadchiroli

10.1 About the district

Gadchiroli district is located in the eastern region of the Maharashtra state with the district headquarters in Gadchiroli Town. The district is included in Nagpur division. Gadchiroli is divided into 7 sub-districts and 870 inhabited villages.

Gadchiroli constitutes 1.2% of the total state area with a land area of ~3,712 sq.km. It is bordered by Chandrapur district to the West, Gondia district to the North, Chhattisgarh state to the East, and Telangana state to the South and South-east. With about two-fifth of the area as the forest area, the proportion of forest cover as a part of total area in the district is significantly more than the state. The district has the highest proportion of forest area and mineral deposits in the state.

18.5 kilometres of railway lines pass through the district. There are 166 uninhabited villages in the district. There are only Three villages having population 10,000 and above. The district is known for activity of Naxalites – the People's Liberation Guerrilla Army – who have taken shelter in the dense forests and hills. The district is categorised as tribal and undeveloped.

Table 160: Comparison of Gadchiroli District with Maharashtra

Indicator	Gadchiroli	Maharashtra
Area in sq.km.	3,716	3,07,713
Percentage share in state geographical area, %	1.21	100
No. of Sub-districts	7	353
No. of inhabited villages	870	40,959
No. of households	2,77,266	24,421,519
Forest area as a % of total geographical area	36.16	16.94

Source: Census 2011

10.2 Demography

According to 2011 census data, the district has a population of over 10.7 lakh persons which is ~0.95% of the state. Gadchiroli is the second least populous district of Maharashtra after Sindhudurg. It is a primarily a rural district with 11% of its population in urban areas whereas 45.2% of the state population lives in urban areas. The population density of the district is much lower than the state as can be seen in Table 161. With a population density of 74 persons/Sq. Km which is significantly lower than the state average, the district is one of the low-intensity regions in the state.

Table 161 lists down multiple demographic indicators of the district. Gadchiroli district has higher sex ratio (number of females per 1000 males) compared to the state. The literacy rate of the district is significantly lower than the state. More than three-fifth of the district's population falls in the working age group (i.e. 15-59 years) while about 55% of its population is actually working i.e. % of total workers (main and marginal workers) to the total population. The workforce participation rate in the district is higher than the state.

Table 161: Demographic Indicators of Gadchiroli district

Indicator	Gadchiroli	Maharashtra
Population, No.	10,71,795	11,23,74,333
Decadal growth rate of population, %	10.46%	16
Urban Population as a percentage of total population, %	11%	45.2
SC Population, %	11%	10.2
ST Population, %	38%	8.8
Sex ratio, No. of females per 1000 males	975	925
Population density, per sq.km.	74	365
Literacy rate, %	70.55%	83
Working age population* as a percentage of total population, %	63%	59
Work participation rate^, %	55%	44
HDI Index	0.608	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 5.84 lakh persons. Figure 75, suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by tertiary and secondary sector. 82% of the workforce is engaged in the primary sector whereas as small as ~4% of the total workforce is engaged in the secondary sector in the district which is one-fourth of the state average. As shown in the Figure 74 below, the rate of unemployment (per 1000) in the district is significantly lower than the state average across all the categories. The lower rate of female unemployment (per 1000) in Gadchiroli points towards a fair gender demographic in the district.

Figure 74: Share of workforce & Employment Rate for Gadchiroli District
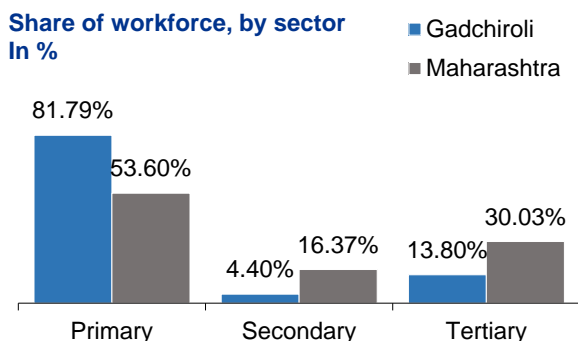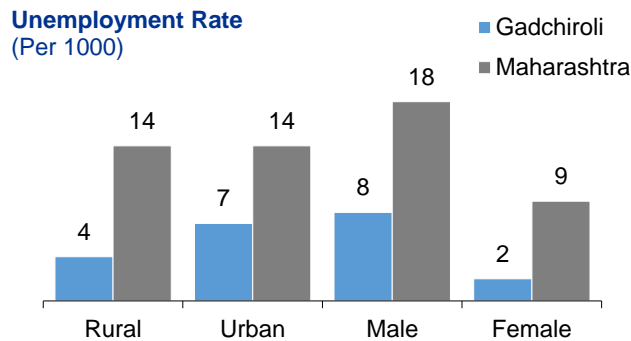
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in figure 76, a little less than three-fifth of the working population is self- employed in Gadchiroli. Proportion of salaried employment in the workforce is one of the lowest in Gadchiroli district when compared against other districts of the state. This shows a higher dependence on irregular employment in the district as against regular from of employment. As large as 38% of the workforce is employed as casual labor which is significantly high as compared to the state average of 3%.
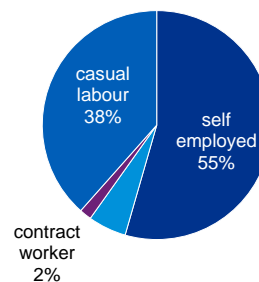
Figure 75: Type of employment in Gadchiroli district
Source: Ministry of Labour & Employment

*Education Profile of the District***:**

Traditional Education:

Gadchiroli district has a total of 2,423 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of over 2 lakh students. The Pupil-Teacher ratio of the district is 15:1. The district also has 72 general and technical colleges with an enrolment of about 19,000 students in state-run general and technical colleges.

Table 162: Educational Profile of Gadchiroli District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	2,043	1,40,095
Secondary Schools (IX to XII)	380	64,639
General Colleges & Technical Education	72	19,000[39]

Source: AISHE, U-DISE

---

[39] 1Enrolment figures at State run general and technical education colleges only

Vocational Education:

Gadchiroli district has a total of 16 ITIs Government and Private with 2,489 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Healthcare, Information and Communication technology, Apparel, and Textiles and Clothing.

Table 163: Total no. of ITI and there training number in Gadchiroli district

Particular	Number
ITIs (Government & Private)	16
Trainee Count	2,489

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 4,606 students are trained annually in the district under the scheme. Top sectors for training are Fashion Design, Garment making and Healthcare sectors within the district. Table below illustrates sector-wise annual training numbers in the district.

Table 164: Sector wise short- term skilling trained numbers in PMKUVA for Gadchiroli district

Sectors	Trained
Fashion Design	1,419
Remaining Sectors	801
Garment Making	447
Medical And Nursing	330
Beauty Culture And Hair Dressing	270
Automotive Repair	259
SSC Apparel	120
Security	60
SSC Healthcare	30
Total	**4,606**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

It is to be noted that about majority of the respondents stated receiving their training from a government training institute in the district.

10.3 Economy

As of 2016-17, Gadchiroli district has the lowest Gross District Value Added (at current prices) in the state at Rs. 8,845 crores. The per capita GDVA (at current prices) of the district was recorded at Rs. 78,863 which is the second lowest in the state and the lowest in the Nagpur division. Gadchiroli is one of the twelve districts in Maharashtra currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

In Gadchiroli, the service sector contributes to 65% of the district economy despite employing only around 19% of the district's workforce. The agriculture and allied activities contribute to 16% and the industry sector contributes to 19% of the GDDP.

The economy of the district is mainly depending on agriculture, mining and forest products. The district is categorized as tribal with farming as the main occupation. The district produces bamboo and Tendu leaves,

and paddy is the main agricultural product. Other agriculture includes sorghum, linseed, pigeonpea (tur), and wheat.

A deeper look reveals that the major sub-sectors in the services sector are Retail and Hospitality, Ownership of dwellings and Business Services and Real Estate Services- each accounting for a 14% contribution towards GDDP. Service sector also includes Banking and Insurance as an important sub-sector in the district's economy.

The registered manufacturing sector contributes accounts for only 3% contribution to the GDDP as can be seen in Figure 76. The only large-scale industry in the district is a paper mill at Ashti in Chamorshi taluka and the paper pulp factory at Desaiganj. There are many rice mills in the district. Siddhayu Ayurvedics Rearch Foundation is located at Desaiganj in Gadchiroli.
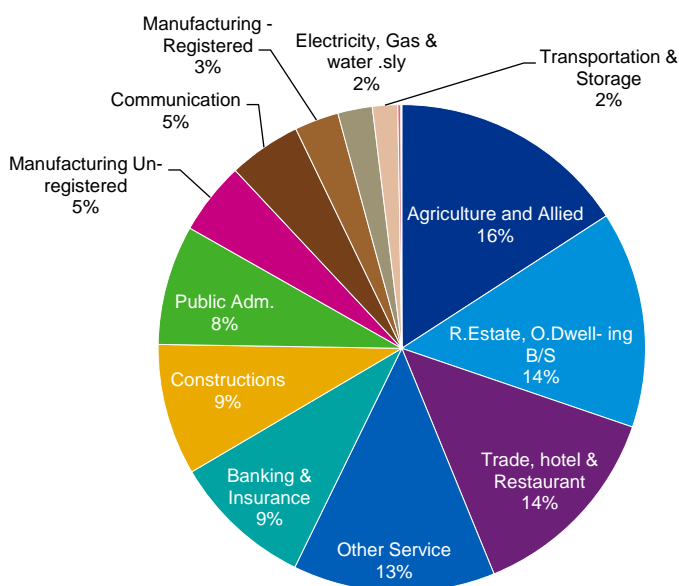
Figure 76: Sector wise GDDP Distribution of Gadchiroli District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

Investments in the district:

Irrigation, Road and railway transport infrastructure, sponge iron and storage and distribution are the top industries where investments in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 165: Sector wise investments in Gadchiroli District

| Sector Name	Proposed Investment (in INR Million)	No of projects
Irrigation	42,040	1
Road transport infrastructure services	14,305	22
Railway transport infrastructure services	11,416	3
Sponge iron	7,000	1
Storage & distribution	1,110	1
Minerals	477	1
Others	47	5
Total	**76,395**	**34**

Source: CMIE

10.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 166: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	54%
	Rural	46%
Gender Profile	Male	69%
	Female	31%
Age Group	15-25 years	51%
	26-35 years	29%
	36-45 years	16%
	46-55 years	4%
	56-59 years	0%
Educational Level	Upto Xth	32%
	Upto XIIth	47%
	Any Graduation	22%
Occupational Profile	Worker	53%
	Non-Worker	47%

Figure 77: Past/Current participation in training, %
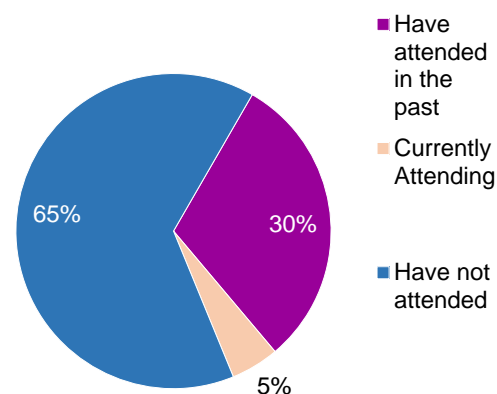
About 65% of the respondents in Gadchiroli stated that they hadn't attended any technical/ non-technical job related training in the past while 30% reported having attended a training programme in the past.

It is to be noted that about three-fifth of the respondents stated receiving their training from a government training institute. The district also has private training providers to enhance the skills of the people and about two-fifth of the respondents were found to be receiving their training from them. None of the respondents mentioned receiving trainings organized by their employers.
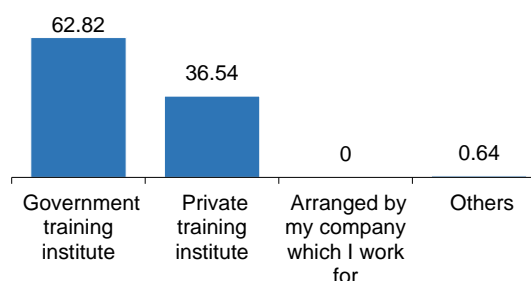
Figure 78: Type of training provider, in %

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure 80, 55% of the respondents in Gadchiroli aspire to be self-employed and 45% reported a preference for being wage-employed. Amongst the respondents who aspire to be wage-employed, there is a higher preference to undertake further education/ training as compared to self-employment aspirants. There is preference for acquiring non-technical education amongst wage-employment aspirants. About two-fifth of the self-employment aspirants prefer skill trainings in vocational courses. The respondents also prefer non-technical education over technical education.

Preference to undertake further education for those aspiring to be self employed (% of responses)

- No I don't want to get training or study further — 42
- Yes I would want to get training/ learn skill — 32
- Yes I would want to get further education — 25

Type of education preference for Self employed (% of responses)

- Other skill trainings like... — 40
- Graduate Non-Technical... — 32
- Others — 8
- Post Graduate Non-Technical... — 6
- Graduate Technical (MBBS,... — 6
- Higher Secondary — 6
- Post Graduate Technical (MD,... — 2

Preference for wage vs self employment (% of responses)

- Wage employment — 45%
- Self employment — 55%

Average expected monthly income:
- Wage Employed: INR 19,678
- Self-Employed: INR 18,868

Preference to undertake further education for those aspiring to be wage employed (% of responses)

- No I don't want to get training or study further — 13
- Yes I would want to get training/ learn skill — 30
- Yes I would want to get further education — 57

Type of education preference for wage employed (% of the responses)

- Graduate Non-Technical (BA,BSc.,BBA,BCA, etc.) — 39
- Post Graduate Non-Technical (MA,MSC,MBA,MCA, etc.) — 23
- Other skill trainings like vocational courses, Diploma courses, ITI... — 14
- Graduate Technical (MBBS, BE etc.) — 9
- Others — 8
- Post Graduate Technical (MD, ME etc.) — 5
- Higher Secondary — 1

Figure 79: Key Findings related to educational attainment of the labour force

Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 167: Aspirational sub-sectors for labour force in Gadchiroli

For wage employment	For self-employment
Governance & Administration	Retail
Healthcare	Own business/ Kirana store
Agri & Allied	Agri & Allied
Auto & Auto Components	Skill Based Business
	Beauty Parlors/Spa/Salons

For those aspiring to be self-employed, there was a preference towards opening a retail or wholesale shop (grocery, stationery, medical shop, pan shop, clothes).

For those aspiring to be wage-employed, there was a preference towards getting jobs in Agriculture and allied activities, Governance and Administration, Healthcare, Auto and Auto-components. Many respondents also selected the category 'others' which includes teaching, electricals, manual wage labor for wage- employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 19,678 and Rs. 18,868 respectively.

Additionally, 97% the respondents would like to work within Maharashtra. As many as 88% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra at a lower wage and expressed a lower inclination towards migrating to other regions outside the state for better economic opportunities.

Perceived benefits of acquiring training:

As many as 75% of the respondents who attended a training programme stated that they actually benefited from attending the training. The primary benefit which was highlighted by the respondents was increase in income. Other stated benefits include smooth movement to a new sector and getting certification. The primary challenge reported by majority of the respondents after attending the training was that the

employers are not providing such trainings within the organization which disables them to keep their skills attained in the training sustained and updated. It is found that among the respondents who reported not having attended any training programme, 45% of the respondents stated having no awareness on any employment-oriented training programs that help gain expertise/ enhance job skills.

10.5 Incremental demand and Estimation of Manpower supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities with the registered manufacturing sector playing only a nominal role. The trend is predictable because even at present, industry sector employs the least amount of workforce in the district. Crop and animal production, Finance and Insurance services, Human health & social work activities, Administrative and support services are expected to be the major drivers of incremental labour demand in the district. The nominal incremental registered manufacturing sector demand would be seen in the manufacture of chemicals, chemical products, food products and beverages which are the only existing registered manufacturing industries present in the district

Table 168: Incremental Demand estimates (2019-2028); in persons for Gadchiroli district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	19,626	20,395
Forestry & Logging	69	72
Fishing & Aquaculture	49	51
Sub-Total	**19,744**	**20,518**
Registered Manufacturing		
Food processing	14	14
Chemicals and Pharmaceuticals	19	21
Construction	707	742
Services		
Wholesale and Retail Trade	153	194
Transportation	864	1,042
Logistics	108	131
IT/ITES	181	218
Hospitality	77	82
BFSI	417	542
Real Estate	83	108
Professional, Scientific & Technical Activities	218	283
Public Administration & Administrative services	6,247	8,127
Education	3,097	4,028
Healthcare	4,142	5,388
Other services	13,941	18,135
Sub-Total	**29,527**	**38,278**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Agriculture sector was highlighted as the most important in the district with focus on forest produces, food processing and horticulture
- The district also has a growing teakwood produces which can increase **furniture making**

Estimation of Manpower Supply

Gadchiroli district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 6.1 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 169: Manpower supply for Gadchiroli district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Gadchiroli	6,61,649	6,15,396	6,11,559

Table 170: Projected workforce by education levels in Gadchiroli district

Education level	Projected work force
Illiterate	2,00,453
Literate but below matric/secondary	2,24,468
Matric/secondary but below graduate	1,00,498
Technical degree or diploma equal to degree or post-graduate degree	56,85
Technical diploma or certificate not equal to degree	1,257
Graduate and above other than technical degree	16,431
Literate others	62,767

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~16436 annually.

Table 171: Size of target population in Gadchiroli district

Particular	Numbers
Enrolment in VIII	17,932
Enrolment in X	18,068
Enrolment in XII	6,863
Dropout at VIII	**1,506**
Passing out of VIII*	16,426
Students not transitioned to IX	**2,704**
Dropout at X	**3,072**
Passing out of X*	14,996
Students not transitioned to XI	**2,468**
Passing out at XII**	12,047
Students not transitioned to Higher Education	8,192
Total Target population	**16,436**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 172: Vocational Education annual capacity for Gadchiroli district

Particular	Annual Capacity in Numbers
Short Term Skilling	15,850
ITI (Government & Private)	4044

10.6 Recommendations

The economic growth of the district is predominantly driven by the secondary and tertiary sectors. Manufacturing forms the core of the employment generation activities in the district with a growth rate of more than 10% for manufacturing of food products, chemical and chemical products, machinery, motor vehicles, etc.

However, agriculture, Finance & Insurance activities and services have a good employment potential for the locals within the district. The district especially has a huge potential in forestry & logging and agriculture. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 173: Sector specific economic growth, employment potential and aspirations in Gadchiroli district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Red
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Green
Transportation	Amber	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Green
Education	Green	Green	Red
Healthcare	Green	Green	Amber
Other Services	Green	Green	Amber

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Food Processing, Chemicals & Pharmaceuticals, Machinery & Equipment, Automotive including transport equipment, IT & ITeS, Real Estate, Professional, scientific & technical activities, Education and Healthcare.
- **High incremental employment potential sectors**: Agriculture, Public Administration & Administrative services, Education, Healthcare and other services.
- **High Aspiration Sectors**: Public Administration & Administrative services and Agriculture & Allied

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 174: Priority sectors for MSSDS in Gadchiroli district

Sl. No.	Sector	High or medium Growth	High Economic Potential	High aspiration
1	Agriculture & Allied		✓	✓
2	Automotive (including transport equipment)	✓		✓
3	Healthcare	✓		✓
4	Retail	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Public Administration & Administrative services
- Education

- Other service activities

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 175. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 175: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force in Gadchiroli district

High demand sectors	Identified Job Roles
Agriculture & Allied	- Dairy farmer - Goat farmer - Micro irrigation technician - Small poultry farmer - Green house operator - Multi Skill Technician (Food Processing)
Healthcare	- General Duty Assistant - Home Health Aide - Diet Assistant - Emergency Medical Technician – Basic - Pharmacy Assistant - Medical Records and Health Information Technician
Retail	- Cashier - Retail Trainee Associate - Retail Sales Associate - Distributor Salesman - Departmental Manager - Sales Associate
Automotive	- Automotive Engine Repair Technician - Auto Component Assembly Fitter - Maintenance Technician Mechanical L4 - Auto / E-Rickshaw Driver & Service Technician - Car Washer and Assistant Service Technician - Plastic Moulding Operator/Technician
Construction & Real Estate	- Mason - Bar Bender & Steel fixer - Construction UT Tester - Assistant Surveyor - Draughtsman
Handicrafts & Carpets	- Bamboo Artwork Maker - Bamboo Basket Maker - Bamboo Mat Maker - Bamboo Processor & Dyer - Bamboo Utility Handicraft Assembler - Bamboo Utility Product Tailor

High demand sectors	Identified Job Roles
Mining	• Mining- Mechanic / Fitter • Explosives Handler • Timberman • Assistant Support- Open Cast Mines • Assistant Support Underground Mines
Multipurpose job roles	• Electrician • Electronics • Plumber • AC Service Technician • Crane Operator • JCB Operator

11. Gondia

11.1 About the district

Gondia district is located towards the eastern side of the Maharashtra state with the district headquarters in Gondia City. The district is divided into 8 sub-districts and 942 inhabited villages.

Gondia has a total land area of 5234 sq.km. and constitutes 1.70% of the total state area. The district lies in the eastern side of Nagpur region. It is bordered by Balaghat district of Madhya Pradesh on the north, Bhandara district on the west, Rajnandgaon of Madhya Pradesh on the east and Gadchiroli on the south.

The district has good connectivity with railways and roads which connects it to the bigger cities which makes markets accessible and helping trade and businesses.

The district is high on natural resources with abundance of minerals. Important minerals found in the district are iron ore and quartz with reserves of Silica, Sea Sand and Vanadium Ore. The district is covered under dense forest and has maximum forest area percentage in the state. Most of the forests are National reserve forests, however, bamboo, teakwood and tendu leaves are major forest produces. Hazra Fall, Kachargadh, Nagzira Wildlife sanctuary and Navegaon National Park are popular destinations among tourists.

Table 176: Comparison of Gondia District with Maharashtra

Indicator	Gondia	Maharashtra
Area in sq.km.	5,234	3,07,713
Percentage share in state geographical area, %	1.7	100
No. of Sub-districts	8	353
No. of inhabited villages	942	40,959
No. of households	2,91,708	24,421,519
Forest area as a % of total geographical area	52.02	16.94

Source: Census 2011

11.2 Demography

According to latest census data, the district has a population of nearly 13.2 lakh persons which is ~1.18% of the state. Of the total population, 62.92% are residing in the rural areas whereas 17.08% are residing in the urban areas of the district. The density of population according to 2011 census is 253 persons/Sq. Km.

The district's literacy rate is at 84.95% which is higher than the state average of 82.91%. Gondia has sex ratio (no. of females per 1000 males) of 999 which is higher than the state average of 925. While 66% of the population in the district are in the working age group (i.e. 15-59 years), about 46% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 177: Demographic Indicators of Gondia district

Indicator	Gondia	Maharashtra
Population, No.	13,22,507	11,23,74,333
Decadal growth rate of population, %	10.14	16
Urban Population as a percentage of total population, %	17.08	45.2
SC Population, %	13.3	10.2
ST Population, %	16.2	8.8
Sex ratio, No. of females per 1000 males	999	925
Population density, per sq.km.	253	365
Literacy rate, %	84.95	83
Working age population* as a percentage of total population, %	66	59
Work participation rate^, %	46	44
HDI Index	0.70	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 6.6 lakh persons. Of this, nearly 71.03% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 13.05% of workers are working in secondary sector and 15.92% workers are working in tertiary sector. As shown in the figure 81 below, Gondia's unemployment (per 1000) in rural areas is slightly higher than the state average, whereas in urban areas it is significantly higher. Additionally, if we compare male and female unemployment (per 1000) of Gondia to the state, both male and female unemployment rate is slightly higher to the state average.

Figure 80: Share of workforce & Employment Rate for Gondia District
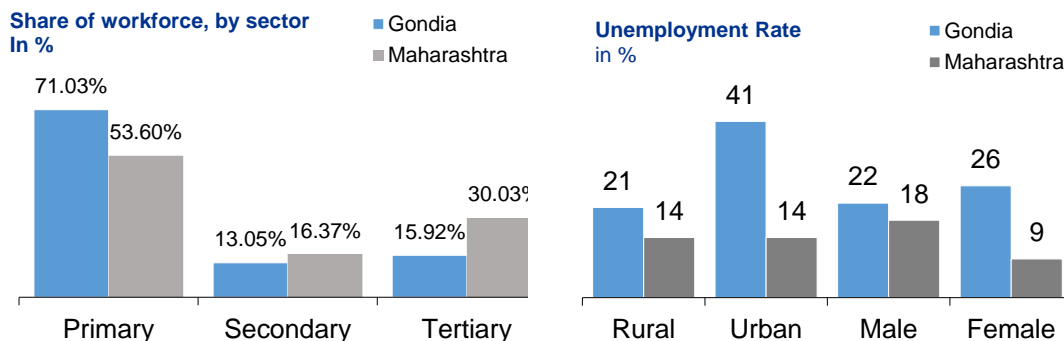
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 81: Type of employment numbers per 1000
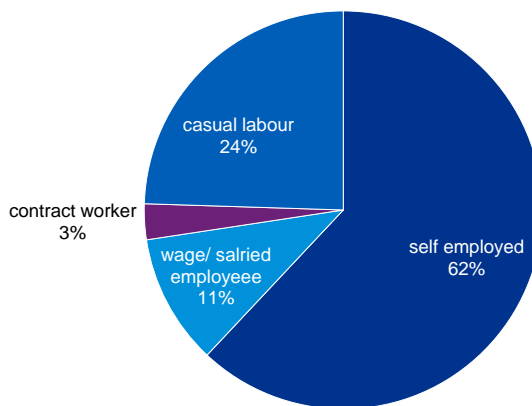
As per figure 82, maximum persons are self-employed in the district which is significantly higher to the state average followed by casual workers which is slightly higher to the state average and salaried employees which is significantly lower to the state average.

Source: Ministry of Labour & Employment

*Education Profile of the District***:**

Traditional Education

Gondia district has a total of 2007 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 2.57 lakh students. The student teacher ratio is 17:1. The district also has 56 general and technical colleges in the district with the enrolment of 19,000 students.

Table 178: Educational Profile of Gondia District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1,619	1,65,344
Secondary Schools (IX to XII)	388	91,948
General Colleges & Technical Education	56	19,000[40]

Source: AISHE, U-DISE

Vocational Education

Aurangabad district has a total of 15 ITIs Government and Private with 3,128 students currently enrolled.Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Healthcare, Beauty & Wellness, Agriculture, Apparel, Information & Communication Technology and Telecom.

Table 179: Total no. of ITI and there training number in Gondia district

Particular	Number
ITIs (Government & Private)	15
Trainee Count	3,128

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 5,278 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making, Banking and Accounting and Beauty and Wellness. Table below illustrates sector-wise annual training numbers in the district.

Table 180: Sector wise short- term skilling trained numbers in PMKUVA for Gondia district

Sectors	Trained
Information and communication technology	1,343
Garment making	990
Banking and accounting	865
Beauty culture and hair dressing	689
Remaining sectors	500
Electrical	450
Fashion design	390
Fabrication	150
Automotive repair	120
Electronics	90
Business and commerce	60
Medical and nursing	55
Soft skills	26
Total	**5,278**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI). Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

---

[40] Enrolment figures at State run general and technical education colleges only

11.3 Economy

As of 2016-17, Gondia district had the 28th highest Gross District Value Added (GVA) in the state at Rs. 12,052 crores. The per capita GVA of the district is Rs. 1,08,182.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 60% towards the GDDP. Secondary sector is at 31% and primary sector is at 9%.

As per the figure indicated below, major contributors to the GDDP of the district are Trade, Hotel & Restaurant, Constructions, Real Estate, Ownership of dwellings and business services, Agriculture & Allied and Manufacturing- Registered.

Figure 82: Sector wise GDDP Distribution of Gondia District
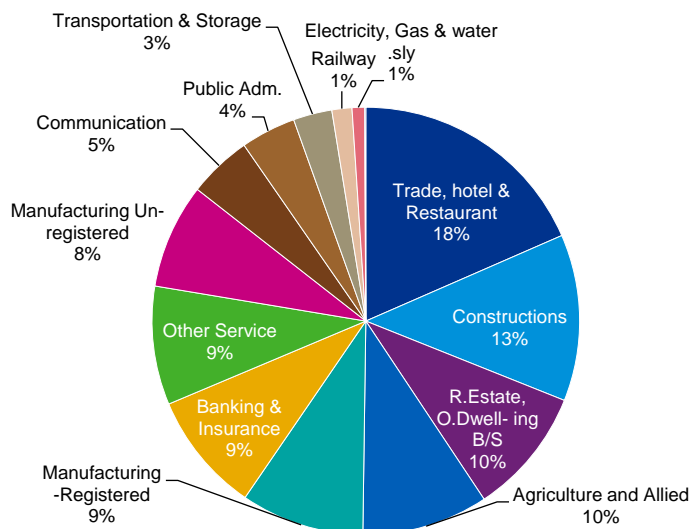
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

Agriculture and allied activities contributes to 10% of the GDDP in the district. The district is also referred as Rice Bowl of Maharashtra due to its production of rice in the district. Other crops like wheat and gram are also grown in few areas of the district. Forest resources also contributes to the GDDP of the district with teakwood, bamboo and tendu leaves its major produces.

Gondia district has 4 registered large and medium enterprises which employs approximately 231 persons. These include companies such as Gayatri Agro Inds. Power Ltd. and Adani Power Maharashtra Energies Ltd. The district also has nearly 1364 Micro, Small and Medium Enterprises (MSME) employing nearly 12,000 persons. Major manufacturing industries include manufacture of tobacco products, food products, printing & reproduction of recorded media and manufacture of basic metals.

Manufacture of tobacco products is the most important industry in the district under registered manufacturing. It includes stemming and redrying of tobacco, manufacture of bidi, cigarettes, cigars, zarda and pan masala. It employs nearly 2,044 persons in the district which constitutes to 76% of the employment under registered manufacturing sector.

Manufacture of food products and beverages is an important industry in the district**.** It includes manufacture of vegetable and animal oils & fats and manufacture of grain mill products. It employs nearly 449 persons in the district which constitutes to 16% of the employment in registered manufacturing sector.

Printing & reproduction of recorded media is also an important industry in the district. It includes printing and service activities related to printing. It employs nearly 86 persons in the district which constitutes to 3% of the employment in registered manufacturing sector.

Manufacture of basic metals is also an important industry in the district. It includes manufacture of basic precious & other non-ferrous metals. It employs nearly 30 persons in the district which constitutes to 1% employment in the registered manufacturing sector.

Other important manufacturing industries include manufacture of other non-metallic mineral products, manufacture of chemical & chemical products, manufacture of paper & paper products and manufacture of rubber & rubber products.

Table 181: Employment in registered manufacturing sector in the district as of 2017-18

Sector	Employment
Manufacture of tobacco products	2044
Manufacture of food products	449
Printing and reproduction of recorded media	86
Manufacture of basic metals	30
Manufacture of other non-metallic mineral products	26
Manufacture of chemicals and chemical products	20
Manufacture of paper and paper products	18
Manufacture of rubber and plastics products	11
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	4

Source: Annual Survey of Industries 2017-18

As shown above in the figure 83, Tertiary Sector is the largest contributor towards the GDDP of the district. Of all the services Trade, Hotel & Restaurant is the highest at 18%, followed by Real estate, ownership of dwellings and business services at 10%. Banking and insurance, other services, communication and public administration are at 9%, 9%, 5% and 4% respectively.

Investments in the district:

Gondia district has attracted investment in key infrastructure sectors. Conventional Electricity, Irrigation Road and rail transport are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district

Table 182: Sector wise investments in Gondia District

Sector Name	Proposed Investment (in INR Million)	No of projects
Conventional electricity	169,440	3
Irrigation	20,962	2
Electricity transmission	6,201	3
Road transport infrastructure services	2,798	3
Railway transport infrastructure services	2,039	2
Other ferrous metal products	205	1
Other miscellaneous services	26	1
Others	14	3
Grand Total	**2,01,684**	**18**

Source: CMIE

11.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 183: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	68%
	Rural	32%
Gender Profile	Male	69%
	Female	31%
Age Group	15-25 years	36%
	26-35 years	28%
	36-45 years	22%
	46-55 years	12%
	56-59 years	2%
Educational Level	Upto Xth	50%
	Upto XIIth	41%
	Any Graduation	9%
Occupational Profile	Worker	62%
	Non-Worker	38%

Figure 83: Past/Current participation in training, %
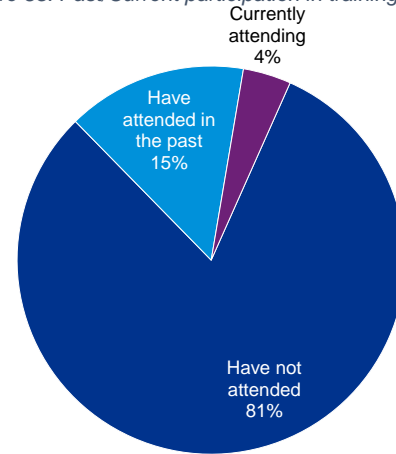
In addition to the above in figure 84, majority respondents (81%) responded that they hadn't attended any technical/ non-technical job related training in the past. 15% reported that they have undergone some training in the past and 4% stated they currently undergoing some kind of training.

Of those who underwent vocational training in the past, the trainings (~67 %) were attended at Private training institutes and 32% attended government training institutes.

Figure 84: Type of training provider, in %
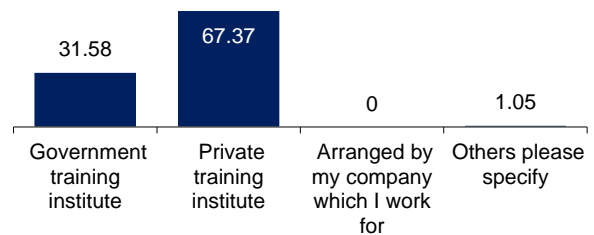
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 86, in the district, 34% of the respondents aspire to be wage-employed and 66% reported a preference for being self-employed. Amongst the respondents there is a preference to undertake further education/ learn skill for those aspiring to be wage employed as well as to those aspiring to be self-employed. Additionally, for those who want further education/ learn skill there is preference for acquiring graduation non-technical degree amongst both self-employed and wage employed respondents.

Figure 85: Key Findings related to educational attainment of the labour force
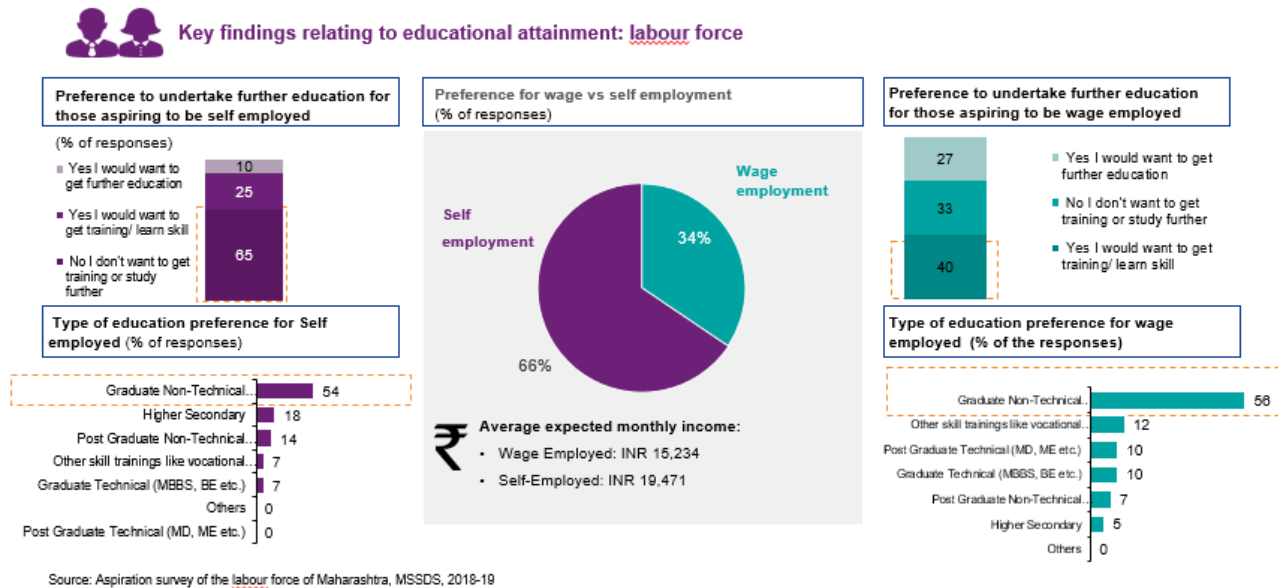
Key findings relating to educational attainment: labour force

Source: Aspiration survey of the labour force of Maharashtra, MSSDS, 2018-19

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 184: Aspirational sub-sectors for labour force in Gondia

For wage employment	For self-employment
Governance & Administration	Opening a Retail shop
Railways	Beauty parlors/Spa/Salons
Engineering & Capital Goods	Skill Based Business (Plumbing, Electrician etc.)
Auto & Auto Ancillaries	Making & Selling Food Products & handicrafts

For those aspiring to be self-employed, there was a preference towards setting up the following types of businesses: Opening/setting up a retail shop, beauty parlors/spa/salons, skill-based business and making & selling food products & handicrafts.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Governance & Administration, Railways, Engineering & Capital goods and auto & auto ancillaries' sub-sectors.

Many respondents also selected 'other' which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 15,234 and Rs. 19,471 respectively.

Additionally, 99% of the respondents would like to work within Maharashtra. However, 77% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

65% of those who attended a training programme stated they actually benefit from attending the training, majority state increase in income and gain new skills. Whereas, among those who didn't benefit from the training, majority state that employer's engagement was not good during the training program.

11.5 Incremental Demand & Estimation of Manpower Supply

Agriculture-Crop & Animal Production, Education, Finance & Insurance activities, Healthcare, Transportation and Construction sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is declining in sub sectors of manufacture of other non-metallic mineral products and manufacture of tobacco products.

Table 185: Incremental Demand estimates (2019-2028); in persons for Gondia district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	19,397	20,157
Forestry & Logging	68	71
Fishing & Aquaculture	48	50
Sub-Total	**19,513**	**20,278**
Registered Manufacturing		
Food processing	24	25
Construction	1,772	1,860
Services		
Wholesale and Retail Trade	337	429
Transportation	2,439	2,940
Logistics	306	369
IT/ITES	511	616
Hospitality	178	190
BFSI	875	1,139
Real Estate	175	228
Professional, Scientific & Technical Activities	457	595
Public Administration & Administrative services	5,395	7,018
Education	3,665	4,768
Healthcare	4,903	6,378
Other Services	14,121	18,369
Sub-Total	**33,364**	**43,039**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- **Healthcare** sector was highlighted as one of the important sectors in the district with focus on job roles related to Nursing.
- **Hospitality** sector is also growing with job roles like cook, servers, front office assistance etc.

- **Agriculture & Allied** sector is also relevant with focus on job roles in fisheries and bamboo fabrication & manufacturing
- **Gondi painting** is a local craft which can be utilized for entrepreneurship

Estimation of Manpower Supply

According to KPMG estimates, Gondia district has a significant opportunity in terms of a favourable demographic dividend- with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 5.96 lakhs labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 186: Manpower Supply for Gondia District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Gondia	8,55,074	6,18,625	5,96,147

The workforce is further split across the educational attainment within the district as shown below in the table 187.

Table 187 Educational Attainment of projected workforce

Educational Level	Projected Workforce
Illiterate	1,00,216
Literate but below matric/secondary	2,74,590
Matric/secondary but below graduate	1,35,741
Technical degree or diploma equal to degree or post-graduate degree	7,385
Technical diploma or certificate not equal to degree	2,199
Graduate and above other than technical degree	21,931
Literate others	54,085

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~22,800 annually.

Table 188: Size of target population in Gondia district

Particular	Numbers
Enrolment in VIII	22,611
Enrolment in X	23,715
Enrolment in XII	11,339
Dropout at VIII	**1,219**
Passing out of VIII*	21,392
Students not transitioned to IX	**3,521**
Dropout at X	**2,658**
Passing out of X*	21,057
Students not transitioned to XI	**3,466**
Passing out at XII**	19,345
Students not transitioned to Higher Education	13,154
Total Target population	**22,800**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 189: Vocational Education annual capacity for Gondia district

Particular	Annual Capacity in Numbers
Short Term Skilling	10,200
ITI (Government & Private)	1,475

11.6 Recommendations

Gondia, being one of the bordering districts with the state of Madhya Pradesh is predominantly driven by primary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 190: Sector specific economic growth, employment potential and aspirations for Gondia district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Orange
Forestry & Logging	Red	Red	Orange
Fishing & Aquaculture	Orange	Red	Orange
Food processing	Green	Red	Orange
Tobacco	Green	Red	Red
Textiles	Orange	Red	Red
Apparel	Orange	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Orange	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Orange	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Orange	Red	Orange
Machinery and Equipment	Green	Red	Orange
Automotive	Green	Red	Orange
Automotive (transport equipment)	Green	Red	Orange
Construction	Red	Orange	Red
Wholesale and Retail Trade	Orange	Red	Green
Transportation	Orange	Orange	Red
Logistics	Orange	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Orange	Red	Red
BFSI	Orange	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Real Estate	🟩	🟥	🟥
Professional, Scientific & Technical Activities	🟩	🟥	🟥
Public Administration & Administrative Services	🟨	🟩	🟩
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟥
Other Services	🟩	🟩	🟨

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->2.9%- Medium; <2.9%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:

- **High economic growth sectors**: Food Processing, Chemicals & Pharmaceuticals, Machinery & Equipment, Automotive including transport equipment, IT & ITeS, Real Estate, Professional, scientific & technical activities, Education and Healthcare.
- **High incremental employment potential sectors**: Agriculture, Public Administration & Administrative services, Education, Healthcare and other services.
- **High Aspiration Sectors**: Wholesale & Retail Trade and Public Administration & Administrative services

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 191: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture & Allied		✓	✓
2	Transportation	✓	✓	
3	Automotive (including transport equipment)	✓		✓
4	Retail	✓		✓
5	Healthcare	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Public Administration & Administrative services
- Machinery and equipment
- Education

- Other service activities (beauty & wellness, Security etc.)

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 192. The basis of selecting the job roles is through the primary inputs while consulting various district officials and employers

Table 192: Top Job Roles Identified for the district as per incremental demand & aspiration of the labourforce

Sector Name	Top Job Roles
Agriculture & Allied	Goat Farmer
	Dairy Farmer
	Micro Irrigation Technician
	Fisheries Extension Associate
	Bamboo Grower
	Agriculture Machinery Operator
	Cotton Cultivator
Automotive (including transport equipment)	Automotive Engine Repair Technician
	Auto Component Assembly Fitter
	Maintenance Technician Mechanical L4
	Accessory Fitter
	Auto / E-Rickshaw Driver & Service Technician
	Car Washer and Assistant Service Technician
Retail	Cashier
	Retail Trainee Associate
	Retail Sales Associate
	Distributor Salesman
	Self Employed Retailer (For Gondi Painting)
	Departmental Manager
	Insurance Agent
Healthcare	General Duty Attendant
	Home Health Aide
	Diet Assistant
	Emergency Medical Technician- Basic
	Patients Care Assistant
	Pharmacy Assistant

12. Hingoli

12.1 About the district

Hingoli district is located in the center of the Maharashtra state with the district headquarters in Hingoli City. The district lies in the eastern side of Aurangabad region and is surrounded by Washim and Yevotmal in northern side, Parbhani in western side and Nanded at south-eastern side.

Hingoli has a total land area of 4827 sq.km and constitutes 1.57% of the total state area. The district is divided into 5 sub-districts and 675 inhabited villages.

Hingoli is considerably new district, and has good connectivity with railways and roads which connects it to the bigger cities such as Mumbai, Jalgaon, Nagpur and Hyderabad making markets accessible and helping in trade and businesses. The nearest domestic airport is in Nanded (80 km) which serves as a common airport for Nanded, Parbhani and Hingoli districts

The district has sufficient supply of sand and stones required for construction. The forest area only covers 7.96% of the total land area and is concentrated in Aundha taluka with produces of Beedi leaves, Gum and Honey. Popular tourist destinations in Hingoli include the Jaleshwar Mahadev Temple (present in the lake), Shri Datta Mandir, Mangalwara and Dakshinmukhi Hanuman Temple, Khatkali.

Table 193: Comparison of Hingoli District with Maharashtra

Indicator	Hingoli	Maharashtra
Area in sq. km.	4,827	3,07,713
Percentage share in State geographical area, %	1.57	100
No. of Sub-districts	5	353
No. of inhabited villages	675	40,959
No. of households	2,27,041	24,421,519
Forest area as a % of total geographical area	7.96	16.94

Source: Census 2011

12.2 Demography

According to latest census data, the district has a population of nearly 11.7 lakh persons out of which males constitute 51% of the population and females 49%. Of the total population, 84.82% are residing in the rural areas and the district has a lower than the state Density of Population (Persons per sq Km.) 244 persons/Sq. Km.

Among the human development indicators, the district's literacy rate is at 78.17%, which is lower than the state average of 82.91%. However, Hingoli has sex ratio (no. of females per 1000 males) of 953 which is higher than the state average of 925. While 58% of the population in the district are in the working age group (i.e. 15-59 years), about 48% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 194: Demographic Indicators of Hingoli district

Indicator	Hingoli	Maharashtra
Population, No.	11,77,345	11,23,74,333
Decadal growth rate of population, %	19.27	16%
Urban Population as a percentage of total population, %	15.18	45.2
SC Population, %	1.38	10.2
ST Population, %	1.07	8.8
Sex ratio, No. of females per 1000 males	953	925
Population density, per sq.km.	244	365
Literacy rate, %	78.17	83

Indicator	Hingoli	Maharashtra
Working age population* as a percentage of total population, %	58	59
Work participation rate^, %	48	44
HDI Index	0.648	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district is majorly agrarian in nature with a workforce of 5.7 lakh persons, out of which nearly 82.77% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 4.77% of workers are working in secondary sector and 12.46% workers are working in tertiary sector. As shown in the figure 87 below, Hingoli's unemployment (per 1000) in rural areas is slightly less than the state average, whereas in urban areas it is significantly less. Additionally, if we compare male unemployment (per 1000) of Hingoli to the state, male unemployment rate is slightly higher to the state average.

Figure 86: Share of workforce & Employment Rate
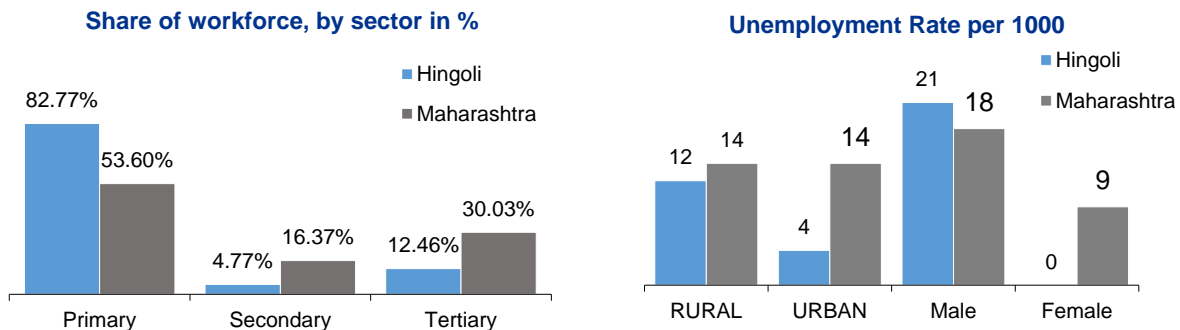
Share of workforce, by sector in %

Source: Census 2011

Unemployment Rate per 1000

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

As can be seen in figure 88, about 53% of the workforce is reported to be self-employed in the district. During field visit, it was shared that most people are engaged in small scale local businesses like car repair. 38% of the workforce is reported to be casual workers 8% of the workforce is reported to be salaried/wage employed and 1% of the workforce is reported to be contract workers. The dominance of the agrarian economy could be seen as a major source for casual labor employment, where the labor can work on hourly basis in a week.

Figure 87: Type of employment in the district
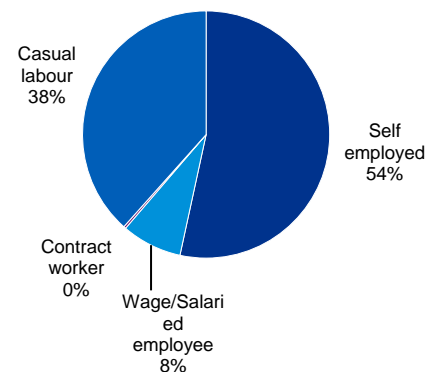
Source: Ministry of Labor & Employment

Educational Profile of the District

Traditional Education:

Hingoli district has a total of 1494 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 2.49 lakh students. The student teacher ratio is 23:1. The district also has 32 general and technical colleges in the district with the enrolment of 9196 students. Among the polytechnics, the government polytechnic has a better enrolment rate as compared to the private ones, and on primary consultations it was shared that the enrolment is falling due to lack of awareness and lack of opportunity. The principal of the polytechnic did share their plan of creating awareness by holding camps for Class 10th and Class 12th students regarding the scope after polytechnic education to ensure that students are taking an informed decision. Besides, most students in polytechnics are keener on pursue of higher education outside the district, rather than taking placements. In the institute, Mechanical has highest demand whereas IT has least demand.

Table 195: Educational Profile of District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	1,237	1,82,107
Secondary (9-12th)	257	67,679
Colleges (General and Technical)	31	9,196[2]

1Enrolment figures at State run general and technical education colleges only

Source: AISHE, U-DISE

Vocational Education

Hingoli district has a total of 7 ITIs Government and Private with 671 students currently enrolled. Trainings are offered by private training centers in the district across various courses for enhancing the skills of the persons. Top sectors in which the trainings are offered in Hingoli as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Agriculture, Information And Communication Technology, Garment Making, Beauty Culture and Hair Dressing and Construction and under the state scheme, majority of the trainings are focused on Accounts Assistant Using Tally and Tailor (Basic Sewing Operator).

Table 196: Total no. of ITI and there training number in Hingoli district

Particular	Number
ITIs (Government & Private)	7
Trainee Count	671

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 4,374 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Fashion Design, Garment Making, Industrial Electrical and Healthcare. Table below illustrates sector-wise annual training numbers in the district.

Table 197: Sector wise short- term skilling trained numbers in PMKUVA for Hingoli district

Sectors	Trained
Information And Communication Technology	1,520
Beauty Culture And Hair Dressing	734
Garment Making	713
Fashion Design	360
Industrial Electrical	300
Remaining Sectors	237
Medical And Nursing	150

Sectors	Trained
Automotive Repair	120
Construction	90
Agriculture	60
SSC Security	60
Electrical	30
Total	**4,374**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. The Settlement ratio is 71% of students trained in RSETI. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd. Also, a demand sericulture training has seen an increase, and there are discussions going on for turmeric processing training.

12.3 Economy

As of 2016-17, Hingoli district had the 2nd lowest Gross District Domestic Product (GDDP) in the state at INR 10024 crores. The per capita income of the district is Rs. 81,235.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 64% towards the GDDP. Secondary sector is at 15% and primary sector is at 21%.

As per the figure indicated below, major contributors to the GDDP of the district are Agriculture and Allied activities, Trade, Hotel & Restaurant, Real estate, Ownership of dwellings and business services, Banking & Insurance and Other services.

Figure 88: Sector wise GDDP Distribution of Hingoli District
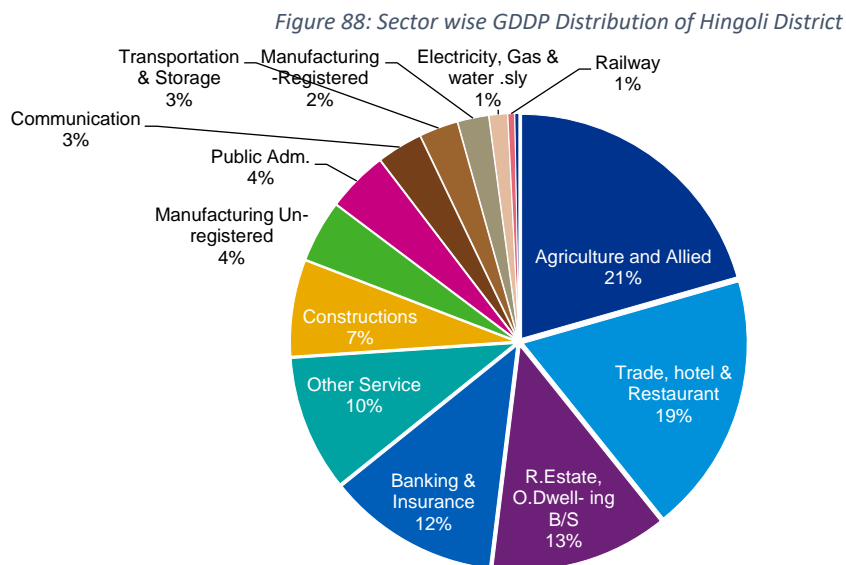
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

Agriculture and allied activities contributes to 21% of the GDDP in the district. The major crops cultivated in the district are soybean, cotton, jowar, pigeon pea, pulses, oil seeds, wheat, gram and sunflower with

soybean and Cotton covering the maximum land under cultivation within the district. Turmeric too is one of the significant crops of the region, however, currently there is limited processing in the district. Currently there is only one soybean oil processing center and small cotton industries which are active. Since, Hingoli is a draught prone zone of Marathwada, there are certain challenges faced by in the agricultural production, and need for proper small scale go downs in order to store grains and for small scale industries is felt.

Hingoli is considered as a no industrial zone, made up mostly of small and medium local businesses and the industry contributes 15% to the economy through un registered economy and construction. The district has over 05 large, 328 small and micro, industrial units employing around 5000 people, out of which the 2 major manufacturing industries of the district are: Manufacture of food products and beverages and Manufacture of textiles.

Manufacture of food products and beverages is the major industry of the district, with sub-sector - Manufacture of sugar alone employing 75% of the people employed in this sector (1264). The other sub sectors that provide livelihood opportunities to people across various rungs of the heterogeneous society are Processing and preserving of meat, Manufacture of vegetable and animal oils and fats and Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials. Some of the prominent employers are Purna Sahkari Sakhar Karkhana Ltd., Purna Sahkari Sakhar Karkhana Ltd. Unit Two and Bhaurao Chavan Sahakari Sakhar Karkhana Ltd. in this sector in Hingoli.

Manufacture of textiles is the second highest industry in the district employing 107 people in preparation and spinning of textile fibres, with employers such as Rokdeshwar Sahkari Soot Girni Ltd.

Table 198: Employment in registered manufacturing sector in the district 2017-18

Sector	Employment
Manufacture of food products and beverages	1264
Manufacture of textiles	107

Source: Annual Survey of Industries, 2017-18

There are 3 clusters which are expected to be instituted in the district, these are - Hingoli Engineering and Fabrication Cluster, Textile Cluster and Turmeric Cluster. Also, Hingoli will make its presence felt in the cutting edge of experimental Physics as it has been selected for the LIGO-India, which is a planned advanced gravitational-wave observatory to be located in India as part of the worldwide network.

As shown above in the figure 89, Tertiary Sector is the largest contributor towards the GDDP of the district, contributing 64%. Of all the services Trade, Hotel & Restaurant is the highest at 19%, followed by Real estate, ownership of dwellings and business services at 13%. Banking and insurance, other services, public administration, communication and transportation and storage are at 12%, 10%, 4% and 3% respectively.

Investments in the district:

Road transport infrastructure, irrigation, and textiles are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 199: Sector wise investments in Hingoli District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	32,198	4
Irrigation	30,384	1
Other textiles	918	1
Storage & distribution	694	1
Other agricultural products	481	2

Sector Name	Proposed Investment (in INR Million)	No of projects
Renewable electricity	450	1
Electricity transmission	380	2
Others	70	5
Total	**65,575**	**15**

Source: CMIE

12.4 Labor force Aspiration

The main findings of the youth aspirations include:

Respondent Profile

Table 200: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	48%
	Rural	52%
Gender Profile	Male	76%
	Female	24%
Age Group	15-25 years	55%
	26-35 years	28%
	36-45 years	08%
	46-55 years	08%
	56-59 years	0%
Educational Level	Up to Xth	54%
	Up to XIIth	31%
	Any Graduation	15%
Occupational Profile	Worker	64%
	Non-Worker	36%
Average monthly household income for those working (INR)		6,123

Figure 89: Past/Current participation in training, %

- Have attended in the past
- Currently Attending
- Have not attended

93% 7%
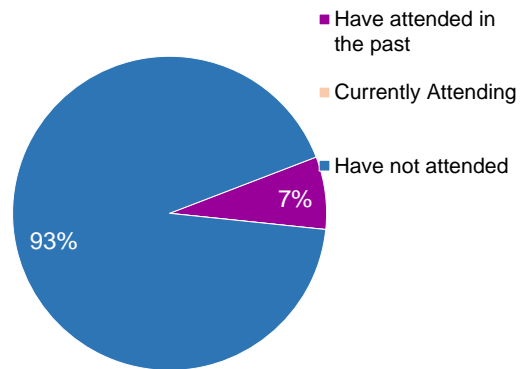
As can be seen in the figure 90, significant number of respondents (93%) shared that they had not undergone any technical/ non-technical job related training in the past and 7% mentioned that they have undergone training. All of those who have not attended the training, shared that lack of awareness of the scheduled training is the main reason behind it.

Of those who underwent vocational training in the past, 50% attended at government training institutes, followed by 30%, which were organised by the attendees employer and 20% in private training institutes. The trainees shared that word of mouth has been the main source of information about the scheduled training, followed by newspaper advertisement.

Figure 90: Type of training provider, in %
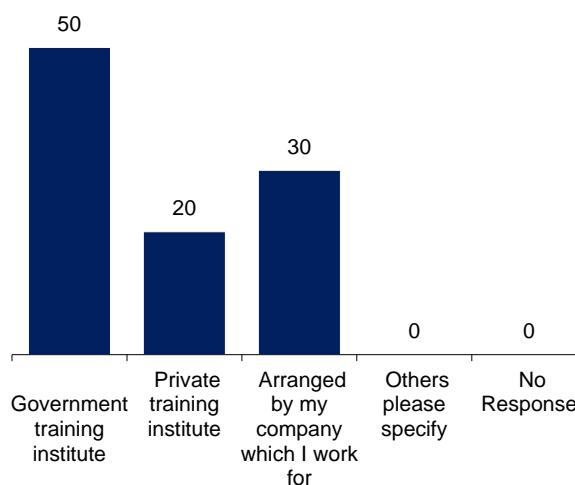
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 92, in the district, majority (69%) of the respondents aspire to be self-employed and 31% reported a preference for being wage-employed. The preference exists despite a difference in the expected monthly income, which is higher in wage employment than self-employment. Amongst the respondents, a very high percentage of wage employment aspirants are keen on going for training as compared to self-employment aspirants interested in trainings. Further 25% are keen on undertaking graduate non-technical trainings under wage employment aspirants and 31% of the interested self-employment aspirants are keen in Higher Secondary.

Figure 91: Key Findings related to educational attainment of the labor force
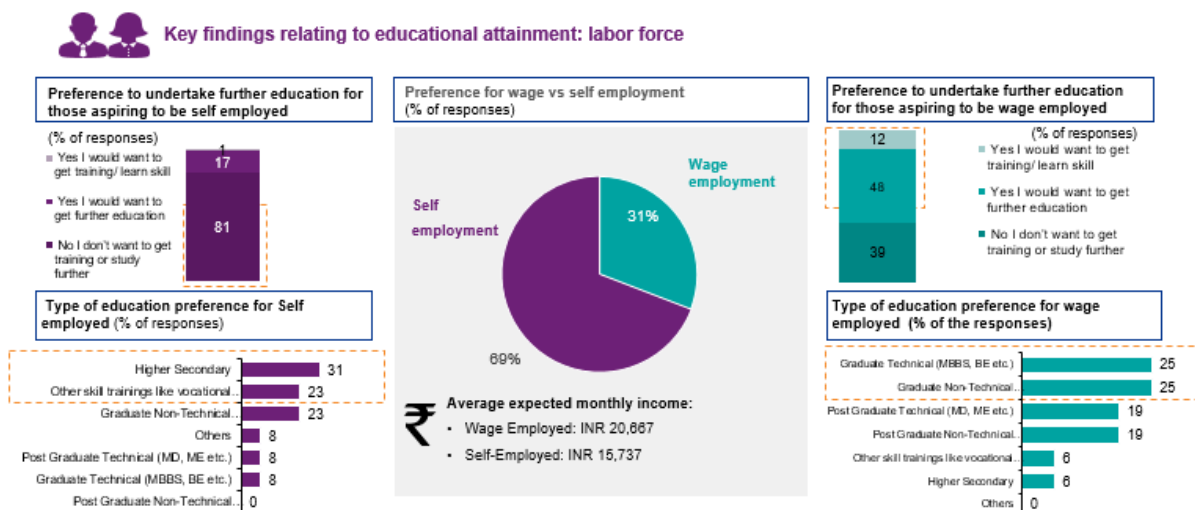
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 201: Aspirational sub-sectors for labor force

For Wage - Employment	For Self - Employment
Other Manufacturing	Retail
Railways	Food Products & Handicrafts
Healthcare	Skill Based Business
Engineering & Capital Goods	Beauty parlors/Spa/ Salons

Some respondents chose 'other' sectors for future economic activity. The top preference shared by self employment aspirant include opening a kirana store, and for those aspiring to be wage employed being employed as an electrician or a teacher topped the preference. Amongst the aspirants looking to be self-employed specifically, they expressed an interest in opening a retail or a wholesale shop for grocery/stationery/medical shop/pan shop/clothes etc.

99% of the respondents have shared that they would prefer to work within their state, Maharashtra and only 12% of the respondents shared that they are willing to work outside their state if they are being paid relatively higher than their wages in Maharashtra.

Perceived benefits of acquiring training:

Out of those who attended the training, 50% felt that the training has reaped benefits such as increase in income and opening of opportunities to move to a new sector. However, the respondents also faced challenges on attending the training, such as a lack of support from employers during the training program and lack of recruitment opportunities for the trained students.

12.5 Incremental Demand & Estimation of Manpower Supply

Crop & Animal production, Finance & Insurance Activities, Human health & social work activities, Transportation, Administrative and support service activities, are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in Manufacture of food products and beverages and Manufacture of textiles.

Table 202: Incremental Demand estimates (2018-2027); in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	19,283	20,039
Forestry & Logging	68	70
Fishing & Aquaculture	48	50
Sub-Total	**19,399**	**20,159**
Registered Manufacturing		
Food processing	67	70
Textiles	71	114

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Construction	684	718
Services		
Wholesale and Retail Trade	239	304
Transportation	1,563	1,884
Logistics	196	236
IT/ITES	328	395
Hospitality	128	137
BFSI	500	650
Real Estate	100	130
Professional, Scientific & Technical Activities	261	340
Public Administration & Administrative services	3,157	4,107
Education	2,070	2,693
Healthcare	2,769	3,602
Other services	10,571	13,751
Sub-Total	**21,881**	**28,228**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- *Agriculture sector* with focus on food processing, Dairy and Sericulture
- *Tourism & Hospitality Sector* is also increasing in the district due to religious temples present in the district
- Creating Awareness, training infrastructure & marketing was highlighted as important factors to attract trainees in the district

Estimation of Manpower Supply

Hingoli district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be approx. 6.05 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 203: Manpower Supply for Hingoli District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Hingoli	7,28,922	6,10,291	6,05,090

The workforce is further split across the educational attainment within the district as shown below in the table 204.

Table 204 Educational Attainment of projected workforce

Educational Level	Projected Workforce
Illiterate	1,59,057
Literate but below matric/secondary	2,58,143
Matric/secondary but below graduate	86,121
Technical degree or diploma equal to degree or post-graduate degree	6,476
Technical diploma or certificate not equal to degree	1,265
Graduate and above other than technical degree	16,897
Literate others	77,131

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~17,381 annually.

Table 205: Size of target population in Hingoli district

Particular	Numbers
Enrolment in VIII	23,361
Enrolment in X	18,837
Enrolment in XII	5,598
Dropout at VIII	**3,049**
Passing out of VIII*	20,312
Students not transitioned to IX	**3,343**
Dropout at X	**3,577**
Passing out of X*	15,260
Students not transitioned to XI	**2,512**
Passing out at XII**	11,689
Students not transitioned to Higher Education	7,949
Total Target population	**17,381**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 206: Vocational Education annual capacity for Hingoli district

Particular	Annual Capacity in Numbers
Short Term Skilling	5,460
ITI (Government & Private)	1,168

12.6 Recommendations

Hingoli, being one of the agrarian district in the state is predominantly driven by primary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 207: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production			
Forestry & Logging			

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Amber
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Amber
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Amber	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Red
Education	Green	Amber	Red
Healthcare	Green	Green	Amber
Other Services	Green	Green	Green

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 Responses- Medium; Below top 6 responses- Low

As per the table above, the following sectors can be prioritized for skill development in the district:

• **High economic growth sectors**: Food Processing, Chemicals & Pharmaceuticals, Machinery & Equipment, Automotive including transport equipment, IT & ITeS, Real Estate, Professional, scientific & technical activities, Education and Healthcare.

- **High incremental employment potential sectors**: Agriculture-Crop & Animal production, Transportation, Public Administration and Education.
- **High Aspiration Sectors**: Agriculture & Allied and Other services (media & entertainment)

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 208: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture & Allied		✓	✓
2	Food Processing	✓	✓	
3	Machinery & Equipment	✓	✓	
4	Transportation		✓	✓
5	Healthcare	✓	✓	✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Automotive including transport equipment
- Public Administration & Administrative services
- Education
- Other Services

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 209. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers

Table 209: Top Job Roles Identified for the district as per incremental demand & aspiration of the labourforce

Sector Name	Top Job Roles
Agriculture & Allied	Goat Farmer
	Dairy Farmer
	Micro Irrigation Technician
	Quality Seed Grower
	Sericulturist
Food Processing	Fruits and Vegetables Drying/ Dehydration Technician
	Fruits and Vegetables Selection In-Charge
	Milk Powder Manufacturing Technician
	Traditional Snack and Savoury Maker
	Soya beverage making technician

Sector Name	Top Job Roles
Machinery & Equipment	Fitter- Mechanical Assembly
	Manual Metal Arc Welding
	CNC Operator
	Draughtsman- Mechanical
	Lab Technician- Metal Tester
Transportation	Reach Truck Operator
	Crane Operator
	Shipment Classification Agent
	Clearance Support Agent
	Consignment Booking Assistant
Healthcare	General Duty Attendant
	Home Health Aide
	Diet Assistant
	Emergency Medical Technician- Basic
	Pharmacy Assistant

13. Jalgaon

13.1 About the district

Jalgaon district is located in northern part of Maharashtra, The district is divided into 15 sub districts and 1513 inhabited villages. Jalgaon has a total land area of 11,765 sq. km. and constitutes 3.8% of the total state area. The district is bordered by districts of Nashik, Dhule, Jalna, Buldhana, Aurangabad in Maharashtra and by Madhya Pradesh in the north.

The district is mainly connected to other major cities by railways and road. The closest airport is Aurangabad airport located at a distance of 164 kms from Jalgaon city.

Headquarters of the MNC Jain Irrigation systems, which is a major manufacturer and exporter of irrigation systems, pipes and fittings, are located in Jalgaon.

Table 210: Comparison of District with Maharashtra

Indicator	Jalgaon	Maharashtra
Area in sq.km.	11,765	3,07,713
Percentage share in state geographical area, %	3.8	100
No. of Sub-districts	15	353
No. of inhabited villages	1513	40,959
No. of households	89,16,57	24,421,519
Forest area as a % of total geographical area	10.06	16.94

Source: Census 2011

13.2 Demography

The population of Jalgaon is 42, 29,917 per census 2011, with urban population of 31.7 %. The district has a literacy rate of 78% which is lower than the state average of 82% and sex ratio of 925 females per 1000 males, equal to the state average. While close to 61% of the district's population is in the working age group (15-59 years), 46% is actually working.

Table 211: Demographic Indicators of district

Indicator	Jalgaon	Maharashtra
Population, No.	42,29,917	11,23,74,333
Decadal growth rate of population, %	14.86	16
Urban Population as a percentage of total population, %	31.74	45.2
SC Population, %	2.93	10.2
ST Population, %	5.75	8.8
Sex ratio, No. of females per 1000 males	925	925
Population density, per sq.km.	360	365
Literacy rate, %	78.2	83
Working age population* as a percentage of total population, %	60.7	59
Work participation rate^, %	45.93	44
HDI Index	0.723	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district, with a total workforce of 18.6 lakh persons, is predominantly agrarian with of which 71% of its workforce engaged in primary sector (agriculture and allied activities and mining), compared to 54% for Maharashtra.

Only about 9% of the workforce is engaged in the secondary sector compared to the state average of 16.4%. 19% of the workforce is engaged in the tertiary sector. As indicated in the figure 93, Jalgaon has a higher rate of unemployment in urban areas and for males, at 1.9% and 2.2% respectively.

Figure 92: Share of workforce & Employment Rate for district
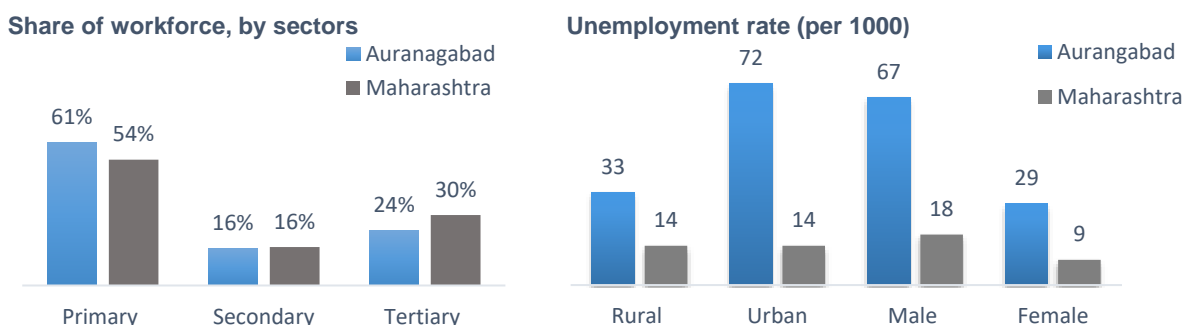
Share of workforce, by sectors

Unemployment rate (per 1000)

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 93: Type of employment in the district

As per figure 94, a higher percentage of workforce is self-employed persons in the district are self- employed (59%) compared to 52.8% in the state. The district also has a higher proportion of casual laborers and lower proportion of salaried employees compared to the state.
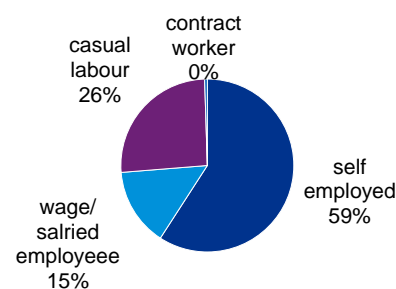
Source: Ministry of Labour & Employment

Educational Profile of the District:

Traditional Education

The district has 4112 schools of which 3264 are primary. Total enrolment in schools was 875770. The student-teacher ratio in the district is 26.

The district also has 126 general and technical colleges in the district with the enrolment of approx. 84000 students.

Table 212: Educational Profile of District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,264	6,38,346
Secondary Schools (IX to XII)	848	2,37,424
General Colleges & Technical Education	126	~84,000

Source: AISHE, U-DISE, 1Enrolment figures at State run general and technical education colleges only

Vocational Education

Jalgaon district has a total of 82 ITIs Government and Private with 7,970 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Agriculture, Beauty and Wellness, Information and Communication Technology, Electronics.

Table 213: Total no. of ITI and there training number in Jalgaon district

Particular	Number
ITIs (Government & Private)	82
Trainee Count	7,970

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 12,400 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Beauty and Wellness, Garment Making and Healthcare. Table below illustrates sector-wise annual training numbers in the district.

Table 214: Sector wise short- term skilling trained numbers in PMKUVA for Jalgaon district

Sectors	Trained
Information and communication technology	4,145
Beauty culture and hair dressing	3,158
Garment making	2,157
Medical and nursing	838
Remaining sectors	603
Electrical	468
Fashion design	386
Soft skills	210
Construction	150
Hospitality	145
Industrial electrical	90
Electronics	30
Banking and accounting	20
Total	**12,400**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

13.3 Economy

At 49,425 crore, Jalgaon district has the 11th highest GVA in the state as of 2016-17. Per capita GVA of Jalgaon stood at Rs. 1,10,309, ranking 20th in the state.

The district economy contributing towards GDDP is led by services and agriculture, with service sector contributing nearly 60% towards the GDDP.

As per the figure 95, major contributors to the GDDP of the district are Trade, Hotels and Restaurants, Agriculture and allied, Banking and Insurance and Real Estate.

Figure 94: Sector wise GDDP Distribution of the District
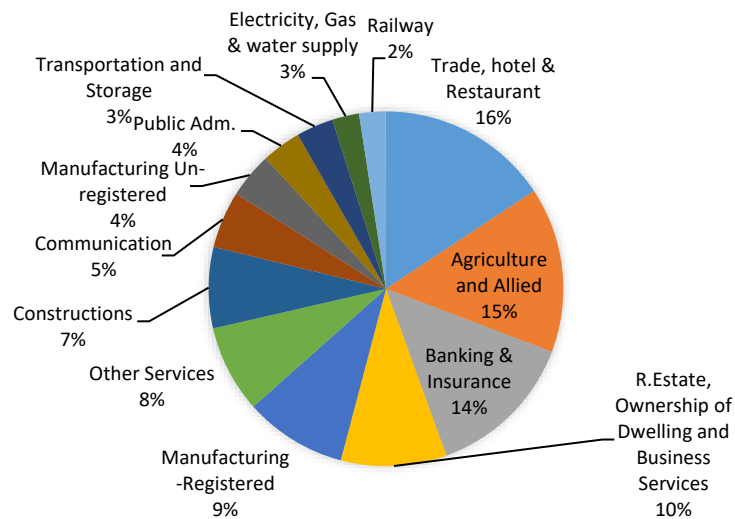
Source: District Domestic Product of Maharashtra 2013-14 (Base 2004-05), published by DES Maharashtra

Agriculture and allied activities contribute to 15% of the district's GDDP.

Cotton constitutes more than half of the gross cropped area in the district. Other major crops grown in the district include Jowar, Maize and Udid and Moong. Banana, Mango and Guava are the chief horticulture crop of the district.

The district also has as about 98 registered agricultural enterprises in post-harvest crop activities such as cotton ginning and seed production.

Industry accounts for around 23% of the district GDDP, led by registered manufacturing accounting for 9% of the district's economy followed by constructions with 7% share.

The district has more than 50,000 micro, small and medium and large industrial units in the manufacturing.

4 major manufacturing industries of the district are food processing, plastic products, electrical equipment and chemicals.

Food processing is the major industry of the district, engaging more than 18,000 persons. Of these the largest is fruit processing engaging more than 10,000 persons, followed by manufacture of dairy products and sugar.

Plastic industry is another major industry in the district engaging more than 12,000 persons. Major product in this category is PVC pipes used in irrigation systems – a major export of the district.

Manufacture of electrical equipment and chemicals are other two major industries in the district.

Major electrical equipment manufactured in the district are motors, generators, transformers and electricity distribution and control apparatus, and domestic appliances. Manufacturing of chemicals activity is distributed across basic chemicals, soaps and detergents, cleaning and polishing materials etc.

Table 215: Employment in registered manufacturing sector in the district 2017-18

Sector	Employment
Manufacture of food products and beverages	18,112
Manufacture of rubber and plastics products	13,041
Manufacture of electrical equipment	1,998
Manufacture of chemicals and chemical products	1,926
Manufacture of motor vehicles, trailers and semi-trailers	1,809

Sector	Employment
Manufacture of textiles	1,477
Manufacture of fabricated metal products, except machinery and equipment	1,194
Manufacture of tobacco products	1,166
Manufacture of other non-metallic mineral products	704
Manufacture of paper and paper products	497
Manufacture of machinery and equipment n.e.c.	366
Publishing, printing and reproduction of recorded media	290

Source: Annual Survey of Industries, 2017-18

Service sector contributing to over 48% of the district's economy, is led by Trade, Hotels and Restaurants, followed by banking and insurance services and Real estate, ownership of dwellings and business services.

Investments in the district:

Jalgaon district has attracted a lot of investment in various sectors. Irrigation, natural gas trading and distribution, conventional electricity, road transport and railway transport infrastructure and health services are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 216: Sector wise investments in Jalgaon District

Sector Name	Proposed Investment (in INR Million)	No of projects
Irrigation	192,194	9
Natural gas trading & distribution	179,500	1
Conventional electricity	115,619	2
Road transport infrastructure services	63,239	10
Railway transport infrastructure services	50,545	6
Health services	13,500	2
Renewable electricity	12,870	4
Processed foods	5,500	4
Other ferrous metal products	5,500	1
Storage & distribution	3,592	2
Air transport infrastructure services	3,500	1
Plastic furniture, floorings & miscellaneous items	3,000	3
Transport logistics services	2,700	1
Plastic tubes, pipes, fittings & sheets	2,022	3
Tourism	1,500	1
Others	5,585	37
Grand Total	**660,365**	**87**

Source: CMIE

13.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Profile	Details	
Urban vs. Rural	Urban	57%
	Rural	43%
Gender Profile	Male	57%
	Female	43%
Age Group	15-25 years	40%
	26-35 years	26%
	36-45 years	18%
	46-55 years	14%
	56-59 years	2%
Educational Level	Upto Xth	61%
	Upto XIIth	28%
	Any Graduation	11%
Occupational Profile	Worker	67%
	Non-Worker	33%

- Have not attended
- Have attended in the past
- Currently attending

In addition to the above in figure, most respondents (84%) responded that they hadn't attended any technical/ non-technical job related training in the past. 12% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, 68% were attended at Private training institutes.
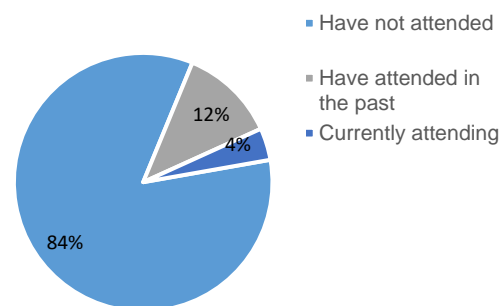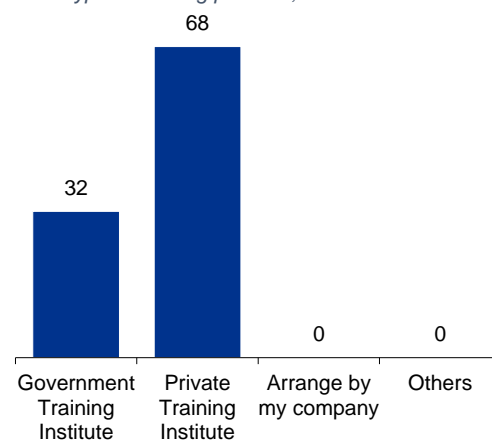
Figure 96: Type of training provider, in %

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 98, in the district, majority (57%) of the respondents aspire to be self-employed and 43% reported a preference for being wage employed. Amongst the respondents, the wage employment aspirants have a higher preference to undertake further education and training.

Additionally, there is a higher preference for acquiring graduate non-technical education amongst both wage and self-employed respondents. Among those who stated a preference for acquiring further training, topmost aspirational areas of training include technical job related skills.

Figure 97: Key Findings related to educational attainment of the labour force

Key findings relating to educational attainment: labour force

Preference to undertake further education for those aspiring to be self employed (% of responses)

- Yes I would want to get training/ learn skill — 9
- Yes I would want to get further education — 14
- No I don't want to get training or study further — 77

Type of education preference for Self employed (% of responses)

Graduate Non-Technical..	57
Other skill trainings like..	29
Graduate Technical (MBBS,..	14
Others	0
Post Graduate Technical..	0
Post Graduate Non-..	0
Higher Secondary	0

Preference for wage vs self employment (% of responses)

Wage employment 43%
Self employment 57%

₹ **Average expected monthly income:**
Wage Employed: 14,362
Self-Employed: 17,680

Preference to undertake further education for those aspiring to be wage employed (% of responses)

- Yes I would want to get training/ learn skill — 29
- Yes I would want to get further education — 33
- No I don't want to get training or study further — 39

Type of education preference for wage employed (% of the responses)

Graduate Non-Technical..	43
Post Graduate Non-Technical..	29
Other skill trainings like..	21
Graduate Technical (MBBS, BE..	7
Others	0
Post Graduate Technical (MD,..	0
Higher Secondary	0

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 218: Aspirational sub-sectors for labour force

For wage-employment	For self-employment
Governance & Administration	Retail
Automobiles and auto ancillaries	Opening a kirana store
Finance, Banking & Insurance	Food Products & Handicrafts
Engineering and capital goods	Skill Based Business
Healthcare & Family Welfare Services	Agri & Allied
	Food Products & Handicrafts

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, making and selling products at home (handicrafts, food products etc), opening a skill based business (mechanic, plumbing, electrical etc.) or agricultural or animal husbandry related work.

Additionally, 97% of the respondents would like to work within Maharashtra. As large as 73% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

96% of those who attended a training programme stated that they benefited from attending the training. Among those who did benefit from the training, majority state increase in income as the main benefit. There was a mixed response when the respondents were asked to highlight the major challenges after attending the training programmes. Top 2 challenges states were: the skill levels expected by the employers didn't match with those provided by training programme, lack of placement/employer interest in hiring

13.5 Incremental Demand & Estimation of Manpower Supply

Key drivers of incremental demand in the district are expected to be crop and animal production, Manufacture of fabricated metal products, machinery and equipment, food processing and textiles, transportation, banking and finance, healthcare, education and administrative services.

Table 219: Incremental Demand estimates (2019-2028) for Jalgaon district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and Allied		
Agriculture - Crop & Animal production	54,619	56,759
Forestry & Logging	192	199
Fishing & Aquaculture	135	141
Sub Total	**54,947**	**57,100**
Registered Manufacturing		
Food processing	956	1,006
Textiles	983	1,578
Chemicals and Pharmaceuticals	235	264
Rubber and Plastics	426	440
Metal products (except machinery and equipment)	2,425	2,367
Machinery and Equipment	1,908	2,436
Automotive	136	146
Construction	**3,762**	**3,949**
		Services
Wholesale and Retail Trade	1,301	1,653
Transportation	11,494	18,499
Logistics	1,442	1,739
IT/ITES	2,408	2,904
Hospitality	568	606
BFSI	3,272	4,256
Real Estate	654	851
Professional, Scientific & Technical Activities	1,709	2,224
Public Administration and Administrative services	16,780	21,828
Education	9,814	12,767
Healthcare	13,128	17,078
Other Services	45,539	59,240
Sub Total	**1,08,110**	**1,43,644**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 93% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Training requirement in cotton ginning, food processing (particularly banana & by product processing) was highlighted

- Employment opportunities exist in healthcare sector, particularly in job roles such as technicians and nursing
- Training opportunities exist in gold jewelry making and marketing, organic farming and solar PV installation

Estimation of Manpower Supply

Jalgaon district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 18.61 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 220: Manpower Supply for District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Jalgaon	27,15,615	19,04,336	18,61,872

Table 221: Projected workforce by education levels

Education level	Projected work force
Illiterate	4,93,736
Literate but below matric/secondary	7,35,302
Matric/secondary but below graduate	3,94,846
Technical degree or diploma equal to degree or post-graduate degree	32,505
Technical diploma or certificate not equal to degree	21,976
Graduate and above other than technical degree	89,990
Literate others	93,517

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~66,095 annually.

Table 222: Size of target population in Jalgaon district

Particular	Numbers
Enrolment in VIII	80,905
Enrolment in X	70,211
Enrolment in XII	19,722
Dropout at VIII	**14,336**
Passing out of VIII*	66,569
Students not transitioned to IX	**10,957**
Dropout at X	**20,544**
Passing out of X*	49,667
Students not transitioned to XI	**8,175**
Passing out at XII**	38,851
Students not transitioned to Higher Education	26,419
Total Target population	**66,095**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 223: Vocational Education annual capacity for Jalgaon district

Particular	Annual Capacity in Numbers
Short Term Skilling	16,380
ITI (Government & Private)	16,920

13.6 Recommendations

The district has potential for incremental demand generation in agriculture and allied activities, transportation, banking and financial services, healthcare and education, administrative, professional, scientific and technical services. Among these, all activities are high or medium on economic growth, except agriculture and public administration.

Agriculture, although low on economic growth is highly aspirational in the district and is closely aligned with food processing, a high economic growth and medium on aspiration activity in the district.

Additionally, retail trade, and, arts and recreation have a potential in the district on account of either their economic growth or aspirational value.

The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below.

Sector	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production	🟥	🟩	🟩
Forestry & Logging	🟥	🟥	🟥
Fishing & Aquaculture	🟧	🟥	🟥
Food processing	🟩	🟥	🟧
Tobacco	🟩	🟥	🟥
Textiles	🟧	🟥	🟥
Apparel	🟧	🟥	🟥
Leather	🟥	🟥	🟥
Wood work	🟥	🟥	🟥
Paper and Paper products	🟩	🟥	🟥
Publishing, printing and recorded media	🟧	🟥	🟥
Hydrocarbons	🟥	🟥	🟥
Chemicals and Pharmaceuticals	🟩	🟥	🟥
Rubber and Plastics	🟧	🟥	🟥
Non-metallic mineral products	🟥	🟥	🟥
Iron and Steel	🟥	🟥	🟥
Metal products (except machinery and equipment)	🟧	🟥	🟥
Machinery and Equipment	🟩	🟥	🟥
Automotive	🟩	🟥	🟥
Automotive (transport equipment)	🟩	🟥	🟥
Construction	🟥	🟥	🟥
Wholesale and Retail Trade	🟧	🟥	🟧
Transportation	🟧	🟩	🟥

Sector	Economic Growth	Employment Potential	Aspirational
Logistics	🟨	🟥	🟥
IT/ITES	🟩	🟥	🟥
Hospitality	🟨	🟥	🟥
BFSI	🟨	🟥	🟩
Real Estate	🟩	🟥	🟥
Professional, Scientific & Technical Activities	🟩	🟥	🟥
Public Administration and Administrative Services	🟨	🟩	🟨
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟥
Other Services	🟩	🟩	🟨
Mining	🟥	🟥	🟥
Electricity, Gas and Water Supply	🟥	🟥	🟥

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the above analysis of the district and keeping in view the primary insights from field visits the sectors, the following sectors are proposed to be taken on priority by MSSDS:

Table 224: Priority sectors for MSSDS

Sl. No.	Sector	High or Medium Economic Growth	High or Medium Employment Potential	High or medium Aspiration
Top priority				
1	Agriculture and Allied		✓	✓
2	Food processing (oil extraction, starch)	✓		✓
3	Administrative and Support services	✓	✓	✓
4	Healthcare	✓	✓	
5	Transportation	✓	✓	

Apart from the above priority sectors, MSSDS can also explore the potential of following sectors in the district –

- BFSI
- Media & Entertainment (included in other services)
- Education

These sectors although low on aspirational value, have a growth or employment generation potential in the district.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 225. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers

Table 225: Job Roles across high demand sectors

High demand sectors	Identified Job Roles
Agriculture & Allied	• Goat Farmer • Dairy Farmer • Micro Irrigation Technician • Greenhouse Operator • Poultry Farmer • Scientific agriculture – surface coating, soil testing, Crop Technician • Organic farming
Transportation	• Transport Coordinator • Transport Duty Manager • Liquid Transport Operator • Transport Consolidator • Tank Lorry Driver
Healthcare	• Nursing • General Duty Assistant • Home Health Aide • Diet Assistant • Emergency Medical Technician – Basic • Pharmacy Assistant
Food processing	• Fruit Pulp Processing Technician • Fruit Ripening Technician • Dairy Processing Equipment Operator • Assistant Lab Technician - Food and Agricultural Commodities

14. Jalna

14.1 About the district

Jalna has a total land area of 7718 sq. km. which constitutes 2.5% of the total state area. The district is a part of Aurangabad region and is bordered by districts of Parbhani, Buldhana, Beed, Jalgaon and Aurangabad.

The district is mainly connected to Aurangabad and other bordering cities by road and railways. Other major cities of India can also be reached from Jalna by air via Aurangabad airport, which is located at a distance of 54 kms from Jalna city.

The district is recognised as the 'Seed Capital of India', it being a hub of major seed manufacturing companies, and large number of farmers being engaged in seed production in the district. The district also boasts of a major Steel Industry comprising a large number of steel rolling mills and a huge unit for manufacturing ball bearings.

Thus, the industrial development in the district is based on agriculture and allied activities and engineering.

Table 226: Comparison of Jalna District with Maharashtra

Indicator	Jalna	Maharashtra
Area in sq.km.	7,718	3,07,713
Percentage share in state geographical area, %	2.50	100
No. of Sub-districts	8	353
No. of inhabited villages	958	40,959
No. of households	3,88,116	24,421,519
Forest area as a % of total geographical area	0.84	16.94

Source: Census 2011

14.2 Demography

The population of Jalna is 19,59, 046 per census 2011, over 80 % of which resides in rural areas. The district has a literacy rate of 71.5% which is lower than the state average of 82% and sex ratio of 937 females per 1000 males, higher than the state average of 925. While 57% of the district's population is in the working age group (15-59 years), 49% is actually working.

Table 227: Demographic Indicators of Jalna district

Indicator	Jalna	Maharashtra
Population, No.	19,59,046	11,23,74,333
Decadal growth rate of population, %	21.46	16
Urban Population as a percentage of total population, %	19.27	45.2
SC Population, %	2.05	10.2
ST Population, %	0.40	8.8
Sex ratio, No. of females per 1000 males	937	925
Population density, per sq.km.	254	365
Literacy rate, %	71.52	83
Working age population* as a percentage of total population, %	60.7	59
Work participation rate^, %	57.03	44
HDI Index	0.48	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district, with a total workforce of 9.3 lakh persons, is predominantly agrarian with 78% of its workforce engaged in primary sector (agriculture and allied activities and mining), compared to 54% for Maharashtra.

Only about 7% of the workforce is engaged in the secondary sector compared to the state average of 16.4%. 15% of the workforce is engaged in the tertiary sector. As indicated in figure 99, Jalna has a higher rate of unemployment compared to Maharashtra except females, for which it is 0.3% compared to 0.9% in Maharashtra.

Figure 98: Share of workforce & Employment Rate for Amravati District
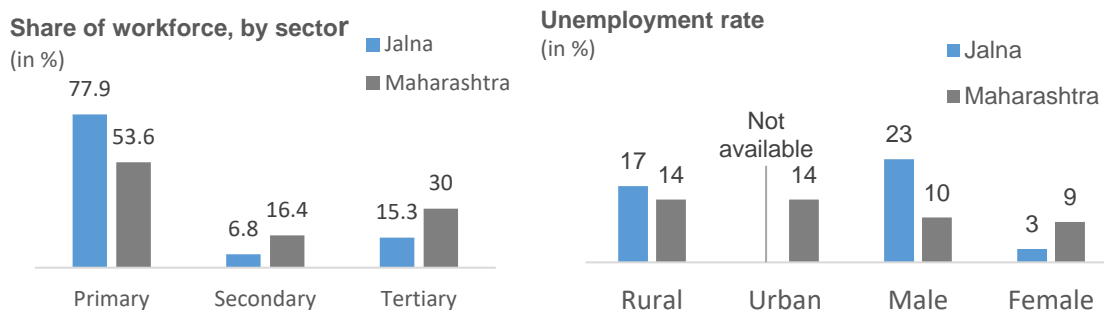
Share of workforce, by sector (in %)

Unemployment rate (in %)

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 99: Type of employment in the district

As per figure 100, maximum persons are self-employed in the district which is slightly higher than the state average followed by casual labours which is significantly higher than the state average .The salaried employees in the district are significantly lower than the state average.
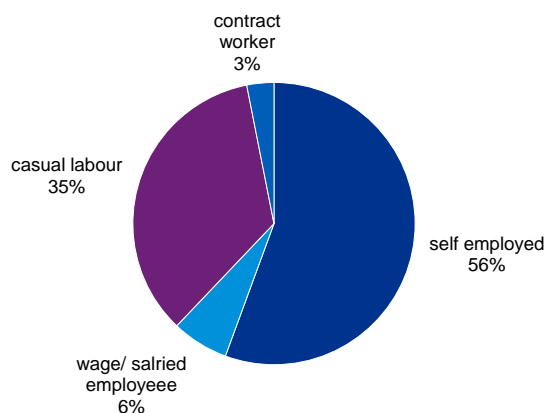
*Educational Profile of the District***:**

Traditional Educational

The district has 2660 schools of which 2198 are primary. Total enrolment in schools was 442951. The student-teacher ratio in the district is 25:1.

The district has 71 colleges for general and technical education with an enrollment capacity of over 39000.

Table 228: Educational Profile of Jalna District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	2,198	3,19,204
Secondary Schools (IX to XII)	462	1,23,747
General Colleges & Technical Education	71	~39,000

Source: AISHE, U-DISE, 1Enrolment figures at State run general and technical education colleges only

Vocational Education

Jalna district has a total of 12 ITIs Government and Private with 1,425 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Auto and Auto Components, Beauty and Wellness, Capital goods and Food processing.

Table 229: Total no. of ITI and there training number in Jalna district

Particular	Number
ITIs (Government & Private)	12
Trainee Count	1,425

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 15,096 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making and Beauty and Wellness. Table below illustrates sector-wise annual training numbers in the district.

Table 230: Sector wise short- term skilling trained numbers in PMKUVA for Jalna district

Sectors	Trained
Information And Communication Technology	7,244
Garment Making	1,768
Beauty Culture And Hair Dressing	982
Industrial Electrical	840
Fashion Design	780
Electrical	690
Agriculture	655
Remaining Sectors	621
Banking And Accounting	616
Construction	480
Medical And Nursing	330
SSC Automotive	30
SSC Healthcare	30
SSC Agriculture	30
Total	**15,096**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

14.3 Economy
As of 2016-17, the GVA and per capita GVA of Jalna district was Rs. 21,260 crore and Rs. 1,03,269 respectively.

The economy of the district is led by Agriculture and Allied activities, followed by Trade, Hotels and Restaurants, Real Estate and Registered Manufacturing.

Agriculture and allied activities contribute to 26% of the district's GDDP. Over 85% of the district area is under agricultural use. Major cereal crops grown in the district are Jowar and Wheat.

Cotton and Sweet lime are major cash and fruit crops cultivated in the district.
Seed production and cotton ginning are the two major post-harvest agriculture activities in the district.
Some of the major seed manufacturers in the district are -Mahyco, Mahindra, Bejo-Sheetal.

Figure 100: Sector wise GDDP Distribution of Jalna District
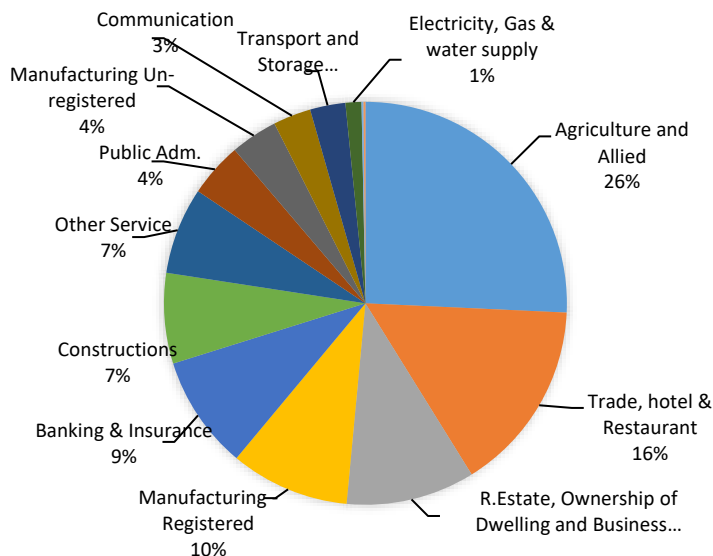
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

Industry accounts for around 22% of the district GDDP, led by registered manufacturing accounting for 10% of the district's economy followed by constructions with 7% share. There are around 8652 large and MSME units in the district.
Industrial activity in the district is concentrated around food processing, and manufacturing of steel rods.

Food processing is the largest manufacturing industry in terms of employment, engaging over 4000 persons in the district. Major food items manufactured in the district are sugar, grain mill products, vegetable and animal oils and fats.

Manufacture of basic metals is the second largest manufacturing activity in terms of employment, engaging more than 2800 persons. Majority of this is concentrated in manufacture of basic iron and steel. NRB is the leading manufacturer of ball bearings located in the district.

Another major industry in the district is **textiles**, employing over 1000 persons mainly in preparation and spinning of textile fibres.

Remaining industrial activity is mainly includes manufacture of tobacco products and machinery and equipment.

Table 231 Employment in registered manufacturing sector in the district 2017-18

Sector	Employment
Manufacture of food products	4,075
Manufacture of basic metals	2,816
Manufacture of other transport equipment	1,216
Manufacture of textiles	1,069
Manufacture of tobacco products	594
Manufacture of machinery and equipment n.e.c.	544
Publishing, printing and reproduction of recorded media	204
Manufacture of chemicals and chemical products	134
Manufacture of fabricated metal products, except machinery and equipment	124
Manufacture of rubber and plastics products	57
Manufacture of paper and paper products	18

Service sector is the major contributor of the district economy contributing to over 52% of the district GDP. This sector is led by Trade, Hotels and Restaurants, followed by Real estate and banking and insurance services.

Investments in the district:

Jalna district has attracted investment in various sectors. Road and railway transport infrastructure services, renewable electricity, renewable electricity, steel and sponge iron are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 232: Sector wise investments in Jalna District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	52,212	9
Railway transport infrastructure services	34,000	2
Renewable electricity	11,920	3
Steel	9,200	11
Sponge iron	5,230	1
Commercial complexes	1,752	2
Other agricultural products	1,100	2
General purpose machinery	1,000	1
Others	1,194	14
Total	**117607**	**45**

Source: CMIE

14.4 Labour force Aspiration

The main findings of the youth aspirations include:

Respondent Profile

Table 233: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	52%
	Rural	48%
Gender Profile	Male	76%
	Female	24%
Age Group	15-25 years	54%
	26-35 years	25%
	36-45 years	17%
	46-55 years	3%
	56-59 years	1%
Educational Level	Upto Xth	55%
	Upto XIIth	35%
	Any Graduation	10%
Occupational Profile	Worker	70%
	Non-Worker	52%

Figure 101: Past/Current participation in training, %

In addition to the above, most respondents (84%) responded that they hadn't attended any technical/ non-technical job related training in the past. 12% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings (~53.57%) were attended at Private training institutes as well as government training institutes.
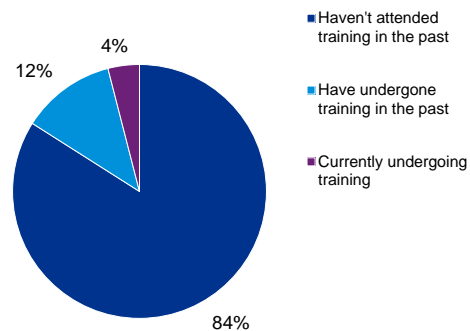
Figure 102: Type of training provider, in %
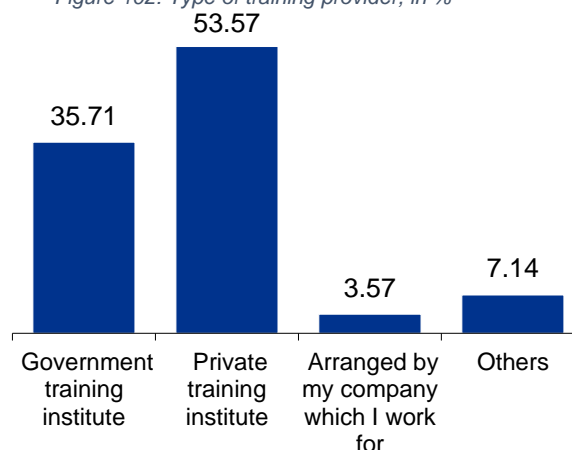
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure 104, in the district, majority (67%) of the respondents aspire to be self-employed and 33% reported a preference for being wage employed. Amongst the respondents, the wage-employment aspirants have a higher preference to undertake further education and training.

Additionally, there is preference for acquiring graduate non-technical education amongst both wage and self-employed respondents.

Figure 103: Key Findings related to educational attainment of the labour force

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 234: Aspirational sub-sectors for labour force in Jalna

For wage employment	For self-employment
Governance & Administration	Retail
Law & Justice	Skill Based Business
Retail	Agri & Allied
	Restaurant/Tea Stall

Some respondents expressed a preference for 'other' sectors such as opening a kirana store in case of self-employment and working as manual wage labour or undertaking admin work in an office in case of wage employment.

For those aspiring to be self -employed, there was a preference towards opening a retail or a wholesale shop. Additionally, all of the respondents would like to work within Maharashtra. However, 48% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

79% of those who attended a training programme stated that they benefited from attending the training. Among those who did benefit from the training, majority state increase in income, followed by movement to a new sector as the main benefit. When the respondents were asked to highlight the major challenges after attending the training programmes, majority stated 'Employers are not providing these kind of training program in-house' followed by 'Employers engagement was not good during the training program'.

14.5 Incremental Demand & Estimation of Manpower Supply

Crop and animal production, and manufacture of machinery and equipment, manufacture of textiles, banking and financial service, transportation, healthcare and education are key drivers of incremental employment demand in the district

Table 235: Incremental Demand estimates (2019-2028) for Jalna district; in persons

Sector	Consolidated projected Incremental demand estimates (2019-2023); in persons	Consolidated projected Incremental demand estimates (2024-2028); in persons
Agriculture and Allied		
Sub-Total	**29,928**	**31,101**
Registered Manufacturing		
Food processing	215	226
Textiles	711	1,142
Iron and Steel	135	141
Fabricated Metal products (except machinery and equipment)	252	246
Machinery and Equipment	2,835	3,621
Automotive (transport equipment)	385	501
Construction	1,393	1,462
Services		
Wholesale and Retail Trade	516	656
Transportation	3,636	4,383
Logistics	456	550
IT/ITES	762	918
Hospitality	315	336
BFSI	951	1,237
Real Estate	190	247
Professional, Scientific & Technical Activities	497	646
Public Administration and Administrative Activities	5,870	7,636
Education	3,715	4,833
Healthcare	4,970	6,465
Other Services	20,418	26,562
Sub total	**28,304**	**36,284**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors account for about 90% of employment in registered manufacturing.

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1. **Iron & Steel sector** has a lot of potential in the district with job roles like EOT crane operator, Conveyor operation and maintenance, Furnace operator etc. likely to be in demand

2. **Seed production, Agri based food processing & sericulture**

3. ERP operator, Tally Operator and Sales Person for retail sector were mentioned as important job roles

4. **Horticulture- Cutting and Pruning facilities** are present in the district which can be utilized to train people

Estimation of Manpower Supply

Jalna district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 10.2 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 236: Manpower Supply for the district

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Jalna	24,73,679	10,45,610	10,24,548

Table 237: Projected workforce by education levels

Education level	Projected work force
Illiterate	3,46,641
Literate but below matric/secondary	4,09,810
Matric/secondary but below graduate	1,57,245
Technical degree or diploma equal to degree or post-graduate degree	9,584
Technical diploma or certificate not equal to degree	2,656
Graduate and above other than technical degree	37,261
Literate others	61,351

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~30,378 annually.

Table 238: Size of target population in the district

Particular	Numbers
Enrolment in VIII	39,531
Enrolment in X	33,327
Enrolment in XII	10,346
Dropout at VIII	**3,127**
Passing out of VIII*	36,404
Students not transitioned to IX	**5,992**
Dropout at X	**4,046**
Passing out of X*	29,281
Students not transitioned to XI	**4,820**
Passing out at XII**	23,354
Students not transitioned to Higher Education	15,881
Total Target population	**30,738**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 239: Vocational Education annual capacity for Jalna district

Particular	Annual Capacity in Numbers
Short Term Skilling	16,020
ITI (Government & Private)	2,644

14.6 Recommendations

The district has potential for incremental demand generation in agriculture and allied activities, transportation, banking and financial services, healthcare, administrative, professional, scientific and technical services. Among these, all activities are high or medium on economic growth, except agriculture and public administration.

Agriculture, although low on economic growth is highly aspirational in the district and is closely aligned with food processing, a high economic growth and aspirational activity in the district.

Additionally, administrative and support services, retail trade, and, arts and recreation have a potential in the district on account of either their economic growth or aspirational value.

The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Sector	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production	Red	Green	Yellow
Forestry & Logging	Red	Red	Red
Fishing & Aquaculture	Yellow	Red	Red
Food processing	Green	Red	Yellow
Tobacco	Green	Red	Red
Textiles	Yellow	Red	Red
Apparel	Yellow	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Yellow	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Yellow	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Yellow	Red	Red
Machinery and Equipment	Green	Yellow	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Yellow	Red	Green
Transportation	Yellow	Yellow	Red
Logistics	Yellow	Red	Red

Sector	Economic Growth	Employment Potential	Aspirational
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Amber
Public Administration and Administrative activities	Amber	Green	Green
Education	Green	Amber	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Amber

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the above analysis of the district and keeping in view the primary insights from field visits the sectors, the following sectors are proposed to be taken on priority by MSSDS:

Table 240: Priority sectors for MSSDS

Sl. No.	Sector	High or Medium Economic Growth	High or Medium Employment Potential	High or medium Aspiration
1	Administrative and Support Services	✓	✓	✓
2	Agriculture and Allied		✓	✓
3	Food processing	✓		✓
4	Machinery and Equipment	✓	✓	
5	Wholesale and Retail Trade	✓		✓
6	Healthcare	✓	✓	

Apart from the above priority sectors, MSSDS can also explore the potential of following sectors in the district –

- Transportation
- Media & Entertainment (other services)
- Sericulture (emerging sector)

These sectors have a growth, employment generation potential or aspirational value in the district.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 241. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers

Table 241: Identified Job roles across high demand sectors

High demand sectors	Identified Job Roles
Agriculture & Allied	• Goat Farmer • Dairy Farmer • Micro Irrigation Technician • Greenhouse Operator • Sugarcane cultivator • Seed processing worker • Floriculturist • Sericulturist
Food processing	• Grain Mill Operator • Assistant Lab Technician - Food and Agricultural Commodities • Fruit Ripening Technician
Machinery & Equipment	• Fitter- Mechanical Assembly • Manual Metal Arc Welding • CNC Operator- Turning • Draughtsman- Mechanical • Lab Technician- Metal Tester • Service Engineer- Installation & Maintenance
Healthcare	• General Duty Assistant • Yoga Trainers • Home Health Aide • Diet Assistant • Emergency Medical Technician – Basic • Pharmacy Assistant
Retail	• Cashier • Retail Sales Associate • Store Ops Assistant • Retail Trainee Associate • Individual Sales Professional/ Self-employed Retailer

15. Kolhapur

15.1 About the district

Kolhapur district is located in southern part of Maharashtra. The district is divided into 12 sub districts and 1195 inhabited villages.

Kolhapur has a total land area of 7,685 sq. km. which constitutes 2.5% of the total state area. The district is a part of Pune region and is bordered by districts of Sangli, Ratnagiri, Sindhurdurg in Maharashtra and the state of Karnataka. The district is connected to other major cities by road and railways. Other major cities in India can also be reached by air from Kolhapur via Pune and Belgaum airports.

Ichalkaranji, a city located in Kolhapur is known for its textile production and exports.

Table 242: Comparison of Kolhapur District with Maharashtra

Indicator	Kolhapur	Maharashtra
Area in sq.km.	7,685	3,07,713
Percentage share in state geographical area, %	2.5	100
No. of Sub-districts	12	353
No. of inhabited villages	1,195	40,959
No. of households	8,21,483	24,421,519
Forest area as a % of total geographical area	23.19	16.94

Source: Census 2011

15.2 Demography

According to latest census data, the district has a population of nearly 38.76 lakh persons which is ~10.01% of the state. Of the total population, 68.27% are residing in the rural areas whereas 31.73% are residing in the urban areas of the district. The density of population according to 2011 census is 504 persons/Sq. Km.

The district's literacy rate is at 81.51% which is lower than the state average of 82.91%. Kolhapur has sex ratio (no. of females per 1000 males) of 957 which is higher than the state average of 925. While 61% of the population in the district are in the working age group (i.e. 15-59 years), about 44% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 243: Demographic Indicators of Kolhapur district

Indicator	Kolhapur	Maharashtra
Population, No.	38,76,001	11,23,74,333
Decadal growth rate of population, %	10.01	16
Urban Population as a percentage of total population, %	31.73	45.2
SC Population, %	3.8	10.2
ST Population, %	0.29	8.8
Sex ratio, No. of females per 1000 males	957	925
Population density, per sq.km.	504	365
Literacy rate, %	81.51	83
Working age population* as a percentage of total population, %	61	59
Work participation rate^, %	43.9	44
HDI Index	0.77	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 17 lakh persons. Of this, nearly 56% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 19% of workers are working in secondary sector and 25% workers are working in tertiary sector. As shown in the figure 105 below, Kolhapur's unemployment (per 1000) in rural areas and urban areas are slightly lower than the state average. Additionally, if we compare male and female unemployment (per 1000) of Kolhapur to the state, both male and female unemployment rate is slightly lower to the state average.

Share of workforce, by sector In %

■ Kolhapur
■ Maharashtra

55.70% 53.60%

18.80% 16.40%

25.50% 30.00%

Primary   Secondary   Tertiary

Source: Census 2011

Unemployment Rate in %

■ Kolhapur
■ Maharashtra

8   14

9   14

10   18

6   9

RURAL   URBAN   Male   Female
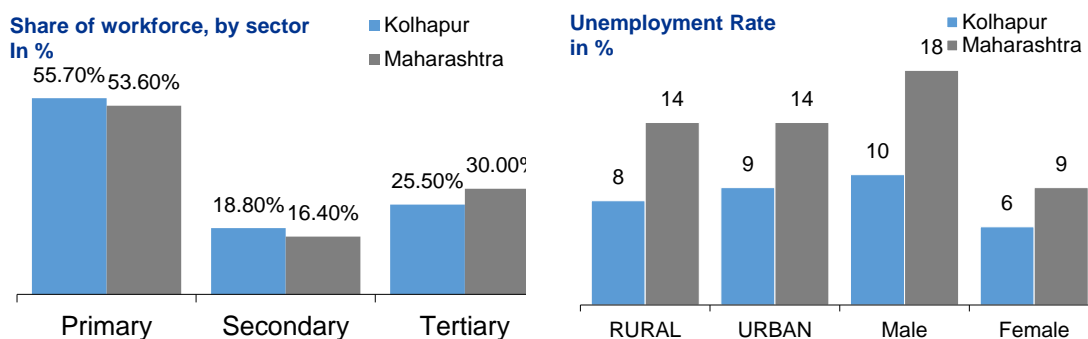
Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As per figure 106, maximum persons are self-employed in the district which is significantly higher to the state average followed by salaried employees which is slightly higher to the state average and casual labours which is significantly lower to the state average.

Figure 105: Type of employment numbers per 1000
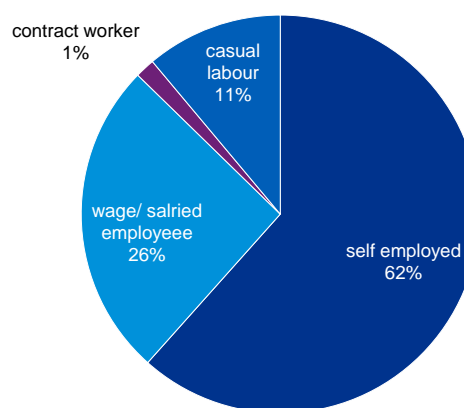
contract worker 1%

casual labour 11%

wage/ salried employeee 26%

self employed 62%

Source: Ministry of Labour & Employment

*Educational Profile of the district***:**

Traditional Education

The district has 4606 schools of which 3605 are primary. Total enrolment in schools was 707,681. The student-teacher ratio in the district is 20:1.

The district has 147 colleges for general and technical education.

Table 244: Educational Profile of Kolhapur District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,605	4,76,653
Secondary Schools (IX to XII)	1,001	2,31,028
General Colleges & Technical Education	155	93,000

Source: AISHE, U-DISE, 1Enrolment figures at State run general and technical education colleges only

Vocational Education

Kolhapur district has a total of 44 ITIs Government and Private with 4872 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information & Communication Technology, Electronics, BFSI, Auto & Auto ancillaries, Capital goods, fashion designing and Gems & Jewelry.

Table 245: Total no. of ITI and there training number in Kolhapur district

Particular	Number
ITIs (Government & Private)	44
Trainee Count	4,872

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 12,129 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Fashion design, Banking and accounting and production and manufacturing. Table below illustrates sector-wise annual training numbers in the district.

Table 246: Sector wise short- term skilling trained numbers in PMKUVA for Kolhapur district

Sectors	Trained
Information and communication technology	5,187
Fashion design	1,870
Banking and accounting	1,741
Production and manufacturing	808
Electrical	485
Garment making	475
Remaining sectors	433
Construction	180
Beauty culture and hair dressing	169
Hospitality	166
Soft skills	138
Automotive repair	138
Medical and nursing	128
Business and commerce	112
Electronics	99
Total	**12,129**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI). Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

15.3 Economy

At 55,985 crore district GDP of Kolhapur was 6th largest in Maharashtra in 2016-17 at current prices. Per capita GDDP of Kolhapur was Rs. 1,67,303.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 54% towards the GDDP. Secondary sector is at 34% and primary sector is at 12%.

As per the figure indicated below, major contributors to the GDDP of the district are Banking and Insurance services, Registered manufacturing, Trade, Hotels and Restaurants, and Agriculture and Allied activities.

Figure 106: Sector wise GDDP Distribution of Kolhapur District
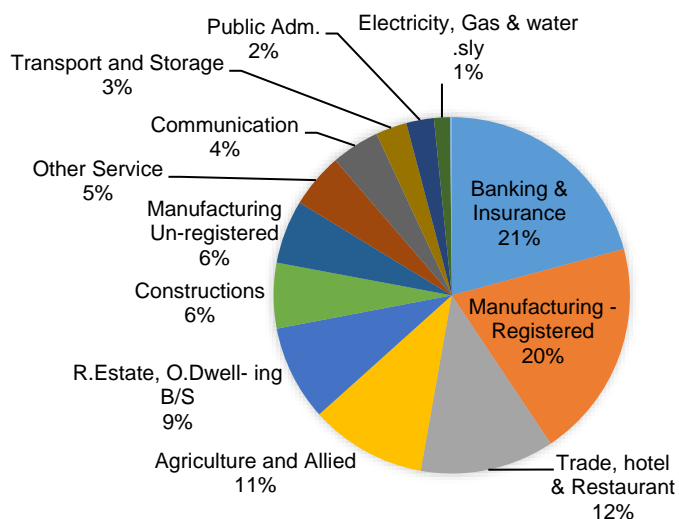
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

Agriculture and allied activities contribute to 11% of the district's GDDP. Major crops grown in the district are Paddy, Groundnut, Soyabeen, Ragi and Jowar.

Industry accounts for around 33% of the district GDDP. The sector is led by registered manufacturing with a 20% share. In the registered manufacturing sector, more than 89,000 persons are employed in top 4 sub sectors viz – manufacture of food products & beverages, manufacture of textiles, metals and machinery and equipment.

Major MSME clusters in the district are - Foundry & Engineering cluster Kolhapur, Silver ornaments Cluster Hupri, Jaggery cluster Kolhapur, Chappal cluster Kolhapur.

Manufacture of food products and beverages is an important industry in the district**.** It includes manufacture of sugar, manufacture of dairy products, manufacture of bakery products and distilling, rectifying & blending of spirits. It employs nearly 27,636 persons in the district which constitutes to 24% of the employment in registered manufacturing sector. Major players in the industry includes Wipro Ltd, Panchali Milk Products Pvt Ltd and Shree Warana Agricultural.

Manufacture of textiles is also an important industry in the district. It includes preparation & spinning of textile fibres, weaving of textiles and finishing of textiles. It employs nearly 24,396 persons in the district which constitutes to 21% of the employment in registered manufacturing sector. Major players in the district includes Pranavaditya Spinning Mills ltd, Santogen exports Ltd and Arihant Spinning Mills Ltd.

Manufacture of basic metals is also an important industry in the district. It includes casting of iron & steel and casting of non-ferrous metals. It employs nearly 19,338 persons in the district which constitutes to 17% employment in the registered manufacturing sector. Major players in the district includes SB Reshellers Pvt Ltd, The Kolhapur Steel Ltd and Shri Karvir Navsini Mahalaxmi ispat Pvt Ltd.

Manufacture of machinery & equipment is another important industry in the district. It includes manufacture of special prupose machinery (machinery for paper, rubber products), manufacture of agricultural & forestry machinery, manufacture of engines & turbines and manufacture of pumps, compressors, taps & valves. It employs nearly 9605 persons in the district which constitutes to 8% employment in the registered manufacturing sector. Major players in the district includes Menon Bearings Ltd, Mather & Platt India Pvt Ltd and Xomox Valves (India) Ltd.

Other important manufacturing industries include manufacture of electrical equipment, manufacture of motor vehicles, trailers & semi-trailers, manufacture of fabricated metal products, manufacture of chemical & chemical products, manufacture of rubber & rubber products and manufacture of other non-metallic mineral products.

Table 247: Employment in registered manufacturing sector in the district as of 2017-18

Sector	Employment
Manufacture of food products & beverages	27,636
Manufacture of textiles	24,396
Manufacture of basic metals	19,338
Manufacture of machinery and equipment n.e.c.	9,605
Manufacture of electrical equipment	6,871
Manufacture of motor vehicles, trailers and semi-trailers	6,840
Manufacture of fabricated metal products, except machinery and equipment	5,491
Manufacture of chemicals and chemical products	2,556
Wholesale and retail trade and repair of motor vehicles and motorcycles	2,372
Manufacture of rubber and plastics products	1,870
Manufacture of other non-metallic mineral products	1,090
Printing and reproduction of recorded media	996
Manufacture of paper and paper products	804
Manufacture of computer, electronic and optical products	603
Manufacture of other transport equipment	564
Manufacture of wearing apparel	504
Manufacture of pharmaceuticals, medicinal chemical and botanical products	383
Publishing activities	353
Other manufacturing	256
Electricity, gas, steam and air conditioning supply	224
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	221
Manufacture of coke and refined petroleum products	183
Manufacture of furniture	163
Repair of computers and personal and household goods	77
Repair and installation of machinery and equipment	47
Manufacture of leather and related products	32
Manufacture of tobacco products	27

Source: Annual Survey of Industries 2017-18

As shown above in the figure 107, Service sector is the major contributor of the district economy contributing to 56% of the district GDP. This sector is led by banking and insurance services and Trade, Hotels and Restaurants.

Investments in the districts:

Kolhapur district has attracted investment in various sectors. Road and Railway transport infrastructure services, irrigation and electricity transmission are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 248: Sector wise investments in Kolhapur District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	42,889	11
Railway transport infrastructure services	41,432	3
Irrigation	25,980	4
Electricity transmission	25,717	4
Sugar	22,469	18
Storage & distribution	8,888	4
Other textiles	8,770	10
Cloth	7,675	8
Beer & alcohol	7,318	7
Cotton & blended yarn	5,708	21
Engines	5,500	1
Natural gas trading & distribution	4,940	2
Health services	4,500	5
Castings & forgings	4,270	4
Others	17,556	79
Grand Total	**2,33,611**	**181**

Source: CMIE

15.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 249: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	51%
	Rural	49%
Gender Profile	Male	54%
	Female	46%
Age Group	15-25 years	45%
	26-35 years	33%
	36-45 years	16%
	46-55 years	6%
	56-59 years	0%
Educational Level	Upto Xth	49%
	Upto XIIth	36%
	Any Graduation	15%
Occupational Profile	Worker	57%
	Non-Worker	43%

Figure 107: Past/Current participation in training, %

Currently attending 5%

Have attended in the past 17%

Have not attended 78%
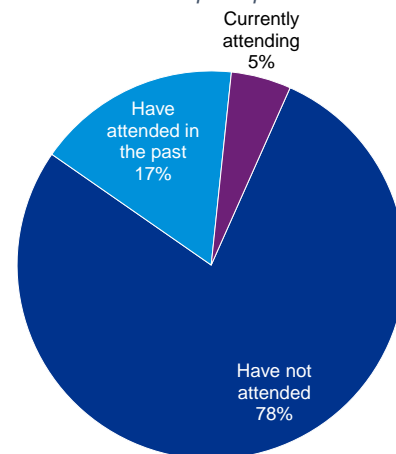
In addition to the above in figure 108, majority respondents (78%) responded that they hadn't attended any technical/ non-technical job related training in the past. 17% reported that they have undergone some training in the past and 5% stated they currently undergoing some kind of training.

Of those who underwent vocational training in the past, the trainings (~62 %) were attended at Private training institutes and 32% attended government training institutes.

Figure 108: Type of training provider, in %
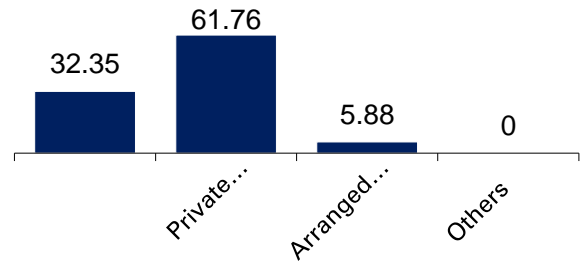
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 110, in the district, 51% of the respondents aspire to be wage-employed and 49% reported a preference for being self-employed. Amongst the respondents there is a preference to undertake further education/ learn skill for those aspiring to be wage employed as well as to those aspiring to be self-employed. Additionally, for those who want further education/ learn skill there is preference for acquiring graduation non-technical degree amongst both self-employed and wage employed respondents.

Figure 109: Key Findings related to educational attainment of the labour force
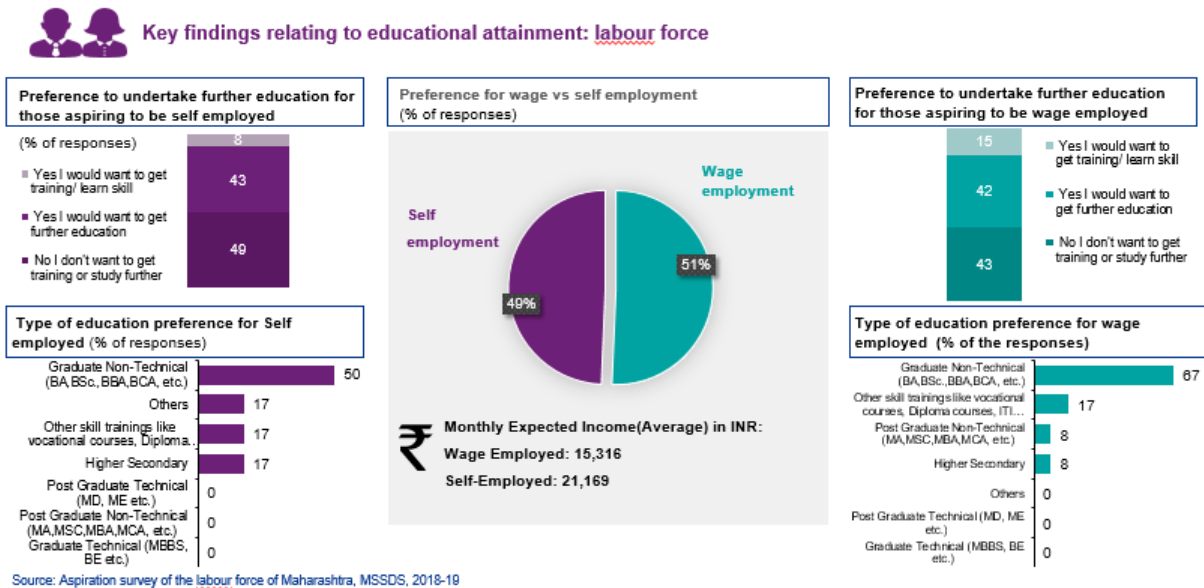
Source: Aspiration survey of the labour force of Maharashtra, MSSDS, 2018-19

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 250: Aspirational sub-sectors for labour force in Kolhapur

For wage employment	For self-employment
Agriculture & Allied	Opening a Retail shop
Art & Culture	Making & Selling Food Products & handicrafts

For wage employment	For self-employment
BFSI	Skill Based Business (Plumbing, Electrician etc.)
IT & ITeS	Opening or Setting up a restaurant/ tea stall

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening/setting up a retail shop, and making & selling food products & handicrafts, skill based business and opening or setting up of restaurant / tea stall.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Agriculture & Allied, Art & Culture, BFSI and IT & ITeS sub-sectors.

Many respondents also selected 'other' which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 15,316 and Rs. 21,169 respectively.

Additionally, 97% of the respondents would like to work within Maharashtra. However, 82% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

79% of those who attended a training programme stated they actually benefit from attending the training, majority state increase in income and get certification. Whereas, among those who didn't benefit from the training, majority state that employers engagement was not good during the training program.

15.5 Incremental Demand & Estimation of Manpower Supply

Agriculture-Crop & Animal Production, Education, Finance & Insurance activities, Healthcare, Transportation and Construction sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is declining in sub sectors of manufacture of machinery & equipment, manufacture of textiles and manufacture of fabricated metal products.

Table 251: Incremental Demand estimates (2019-2028) for Kolhapur district; in persons

Sector[1]	Consolidated projected Incremental estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and Allied		
Agriculture - Crop & Animal production	38,898	40,423
Forestry & Logging	137	142
Fishing & Aquaculture	96	100
Sub-Total	39,132	40,665
Food processing	1,459	1,535
Textiles	16,233	26,058
Apparel	158	205
Chemicals and Pharmaceuticals	359	402
Iron and Steel	926	970
Fabricated Metal products (except machinery and equipment)	11,150	10,887
Machinery and Equipment	50,064	63,930
Automotive	514	552

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Automotive (transport equipment)	179	232
Construction	**3,311**	**3,475**
Services		
Wholesale and Retail Trade	1,572	1,997
Transportation	11,213	13,519
Logistics	1,407	1,696
IT/ITES	2,350	2,833
Hospitality	931	994
BFSI	6,909	8,988
Real Estate	1,382	1,798
Professional, Scientific & Technical Activities	3,610	4,696
Administrative and Support Services	24,158	31,427
Education	12,510	16,274
Healthcare	16,734	21,769
Other Services	45,933	59,753
Sub Total	**1,28,711**	**1,65,743**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:
- **IT&ITeS sector** is not considered to be very relevant in Kolhapur.
- **Tourism and Hospitality** is a significant sector in the district due to religious temples present in the district
- **Silver/Gems and Jewelry** has a lot of potential in the district which was mentioned by the officials, under the category of Other Manufacturing.
- **Manufacture of Leather** was also mentioned to be major sector within the district as a local craft, with job roles such as shoe making, leather processing and any entry level job role.
- **Foundry** is an important sectors under 'Metal Products'.
- Within Agriculture and Allied **– Poultry Farming** is an area where people can be trained.
- **Readymade garments and power looms** is an area that is upcoming in the district

Estimation of Manpower Supply

According to KPMG estimates, Kolhapur district has a significant opportunity in terms of a favourable demographic dividend- with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 16.3 lakhs work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 252: Manpower Supply for Kolhapur District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Kolhapur	25,96,133	16,54,457	16,30,566

The workforce is further split across the educational attainment within the district as shown below in the table 253.

Table 253 Educational Attainment of projected workforce

Educational Level	Projected Workforce
Illiterate	3,37,502
Literate but below matric/secondary	5,83,790
Matric/secondary but below graduate	4,49,620
Technical degree or diploma equal to degree or post-graduate degree	34,778
Technical diploma or certificate not equal to degree	20,666
Graduate and above other than technical degree	1,37,896
Literate others	66,314

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~55867 annually.

Table 254: Size of target population in the district

Particular	Numbers
Enrolment in VIII	62,510
Enrolment in X	60,778
Enrolment in XII	23,108
Dropout at VIII	**5,345**
Passing out of VIII*	57,165
Students not transitioned to IX	**9,409**
Dropout at X	**7,457**
Passing out of X*	53,321
Students not transitioned to XI	**8,777**
Passing out at XII**	44,446
Students not transitioned to Higher Education	30,223
Total Target population	**55,867**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 255: Vocational Education annual capacity for Kolhapur district

Particular	Annual Capacity in Numbers
Short Term Skilling	19,950
ITI (Government & Private)	10,204

15.6 Recommendations

Kolhapur, being one of the industrialized districts in the state of Andhra Pradesh is predominantly driven by secondary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 256: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Red
Tobacco	Green	Red	Red
Textiles	Amber	Green	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Amber
Metal products (except machinery and equipment)	Amber	Amber	Red
Machinery and Equipment	Green	Green	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Amber	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Amber
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Amber	Red
Public Administration and Administrative activities	Amber	Green	Red
Education	Green	Amber	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Green
Mining	Red	Red	Red
Electricity, Gas and Water Supply	Red	Red	Red

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low

As per the table above, the following sectors can be prioritized for skill development in the district:
  • **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
  • **High incremental employment potential sectors**: Agriculture-Crop & Animal production, Manufacture of Textiles, Manufacture of machinery & equipment, Administrative activities and Healthcare.
  • **High Aspiration Sectors**: Agriculture & Allied and Arts, Entertainment & Recreation.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 257: Priority sectors for MSSDS

SI. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture & Allied		✓	✓
2	Textiles	✓	✓	
3	Healthcare	✓	✓	
4	Metal products including machinery & equipment	✓	✓	
5	Automotive (including transport equipment)	✓		✓
6	IT/ITES	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

  • Transportation and logistics
  • Professional, Scientific & Technical activities
  • BFSI
  • Other services (including Media & Entertainment)

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 258. The basis of selecting the job roles is through the primary inputs while consulting various district officials and employers

Table 258: Top Job Roles Identified for the district as per incremental demand & aspiration of the labourforce

Sector Name	Top Job Roles
Agriculture	Goat Farmer
	Dairy Farmer
	Micro Irrigation Technician
	Quality Seed Grower
	Poultry Farmer
	Sericulturist
Transportation	Reach Truck Operator
	Crane Operator
	Shipment Classification Agent
	Clearance Support Agent
	Consignment Booking Assistant
Healthcare	General Duty Attendant
	Home Health Aide
	Diet Assistant
	Emergency Medical Technician- Basic
	Pharmacy Assistant
Machinery and Equipment and Metal products	Fitter- Mechanical Assembly
	Manual Metal Arc Welding
	CNC Operator
	Draughtsman- Mechanical
	Lab Technician- Metal Tester
Automotive	Vehicle Assembly Fitter/ Technician
	Automotive Service Technician
	Maintenance Technician Mechanical
	Auto Component Assembly Fitter
	Automotive Engine Repair Technician
Textiles	Fitter- Spinning Preparatory
	Knitting Machine Operator
	Loom Fitter
	Sewing Machine Operator
	Assistant Ginning Fitter
Leather	Pattern Cutter- Footwear
	Sample Maker- Footwear
	Splitting and Sammying Operator

16. Latur

16.1 About the district

Latur district is located towards the south eastern side of the Maharashtra state with the district headquarters in Latur City. The district is divided into 10 sub-districts and 921 inhabited villages.

Latur has a total land area of 7,157 sq.km. and constitutes 2.33% of the total state area. The district lies in the south eastern side of Aurangabad region. It is bordered by Bidur District of Karnataka on the east, Nanded on the northeast, Parbhani on the north, Beed on the northwest and Osmanabad on the western and southern side.

The district has good connectivity with railways and roads which connects it to the bigger cities such as Mumbai, Hyderabad, Pune, Kolhapur and Aurangabad which makes markets accessible and helping trade and businesses.

The district is not rich on mineral resources. However, the Masonry stone is available in large scale in the district. The forest area in the district is very low with only 0.56% of the total land area. Vrundavan Park Chakur, Udgir Fort, Ausa Fort, Kharosa Caves and Udgir Hattiber- Deverjan are popular destinations among tourists.

Table 259: Comparison of Latur District with Maharashtra

Indicator	Latur	Maharashtra
Area in sq.km.	7,157	3,07,713
Percentage share in state geographical area, %	2.33	100
No. of Sub-districts	10	353
No. of inhabited villages	921	40,959
No. of households	3,81,600	24,421,519
Forest area as a % of total geographical area	0.56	16.94

Source: Census 2011

16.2 Demography

According to latest census data, the district has a population of nearly 24.55 lakh persons which is ~2.19% of the state. Of the total population, only 25% are residing in the urban areas of the district.

The district's literacy rate is at 79.03% which is lower than the state average of 82.91%. Latur has sex ratio (no. of females per 1000 males) of 924 which is similar the state average of 925. While 53% of the population in the district are in the working age group (i.e. 15-59 years), about 34.23% is actually working i.e. % of total workers (main and marginal workers) to the total population which is significantly lower to the state average.

Table 260: Demographic Indicators of Latur district

Indicator	Latur	Maharashtra
Population, No.	24,55,543	11,23,74,333
Decadal growth rate of population, %	18.04	16
Urban Population as a percentage of total population, %	25	45.2
SC Population, %	19	10.2
ST Population, %	2	8.8
Sex ratio, No. of females per 1000 males	924	925
Population density, per sq.km.	343	365
Literacy rate, %	79.03	83
Working age population* as a percentage of total population, %	53	59
Work participation rate^, %	34.23	44
HDI Index	0.663	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 10.4 lakh persons. Of this, nearly 71.76% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 8.17% of workers are working in secondary sector and 20.08% workers are working in tertiary sector. As shown in the figure 111 below, Latur's unemployment (per 1000) in rural areas is significantly lower compared to the state average, whereas in urban areas it is slightly higher. Additionally, if we compare male and female unemployment (per 1000) of Latur to the state, male unemployment rate is significantly lower than the state average. Whereas female employment is slightly less than the state average.

Figure 110: Share of workforce & Employment Rate for Latur District
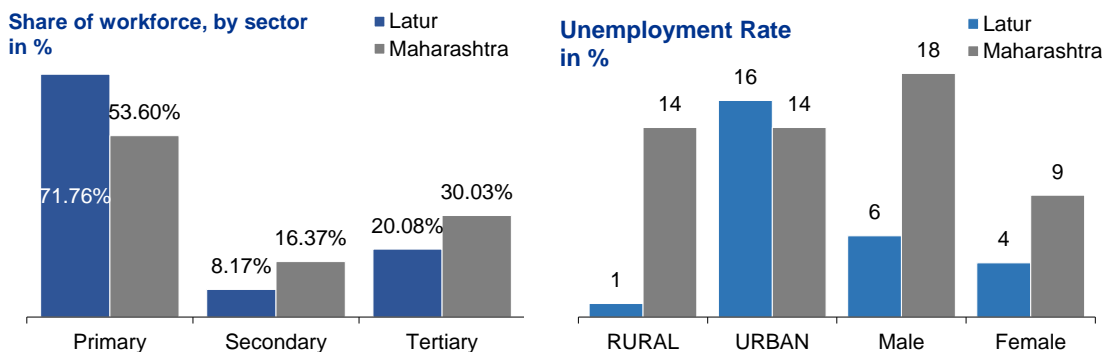
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As per figure 112, maximum persons are self-employed in the district which is similar to the state average followed by casual labours which is significantly higher than the state average and salaried employees which is significantly lower to the state average.

Figure 111: Type of employment numbers per 1000
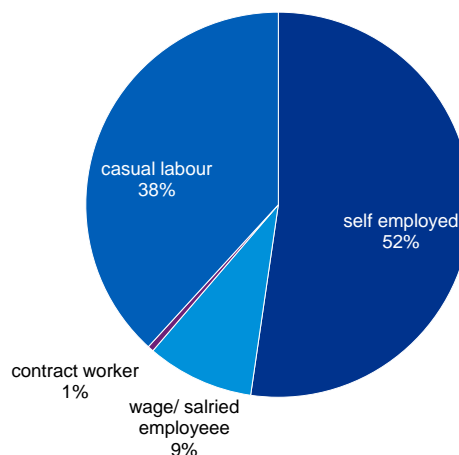
Source: Ministry of Labour & Employment

*Educational Profile of the District***:**

Traditional Education

Latur district has a total of 3,305 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 5.69 lakh students. The student teacher ratio is 22:1. The district also has 116 general and technical colleges in the district with the enrolment of 39000 students.

Table 261: Educational Profile of Latur District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	2,562	4,01,279
Secondary Schools (IX to XII)	743	1,68,263
General Colleges & Technical Education	121	39,000

Source: AISHE, U-DISE, 1Enrolment figures at State run general and technical education colleges only

Vocational Education

Latur district has a total of 14 ITIs Government and Private with 2657 students currently enrolled. Majority of private training centers in the district offer various courses for enhancing the skills of the persons. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY,DDU-GKY and NSDC Fee Based) are Gems & Jewelry, Retail, Information & Communication Technology, Fashion Design, Textiles and Garment Making.

Table 262: Total no. of ITI and there training number in Latur district

Particular	Number
ITIs (Government & Private)	14
Trainee Count	2,657

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 22,299 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment Making, Fashion Design, and Beauty and Wellness. Table below illustrates sector-wise annual training numbers in the district.

Table 263: Sector wise short- term skilling trained numbers in PMKUVA for Latur district

Sectors	Trained
Information And Communication Technology	7,131
Garment Making	4,759
Fashion Design	3,474
Remaining Sectors	1,466
Automotive Repair	1,136
Medical And Nursing	778
Electrical	713
Beauty Culture And Hair Dressing	680
Soft Skills	644
Banking And Accounting	390
Construction	350
Fabrication	326
Electronics	282
Production And Manufacturing	170
Total	**22,299**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI). Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

16.3 Economy

As of 2016-17, Latur district had the 17th highest Gross District Domestic Product (GDDP) in the state at Rs. 23,166 crores. The per capita GDDP of the district is Rs. 1,14,436.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 66% towards the GDDP. Secondary sector is at 18% and primary sector is at 16%.

As per the figure indicated below, major contributors to the GDDP of the district are Trade, Hotel & Restaurant, Agriculture & Allied activities, Real Estate, Ownership of dwellings and business services, Banking & Insurance and Other Services.

Figure 112: Sector wise GDDP Distribution of Latur District
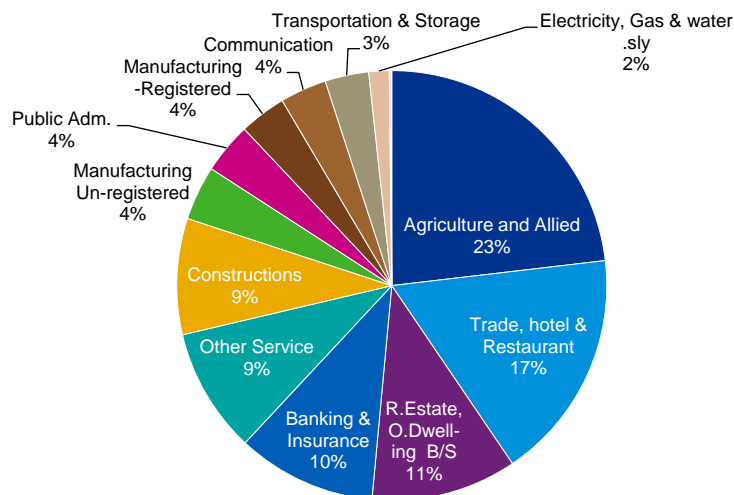
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

Agriculture and allied activities contributes to 23% of the GDDP in the district. Nearly 73 % of the population is depends upon agriculture. Major crops grown in the district are Soyabean, Rice, pulses, and sugarcane. There is lack of irrigation facilities and high dependence on rainfall.

Latur district has 21 registered large and medium enterprises. The district also has nearly 2051 Micro, Small and Medium Enterprises (MSME) employing nearly 21,000 persons. Major manufacturing industries include food products and beverages, printing and reproduction of recorded media, manufacture of chemicals and chemical products and manufacture of fabricated metal products.

Manufacture of food products and beverages is an important industry in the district**.** It includes processing and preserving of fruits and vegetables, manufacture of vegetable and animal oil and fats, manufacture of dairy products, manufacture of grain mill products, starches and starch products, manufacture of bakery products, manufacture of sugar, distilling, rectifying and blending spirits and manufacture of soft drinks. It employs nearly 4190 persons in the district which constitutes to 70% of the employment in registered manufacturing sector. Major players in the industry include Killari Sahakari Sakhar Kharkhana, Manjra Sahakari Sakhar Kharkhana and Tina Oils and Chemicals Ltd.

Printing and reproduction of recorded media is also an important industry in the district. It includes printing of newspapers, magazines, flexographic plastic, glass and metals. It employs nearly 540 persons in the district which constitutes to 10% of the employment in registered manufacturing sector.

Manufacture of chemicals and chemical products is also an important industry in the district. It includes manufacture of basic chemicals, fertilizer and nitrogen compounds, plastics and synthetic rubber in primary

forms. It employs nearly 380 persons in the district which constitutes to 6% employment in the registered manufacturing sector. Major players in the industry include Alko Plus

Other important manufacturing industries include manufacture of fabricated metal products, wholesale and retail trade and repair of motor vehicles and motorcycles, manufacture of paper and paper products and manufacture of rubber and rubber products.

Table 264: Employment in registered manufacturing sector in the district as of 2017-18

Sector	Employment
Manufacture of food products and beverages	4,187
Printing and reproduction of recorded media	594
Manufacture of chemicals and chemical products	379
Manufacture of fabricated metal products, except machinery and equipment	279
Wholesale and retail trade and repair of motor vehicles and motorcycles	210
Electricity, gas, steam and air conditioning supply	111
Manufacture of paper and paper products	64
Manufacture of rubber and plastics products	22
Manufacture of textiles	20
Manufacture of basic metals	19
Manufacture of furniture	13
Manufacture of furniture	7

Source: Annual Survey of Industries 2017-18

As shown above in the figure 102, Tertiary Sector is the largest contributor towards the GDDP of the district. Of all the services Trade, Hotel & Restaurant is the highest at 17%, followed by Real estate, ownership of dwellings and business services with banking and insurance at 11%. Other services, public administration, communication and transportation and storage are at 9%, 4%, 4% and 3% respectively.

Investments in the district:

Latur district has attracted a lot of investment in various sectors. Road and railway transport infrastructure services, retail trading, transport logistic services are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 265: Sector wise investments in Latur District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	44,469	11
Other transport equipment & ancillaries	15,000	2
Railway transport infrastructure services	8,300	2
Retail trading	3,000	3
Transport logistics services	2,875	2
Other textiles	1,026	1
Education	744	1
Beer & alcohol	390	1
Electricity transmission	170	1
Processed foods	150	1

Sector Name	Proposed Investment (in INR Million)	No of projects
Other chemical products	90	1
Drugs & pharmaceuticals	56	13
Total	**76268**	**39**

Source: CMIE

16.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 266: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	45%
	Rural	55%
Gender Profile	Male	57%
	Female	43%
Age Group	15-25 years	36%
	26-35 years	42%
	36-45 years	14%
	46-55 years	8%
	56-59 years	0%
Educational Level	Upto Xth	62%
	Upto XIIth	28%
	Any Graduation	10%
Occupational Profile	Worker	59%
	Non-Worker	41%

Figure 113: Past/Current participation in training, %

Currently attending 1%
Have attended in the past 16%
Have not attended 83%
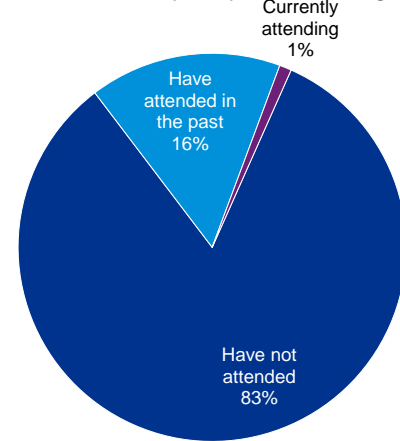
In addition to the above in figure 114, majority respondents (83%) responded that they hadn't attended any technical/ non-technical job related training in the past. 16% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings (~44 %) were attended at Private training institutes and 56% attended government training institutes.

Figure 114: Type of training provider, in %
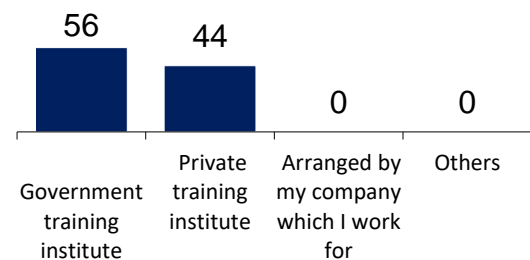
Government training institute	Private training institute	Arranged by my company which I work for	Others
56	44	0	0

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 116, in the district, 35% of the respondents aspire to be wage-employed and 65% reported a preference for being self-employed. Amongst the respondents there is a preference to undertake further education/ learn skill for those aspiring to be wage employed as compared to those aspiring to be self-employed. Additionally, there is preference for acquiring a graduation on-technical degree or post-graduation degree amongst both self-employed and wage employed respondents.

Figure 115: Key Findings related to educational attainment of the labour force

Key findings relating to educational attainment: labour force

Preference to undertake further education for those aspiring to be self employed (% of responses)
- No I don't want to get training or study further: 52
- Yes I would want to get training/ learn skill: 35
- Yes I would want to get further education: 14

Type of education preference for Self employed (% of responses)
- Graduate Non-Technical (BA,BSc.,BBA,BCA, etc.): 82
- Post Graduate Non-Technical (MA,MSC,MBA,MCA, etc..): 9
- Higher Secondary: 9
- Others: 0
- Other skill trainings like vocational courses, Diploma courses, ITI courses..: 0
- Post Graduate Technical (MD, ME etc.): 0
- Graduate Technical (MBBS, BE etc.): 0

Preference for wage vs self employment (% of responses)
- Wage employment: 35%
- Self employment: 65%

Monthly Expected Income(Average) in INR:
Wage Employed: 16,039
Self-Employed: 19,396

Preference to undertake further education for those aspiring to be wage employed
- No I don't want to get training or study further: 39
- Yes I would want to get training/ learn skill: 33
- Yes I would want to get further education: 29

Type of education preference for wage employed (% of the responses)
- Graduate Non-Technical (BA,BSc.,BBA,BCA, etc.): 36
- Post Graduate Non-Technical (MA,MSC,MBA,MCA, etc.): 18
- Higher Secondary: 18
- Other skill trainings like vocational courses, Diploma..: 9
- Post Graduate Technical (MD, ME etc.): 9
- Graduate Technical (MBBS, BE etc.): 9
- Others: 0

Source: Aspiration survey of the labour force of Maharashtra, MSSDS, 2018-19

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 267: Aspirational sub-sectors for labour force in Latur

For wage employment	For self-employment
Governance & Administration	Retail
Railways	Skill Based Business (Plumbing, Electrician etc.)
Rural Development & Panchayati Raj	Food Products & Handicrafts
Healthcare	Agriculture & Allied
Agriculture & Allied	Setting up beauty parlor/spa/salons

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, beauty parlour/spa/salons, Agriculture & Allied, skill based business (Plumbing, mechanic etc.) and making & selling of food products & handicrafts.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Governance & Administration, Railways, Rural development & panchayati raj, healthcare and agriculture & allied sub-sectors.

Many respondents also selected 'other' which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 16,039 and Rs. 19,396 respectively.

Additionally, 99% of the respondents would like to work within Maharashtra. However, 71% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

47% of those who attended a training programme stated they actually benefit from attending the training, majority state increase in income and gain new skills. Whereas, among those who didn't benefit from the training, majority state that employers are not able to provide these kind of trainings in-house.

16.5 Incremental Demand & Estimation of Manpower Supply

Agriculture-Crop & Animal Production, Education, Finance & Insurance activities, Transportation, Healthcare and Construction sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is low as compared to other districts, however it is concentrated in high growth sub sectors of food products and beverages, fabricated metal products and chemical and chemical products.

Table 268: Incremental Demand estimates (2019-2028) for Latur district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop & Animal production	30,833	32,041
Forestry & Logging	108	113
Fishing & Aquaculture	76	79
Sub-Total	**31,018**	**32,233**
Registered Manufacturing		
Food processing	221	233
Fabricated Metal products (except machinery and equipment)	567	553
Construction	2,164	**2,272**
Services		
Wholesale & Retail Trade	745	947
Transportation	5,418	6,532
Warehousing, Postal & Courier services	680	820
Information & Communication	1,135	1,369
Accommodation & Food Services	376	402
BFSI	1,927	2,506
Real Estate	385	501
Professional, Scientific and technical services	1,007	1,309
Public Administration and Administrative Services	9,950	12,944
Education	7,870	10,237
Healthcare	10,527	13,694
Others	23,290	30,297
Wholesale & Retail Trade	745	947
Sub-Total	**63,310**	**81,558**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Estimation of Manpower Supply

According to KPMG estimates, Latur district has a significant opportunity in terms of a favourable demographic dividend- with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 12.1 lakhs labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 269: Manpower Supply for Latur District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Latur	15,82,122	12,21,700	12,14,318

The workforce is further split across the educational attainment within the district as shown below in the table 270.

Table 270 Educational Attainment of projected workforce

Educational Level	Projected Workforce
Illiterate	3,28,082
Literate but below matric/secondary	4,30,426
Matric/secondary but below graduate	2,75,087
Technical degree or diploma equal to degree or post-graduate degree	29,751
Technical diploma or certificate not equal to degree	8,639
Graduate and above other than technical degree	64,230
Literate others	78,103

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~43,806 annually.

Table 271: Size of target population in the district

Particular	Numbers
Enrolment in VIII	50,802
Enrolment in X	47,057
Enrolment in XII	15,449
Dropout at VIII	**6,213**
Passing out of VIII*	44,589
Students not transitioned to IX	**7,339**
Dropout at X	**9,670**
Passing out of X*	37,387
Students not transitioned to XI	**6,154**
Passing out at XII**	30,357
Students not transitioned to Higher Education	20,643
Total Target population	**43,806**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 272: Vocational Education annual capacity for Latur district

Particular	Annual Capacity in Numbers
Short Term Skilling	39,720
ITI (Government & Private)	4,752

16.6 Recommendations

Latur, being one of the agrarian district is predominantly driven by primary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 273: Sector specific economic growth, employment potential and aspirations for Latur district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Yellow
Forestry & Logging	Red	Red	Yellow
Fishing & Aquaculture	Yellow	Red	Yellow
Food processing	Green	Red	Yellow
Tobacco	Green	Red	Red
Textiles	Yellow	Red	Red
Apparel	Yellow	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Yellow	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Yellow	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Yellow	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Yellow	Red	Yellow
Transportation	Yellow	Green	Red
Logistics	Yellow	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Yellow	Red	Red
BFSI	Yellow	Red	Yellow
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Public Administration and Administrative activities	🟧	🟩	🟩
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟩
Other Services	🟩	🟩	🟥

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low

As per the table above, the following sectors can be prioritized for skill development in the district:

- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Agriculture-Crop & Animal production, Transportation, Administrative activities, Education and Healthcare.
- **High Aspiration Sectors**: Public Administration and Healthcare

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 274: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Healthcare	✓	✓	✓
2	Agriculture & Allied		✓	✓
3	Transportation	✓	✓	
4	Retail	✓		✓
5	Food Processing	✓		✓
6	Administrative activities	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Professional, Scientific & Technical activities

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 275. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers

Table 275: Top Job Roles Identified for the district as per incremental demand & aspiration of the labourforce

Sector Name	Top Job Roles
Healthcare	General Duty Attendant
	Home Health Aide
	Diet Assistant
	Emergency Medical Technician- Basic
	Pharmacy Assistant
Agriculture	Goat Farmer
	Dairy Farmer
	Micro Irrigation Technician
	Quality Seed Grower
	Small Poultry Farmer
Transportation	Reach Truck Operator
	Crane Operator
	Shipment Classification Agent
	Clearance Support Agent
	Consignment Booking Assistant
Retail	Cashier
	Retail Sales Associate
	Store Ops Assistant
	Retail Trainee Associate
	Individual Sales Professional/ Self-employed Retailer
Food Processing	Fruits and Vegetables Selection In-Charge
	Pulse Processing Technician
	Soya beverage making technician
	Packing Machine Worker – Food Processing
	Fruit Ripening Technician

17. Mumbai City

17.1 About the district

Mumbai City is a district of Maharashtra in Konkan Division and lies on the west side of the state. As a city district, it has no headquarters or subdivisions. It, along with the Mumbai Suburban District, makes up the metropolis of Mumbai, which is the capital city of Maharashtra.

The city has an area of 157 km² and a population and is called the "island city" or South Mumbai or Old Mumbai and extends from Colaba in the south to Mahim and Sion in the north.

Table 276: Comparison of Mumbai District with Maharashtra

Indicator	Mumbai City	Maharashtra
Area in sq. km.	157	3,07,713
Percentage share in State geographical area, %	0.05%	100%
No. of Sub-districts	N/a	353
No. of inhabited villages	N/a	40,959
No. of households	6,74,339	24,421,519
Forest area as a % of total geographical area	0	16.94%

Source: Census 2011

17.2 Demography

According to the 2011 census, Mumbai City district has a population of 3,085,411, that is 100% urban and ranks 115th in India (out of a total of 640) in population. The district has a population density of 19,652 inhabitants per square kilometer, which is 53 times more than the state population density, making Mumbai City a highly populated district. A population growth rate over the decade 2001-2011 has been observed of 7.57%. The city has a literacy rate better than the state rate at 89.21%, however, its sex ratio is 832, which is almost 100 females less than the state sex ratio. The working population is 69% however, only 42% is currently participating. The HDI at 0.841 of the district is much higher than the state HDI and that of other districts.

Table 277: Demographic Indicators of the district

Indicator	Mumbai City	Maharashtra
Population, No.	30,85,411	11,23,74,333
Decadal growth rate of population, %	-7.6%	16%
Urban Population as a percentage of total population, %	100%	45.2%
SC Population, %	7.1%	10.2%
ST Population, %	0.8%	8.8%
Sex ratio, No. of females per 1000 males	832	925
Population density, per sq.km.	19,652	365
Literacy rate, %	89.2%	83%
Working age population* as a percentage of total population, %	69%	59%
Work participation rate^, %	42%	44%
HDI Index	0.841	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 12.83 lakh persons, out of which nearly 73.06% of workers are engaged in tertiary sector, followed by 25.73% in secondary sector and only 1.21% workers in primary sector. This distribution can also be understood by the urbanized nature of the district. As shown in the figure 117 below, Mumbai's unemployment (per 1000) is almost similar to that of Maharashtra. Also, while the average unemployment rate is a little lower than the state numbers, however, the unemployment rate of men is much higher than that of women (16:11), and the unemployment rate of women is higher than the state rate, which is not the case with male unemployment rate.

Figure 116: Share of workforce & Employment Rate for District
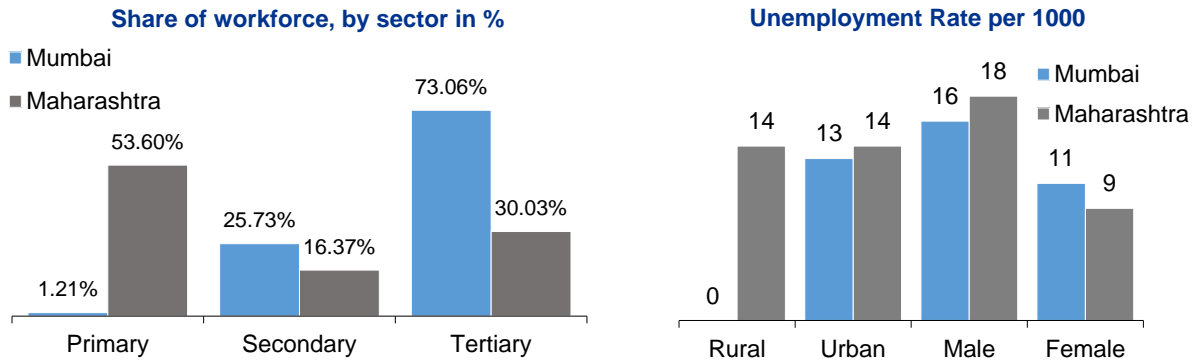
Share of workforce, by sector in %

Unemployment Rate per 1000

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh
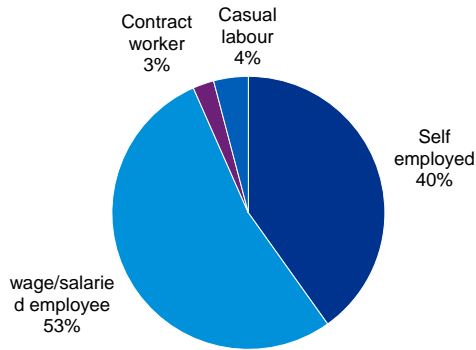
Figure 117: Type of employment in the district
Source: Ministry of Labor & Employment

As can be seen in figure 118, significant proportion of the workforce is reported to be wage/salaried-employed (53%) in the district, followed by 40% self-employed, 4% of the workforce is reported to be engaged in casual labor and 3% contract workers. The % of employment in wage/salaried employment is the highest as compare to all other districts, which could be due to the dependence on secondary and tertiary sector for livelihood opportunities.

In addition to above, the major sub-sectors which provide maximum employment in registered manufacturing are manufacture of wearing apparel, printing and reproduction of recorded media, wholesale and retail trade and repair of motorcycles, manufacture of other non-metallic mineral.

Educational Profile of the District:

Traditional Education

Mumbai district has a total of 3,182 schools, which includes approximately 1% of government schools. It is imperative to notice that there is no significant difference in the enrollment of students in primary and Secondary School and the student teacher ratio is 20:1. The district also has 130 general and technical colleges in the district with the enrolment of 1,24,000 students.

Table 278: Education Profile of District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	1,521	6,51,915
Secondary (9-12th)	1,661	6,30,272
Colleges (General and Technical)	130	1,24,000[2]

Source: AISHE, U-DISE, 1Enrolment figures at State run general and technical education colleges only

Vocational Education

Mumbai City district has a total of 22 ITIs Government and Private with 5,504 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Construction, Retail, Auto And Auto Components, Banking And Accounting, Information And Communication Technology and Beauty And Wellness.

Table 279: Total no. of ITI and there training number in Mumbai City district

Particular	Number
ITIs (Government & Private)	22
Trainee Count	5,504

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 3,171 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Beauty and Wellness and Healthcare. Table below illustrates sector-wise annual training numbers in the district.

Table 280: Sector wise short- term skilling trained numbers in PMKUVA for Mumbai City district

Sectors	Trained
Information and communication technology	1,447
Beauty culture and hair dressing	733
Medical and nursing	355
Remaining sectors	203
Soft skills	196
Garment making	177
Hospitality	83
Banking and accounting	60
Retail	60
Total	**3,171**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

17.3 Economy

As of 2016-17, Mumbai city (including Mumbai suburban) had the 3rd highest Gross District Domestic Product (GDDP) in the state at INR 3,85,007 crores. The per capita income of the district is INR.2,79,965.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 77% towards the GDDP, secondary sector 22% and primary sector 1%.

Figure 118: Sector Wise GDDP Distribution of district
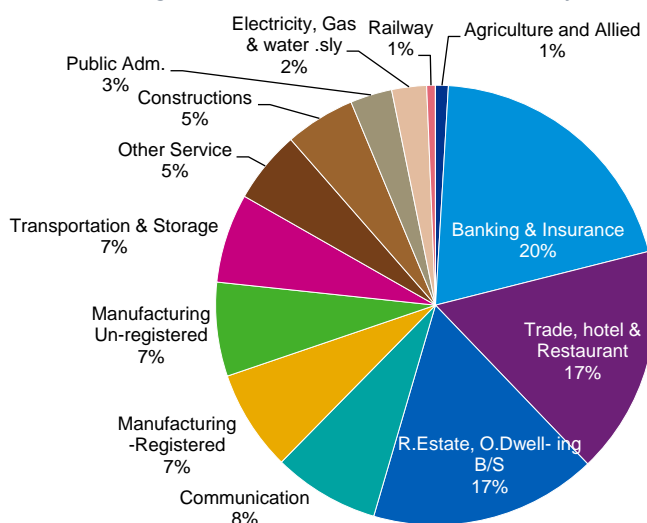
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

As shown above in the figure 119, Tertiary Sector, which is the largest contributor towards the GDDP encompasses of services such as Banking and Insurance leading the sector by a contribution of 20%, followed by Trade, Hotel & Restaurant at 17%, real estate, ownership of dwellings and business service at 17%, and other contributing services, such as public administration, communication, transportation and storage with 3%, 8%, 8% and 7% contribution respectively.

Agriculture sector is of low economic significance as the district is urbanized and has negligible contribution from this sector.

Mumbai district has 635 large scale projects employing 2,17,662 people and 6,589 medium, small and micro enterprises which employs approximately 1,95,793. The major manufacturing industries of the district includes - Manufacture of wearing apparel; dressing and dyeing of fur, Publishing, printing and reproduction and Manufacture if Textiles (Table 196).

Manufacture of wearing apparel; dressing and dyeing of fur is the largest employer in the industry, with Manufacture of wearing apparel, except fur apparel employing almost 98% of the people employed in this industry, in companies such as Tiny Girl Clothing Co. Pvt.Ltd and Opera Clothing Pvt.Ltd. The remaining 2% of the people are engaged in sub sectors, namely, Manufacture of knitted and crocheted apparel.

Publishing, printing and reproduction of recorded media is the second largest industry employing 3,721 persons. Out of this, 94% are engaged in printing in almost 100 companies. The other 6% are engaged in service activities related to printing.

Manufacture of textiles is the third major industry employing over 1800 people in manufacture of other textiles (89%), preparation and spinning of textile fibres, finishing of textiles, and Manufacture of cordage, rope, twine and netting.

Table 281: Major Industries in registered manufacturing

Major Industries in registered manufacturing	Employment
Manufacture of wearing apparel; dressing and dyeing of fur	9,206
Publishing, printing and reproduction of recorded media	3,721
Manufacture of textiles	1,802
Manufacture of other non-metallic mineral products	1,331
Manufacture of food products and beverages	1,100
Manufacture of chemicals and chemical products	853
Manufacture of machinery and equipment n.e.c.	560

More sectors supplementing the job creation include Manufacture of other non-metallic mineral products, Manufacture of food products and beverages, Manufacture of chemicals and chemical products and Manufacture of machinery and equipment n.e.c.

Investments in the district:

Mumbai district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Railway and Road transport infrastructure services, housing construction, telecom services, transport, storage and distribution are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 282: Sector wise investments in Mumbai City District

Sector Name	Proposed Investment (in INR Million)	No of projects
Railway transport infrastructure services	3,867,347	60
Road transport infrastructure services	1,965,677	181
Housing construction	1,879,959	938
Telecommunication services	1,347,998	29
Air transport services	921,600	7
Railway transport services	700,000	1
Storage & distribution	394,097	21
Other transport equipment & ancillaries	293,400	1
Refinery	289,208	20
Commercial complexes	262,036	136
Air transport infrastructure services	168,820	12
Health services	111,756	57
Shipping transport infrastructure services	92,603	25
Hotels & restaurants	80,174	119
Transport logistics services	75,263	44
Electricity transmission	65,106	7
Retail trading	64,319	88
Irrigation	52,419	2
Tourism	48,647	22
ITES	46,996	38
Conventional electricity	43,276	6
Road transport services	37,600	6
Crude oil & natural gas	35,852	2
Renewable electricity	30,404	13
Other miscellaneous services	23,925	22
Gems & jewellery	20,770	20
Education	20,145	17
Lubricants, etc.	20,112	5
Computer software	20,091	46

Sector Name	Proposed Investment (in INR Million)	No of projects
Other recreational & allied services	19,267	37
Exhibition of films	16,305	45
Passenger vehicles	16,250	3
Inorganic chemicals	9,350	6
Electricity distribution	8,700	1
Other construction materials	6,500	3
Business services & consultancy	6,378	5
Other chemical products	5,200	7
Drugs & pharmaceuticals	4,819	14
Poultry & meat products	4,630	2
Natural gas trading & distribution	4,342	4
Other textiles	4,284	8
Cotton & blended yarn	4,258	6
Others	27,135	100
Total	**1,31,17,014**	**2,186**

Source: CMIE

17.4 Labor force Aspiration

The main findings of the youth aspirations include:

Respondent Profile

Table 283: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	61%
	Rural	39%
Gender Profile	Male	78%
	Female	22%
Age Group	15-25 years	57%
	26-35 years	26%
	36-45 years	13%
	46-55 years	03%
	56-59 years	01%
Educational Level	Up to Xth	48%
	Up to XIIth	39%
	Any Graduation	13%
Occupational Profile	Worker	63%
	Non-Worker	37%
Average monthly household income for those working (INR)		13,173

Figure 119: Past/Current participation in training, %

- Have attended in the past
- Currently Attending
- Have not attended

68%
24%
8%
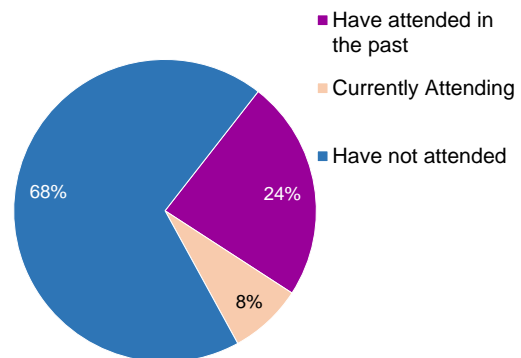
As can be seen in the figure 120, majority respondents (68%) shared that they have not attended any technical/ non-technical job related training in the past. 24% reported that they have undergone trainings in the past and 8% are currently attending the training. It is of significance to know that amongst those who did not attend the training more than 73% were not aware about the training being organised. Amongst those who knew, they expressed either the physical distance, the quality of the training institute or the lack of time as the main reason for not attending the training. The charges/fees ranked last as the hindrance, which is also representative of the better economic conditions of the district as compared to other district, if the fees was same across.

Figure 120: Type of training provider, in %
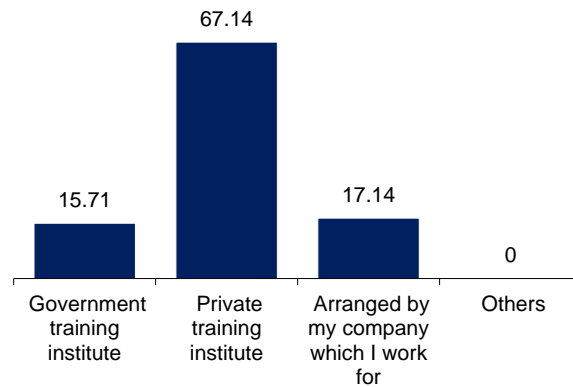
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 122, in the district, majority (54%) of the respondents aspire to be self-employed and 46% reported a preference for being wage employed. This preference can be due to the difference in the average expected monthly income, which is higher in self-employment as compared to wage employment. Amongst the respondents, a slightly higher percentage of the self-employment aspirants have a higher preference to undertake further education and training. Additionally, there is preference for acquiring vocational education amongst both wage and self-employed respondents.

Figure 121: Key Findings related to educational attainment of the labor force
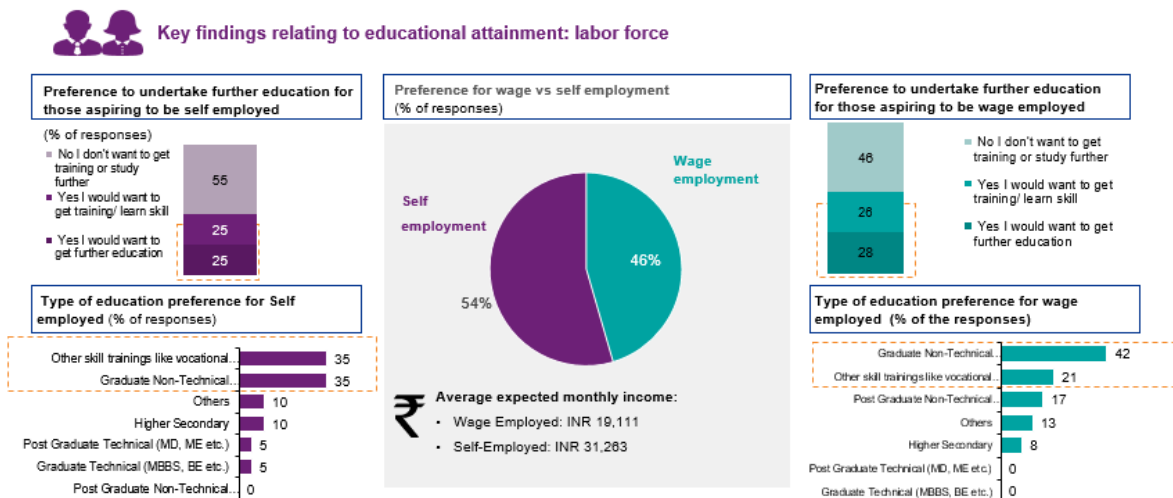
Source: Aspiration survey of the labor force of Maharashtra, MSSDS, 2018-19

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 284: Aspirational sub-sectors for labor force

For wage employment	For self-employment
Food Processing	Retail
Healthcare	Restaurant/ Tea Stall
Engineering & Capital Goods	Food Products & Handicrafts
Governance & Administration	Skill Based Business

Some respondents chose 'other' sectors in self-employment category and shared preferences for opening a kirana store. For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop for grocery/stationery/medical shop/pan shop or clothes. Additionally, 95% of the respondents shared that they would like to work within Maharashtra, however, 54% shared a willingness to work outside the district if they get better wages.

Perceived benefits of acquiring training:

65% of those who attended a training programme stated that they benefit from attending the training. Among those who did benefit from the training, majority (82%) stated increase in income as the main benefit. There were certain challenges that the respondents highlighted after receiving the training, out of which the ones which got the highest response included – poor employer engagement during the training program, gap in the skill levels expected by the employers and those provided in the training, and lack of opportunities for trainees even after attending the program.

17.5 Incremental Demand & Estimation of Manpower Supply

Transportation, Finance & Insurance Activities, Human health & social work activities, Administrative and support service activities, Professional, Scientific & Technical Activities, Information & Communication and Real Estate Activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of Manufacture of wearing apparel; dressing and dyeing of fur, Manufacture of machinery and equipment n.e.c., Manufacture of textiles and Manufacture of fabricated metal products, except machinery and equipment.

Table 285: Incremental Demand estimates (2019-2028) for Mumbai City; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and Allied	619	643
Registered Manufacturing		
Textiles	1,199	1,925
Apparel	2,890	3,751
Chemicals and Pharmaceuticals	104	117
Iron and Steel	5	5
Fabricated Metal products (except machinery and equipment)	1,021	997
Machinery and Equipment	2,919	3,727

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Automotive (transport equipment)	125	163
Construction	3,318	3,482
Services		
Wholesale and Retail Trade	3,394	4,311
Transportation	29,917	36,068
Logistics	3,754	4,525
IT/ITES	6,269	7,558
Hospitality	2,507	2,675
BFSI	17,437	22,683
Real Estate	3,487	4,537
Professional, Scientific & Technical Activities	9,110	11,851
Public Administration and administrative activities	97,554	1,26,904
Education	12,276	15,969
Healthcare	16,421	21,361
Other Services	68,510	89,122
Sub total	2,70,634	3,47,564

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 85% of employment in registered manufacturing, remaining is concentrated in Manufacture of jewelry and related articles majorly. .

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Gems and Jewellery
- Beauty and wellness
- Domestic workers
- Fisheries and aquaculture
- Tourism & Hospitality

Estimation of Manpower Supply

Mumbai district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 9.32 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 286: Manpower supply for Mumbai district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Mumbai	18,01,944	9,56,831	9,32,244

Table 287: Projected workforce by education levels

Education level	Projected work force
Illiterate	97,138
Literate but below matric/secondary	3,05,781
Matric/secondary but below graduate	2,89,221
Technical degree or diploma equal to degree or post-graduate degree	29,270
Technical diploma or certificate not equal to degree	10,533
Graduate and above other than technical degree	1,66,455
Literate others	33,846

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~2,37,678 annually.

Table 288: Size of target population in the district

Particular	Numbers
Enrolment in X	1,52,284
Enrolment in XII	1,52,335
Dropout at X	1,48,386
Passing out of X*	3,898
Students not transitioned to XI	642
Passing out at XII**	130,368
Students not transitioned to Higher Education	88,650
Total Target population	237,678

Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
*** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force*
The dropout rate after X is assumed to be same as Mumbai Suburban
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 289: Vocational Education annual capacity for Mumbai City district

Particular	Annual Capacity in Numbers
Short Term Skilling	5,820
ITI (Government & Private)	10.604

17.6 Recommendations

The economic growth of Mumbai district is predominantly driven by the secondary and tertiary sectors. Manufacturing along with services forms the core of the employment generation activities in the district. Finance and Insurance services, Education and public administration sectors have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 290: Sector specific economic growth, employment potential and aspirations

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production			
Forestry & Logging			
Fishing & Aquaculture			

Sectors	Economic Growth	Employment Potential	Aspirational
Food processing	Green	Red	Green
Tobacco	Green	Red	Red
Textiles	Amber	Red	Amber
Apparel	Amber	Red	Amber
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Amber
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Green	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Amber	Red
Public Administration and Administrative activities	Amber	Green	Amber
Education	Green	Green	Red
Healthcare	Green	Green	Green
Other Services	Green	Green	Red

Source: KPMG In India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6- Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Manufacturing of food products and beverages, manufacturing of chemical and chemical products, manufacturing of machinery and equipment, Manufacture of motor vehicles, trailers and semi-trailers, manufacture of other transport equipment, Information & communication, real estate activities, Professional, Scientific & Technical Activities, Administrative

and support service activities, education, Human health & social work activities, Arts, entertainment & Recreation and Other Service Activities

- **High incremental employment potential sectors**: Transportation, Finance and Insurance activities, Administrative and support service activities (including public administration and compulsory social security) Education, Human health & social work activities and other service activities.
- **High Aspiration Sectors**: Manufacture of food products and beverages, human health & social work activities

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 291: Priority sectors for MSSDS

Sl. No.	Sector	High / Medium Growth	High / Medium Employment Potential	High / Medium aspiration
1	Food Processing	✓		✓
2	Machinery and equipment	✓		✓
3	Automotive (transport equipment)	✓		✓
4	Transportation	✓	✓	
5	BFSI	✓	✓	
6	Healthcare			

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Textiles and Apparels
- Professional, Scientific & Technical Activities
- Administrative activities
- Education
- Other service activities

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 292. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 292: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Food Processing	- Supervisor: Fruits and vegetable processing - Baking technician - Multi skill technician (food processing) - Dairy products processor - Industrial production worker – food processing

High demand sectors	Identified Job Roles
Machinery and equipment	• CNC Operator – Turning • Fitter – fabrication • Equipment operator • Forger • Fitter – electrical and electronic assembly
Automotive (including transport equipment)	• Auto body technician • Automotive electrician • Forging operator • Welding technician • Surface treatment technician
Transportation	• Transport consolidator • Courier delivery executive • Cargo surveyor • Ground operation associate • Courier branch sales executive
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant

18. Mumbai Suburban

18.1 About the district

Mumbai Suburban district is located in the western region of the Maharashtra state with the district headquarters in Bandra. The district is included in Konkan division.

The district along with Mumbai City district and other suburban communities make up the metropolis of Mumbai. It consists of three administrative subdivisions: Kurla, Andheri, and Borivali

Mumbai Suburban constitutes a small 0.12% of the total state area with a land area of 446 sq.km.

Table 293: Comparison of Mumbai Suburban District with Maharashtra

Indicator	Mumbai Suburban	Maharashtra
Area in sq. km.	386.56	3,07,713
Percentage share in State geographical area, %	0.12%	100%
No. of Sub-districts	N/a	353
No. of inhabited villages	N/a	40,959
No. of households	277,266	24,421,519
Forest area as a % of total geographical area	0	16.94%

Source: Census 2011

18.2 Demography

According to 2011 census data, the district has a population of over 93 lakh persons which is ~8.3% of the state and is the second smallest district in area. The district is the third most populous district in the state after Thane and Pune and fifth most populous district in India. With a population density as high as 20,980 persons/Sq. Km, it is the most densely-populated district of Maharashtra. While less than three-fifth of the state population lives in rural areas in the state, Mumbai Suburban is an entirely urban district.

Table 294 lists down multiple demographic indicators of the district. Mumbai Suburban is one of the largest metropolises in the world. It has a literacy rate of 81% and a sex ratio of 860. The HDI index of the district is greater than the state average. About 69% of the district's population falls in the working age group (i.e. 15-59 years) while around 40% are actually working i.e. % of total workers (main and marginal workers) to the total population, which indicates that the district is bearing the burden of unproductive population very heavily.

Table 294: Demographic Indicators of district

Indicator	Mumbai Suburban	Maharashtra
Population, No.	93,56,962	11,23,74,333
Decadal growth rate of population, %	7.65%	16%
Urban Population as a percentage of total population, %	100%	45.2%
SC Population, %	6.23%	10.2%
ST Population, %	1.11%	8.8%
Sex ratio, No. of females per 1000 males	860	925
Population density, per sq.km.	20,980	365
Literacy rate, %	81%	83%
Working age population* as a percentage of total population, %	69%	59%
Work participation rate^, %	40%	44%
HDI Index	0.841	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a total workforce of 37.35 lakh persons, of which 65.98% are engaged in tertiary sector, 32.71% in the secondary sector and 1.31% in the primary sector (agriculture and allied activities). As indicated in the figure 123 below, Mumbai Suburban overall has a lower rate of unemployment (13 per 1000) as compared to the state. The male unemployment rate is lower and female unemployment rate is higher than the state's corresponding rate. However the ratio of male to female unemployment rate is 16:11.

Figure 122: Share of workforce & Employment Rate
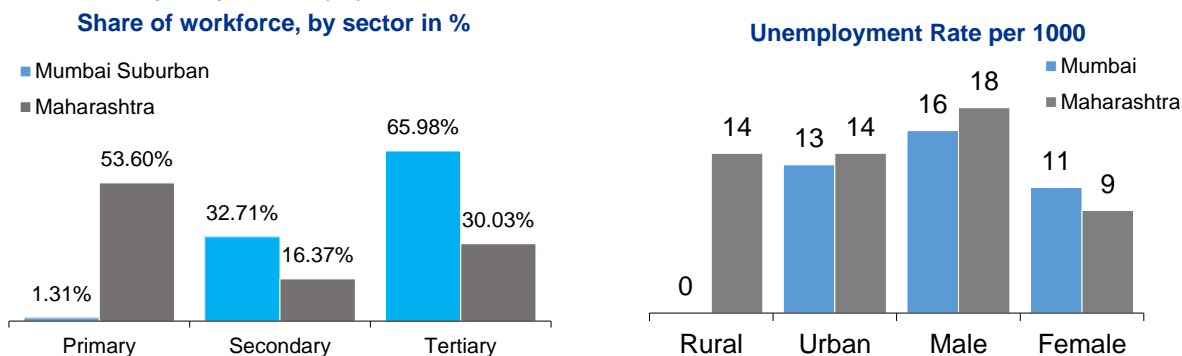
Share of workforce, by sector in %

Source: Census 2011

Unemployment Rate per 1000

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 123: Type of employment in the district

Type of employment Numbers per 1000
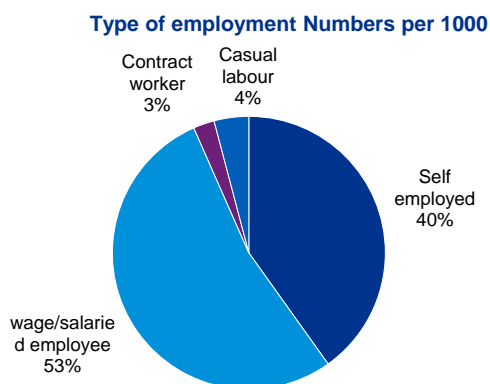
As can be seen in figure 124, more than 53% of the respondents are reported to be Wage/Salaried employee in the district, which is the highest in the state, 40% of the workforce is reported to be self-employed, 4 % of the workforce is reported to be casual workers and 3% of the workforce is reported to be contract workers. The high engagement in the tertiary sector is the reason for a high % of wage/salaried employees.

Source: Ministry of Labor & Employment

Educational Profile of the District:

Traditional Education

The district has 2550 schools of which 2372 are primary schools comprising of approximately 46% government schools. However, 100% secondary schools are government schools. The total enrolment in schools has been 810049. The district also has 203 general and technical colleges with the enrolment of approx. 205,000 students.

Table 295: Educational Profile of District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	2,372	7,82,084
Secondary (9-12th)	178	27,965
Colleges (General and Technical)	203	2,05,000[2]

[1]*Enrolment figures at State run general and technical education colleges only*
Source: AISHE, U-DISE

Vocational Education

Mumbai Suburban district has a total of 8 ITIs Government and Private with 776 students currently enrolled. Top sectors in which the trainings are offered in Mumbai Suburban as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Banking and Accounting, Information and Communication Technology, Beauty Culture and Hair Dressing, Fashion Design, Garment Making and Soft Skills.

Table 296: Total no. of ITI and there training number in Mumbai Suburban district

Particular	Number
ITIs (Government & Private)	8
Trainee Count	776

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 13,397 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Banking and Accounting, Garment Making and Beauty and Wellness. Table below illustrates sector-wise annual training numbers in the district.

Table 297: Sector wise short- term skilling trained numbers in PMKUVA for Mumbai Suburban district

Sectors	Trained
Information And Communication Technology	4,276
Banking And Accounting	1,666
Garment Making	1,516
Beauty Culture And Hair Dressing	1,399
Business And Commerce	939
Soft Skills	834
Remaining Sectors	774
Fashion Design	681
Retail	439
Hospitality	240
Automotive Repair	190
Electrical	187
Medical And Nursing	177
Refrigeration And Air Conditioning	56
Electronics	23
Total	**13,397**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training

Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

18.3 Economy

As of 2016-17, Mumbai Suburban (along with Mumbai City) had the 3rd highest Gross District Domestic Product (GDDP) in the state at INR 3,85,007 crores. The per capita income of the district is INR.2,79,965.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 77% towards the GDDP, secondary sector 22% and primary sector 1%.

Figure 124: Sector wise GDDP Distribution of Mumbai Suburban District
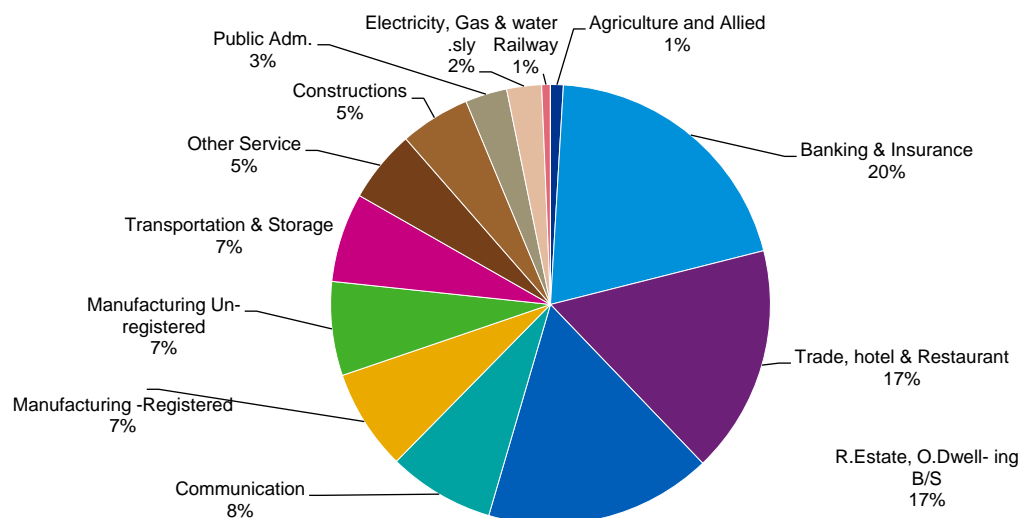
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

As shown above in the figure 125, Tertiary Sector, which is the largest contributor towards the GDDP encompasses of services such as Banking and Insurance leading the sector by a contribution of 20%, followed by Trade, Hotel & Restaurant at 17%, real estate, ownership of dwellings and business service at 17%, and other contributing services, such as public administration, communication, transportation and storage with 3%, 8%, and 7% contribution respectively.

Agriculture sector is of low economic significance as the district is urbanized and has negligible contribution from this sector.

Mumbai Suburban's industry accounts for over 22% of the districts GDDP, with registered and unregistered manufacturing each accounting for 7% of the district's economy. The district has over 635 large and 6589 micro, small and medium industrial units employing over 4 lakh people, out of which the 3 major manufacturing industries of the district are: Manufacture of food products and beverages, Manufacture of wearing apparel; dressing and dyeing of fur and Manufacture of chemicals and chemical products

Manufacture of wearing apparel; dressing and dyeing of fur is the major industry of the district with 2359 employed in this sector. Sub-sector - Manufacture of wearing apparel, except fur apparel alone employs 98% of the people employed in this sector. The other sub sectors that provide livelihood opportunities to people across various rungs of the heterogeneous society is Manufacture of knitted and crocheted apparel. Some of the prominent employers are Pepe Jeans India Pvt. Ltd., Apollo Design Apparel Parks Ltd, Juliet Apparels Ltd In this sector in Mumbai Suburban.

Manufacture of chemicals and chemical products with subsector such as Manufacture of pharmaceuticals, medicinal chemical and botanical products is the second highest industry in the district employing 8934 people (40% of the total population in this sector), with employers such as U.S. Vitamin Pharmaceuticals Corp And Reliance Life Sciences Pvt. Ltd. The second largest sub sector is Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations, employing 23% people, followed by Manufacture of other chemical products n.e.c., Manufacture of basic chemicals, Manufacture of fertilizers and nitrogen compounds, and Manufacture of fertilizers and nitrogen compounds.

Manufacture of food products and beverages is the third prominent industry with Manufacture of other food products n.e.c., leading the sub sector employing 27% of the employees of the sector, followed by Manufacture of bakery products employing 24% and Manufacture of prepared meals and dishes employing 19%. Apart from this the other active sub sector under this sector are: Manufacture of vegetable and animal oils and fats, Manufacture of dairy products and Manufacture of soft drinks; production of mineral waters and other bottled waters
.

Other noteable manufacturing industries include Manufacture of textiles Manufacture of machinery and equipment n.e.c., Publishing, printing and reproduction of recorded media and Manufacture of other non-metallic mineral products.

Table 298: Employment in registered manufacturing sector in the district 2017-18

Sector	Employment
Manufacture of wearing apparel; dressing and dyeing of fur	23,595
Manufacture of chemicals and chemical products	22,218
Manufacture of food products and beverages	19,302
Manufacture of textiles	17,878
Manufacture of machinery and equipment n.e.c.	16,489
Publishing, printing and reproduction of recorded media	10,179

Source: Annual Survey of Industries, 2017-18

Investments in the district:

Mumbai Suburban being one of the industrial districts in the state has attracted a lot of investment in various sectors. Road transport infrastructure, housing construction, storage and distribution are among the top sectors in which investments have been announced, are under implementation or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 299: Sector wise investments in Mumbai Suburban District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	242,038	18
Housing construction	35,960	174
Storage & distribution	32,500	2
Retail trading	26,360	16
Commercial complexes	13,956	24
Electricity transmission	12,232	5
Railway transport infrastructure services	6,500	3
Health services	3,941	7
Shipping transport infrastructure services	3,190	1
Hotels & restaurants	980	4
Other recreational & allied services	830	2
Other textiles	674	2
Others	1,580	21
Total	**380,741**	**279**

Source: CMIE

18.4 Labor force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Figure 125: Past/Current participation in training, %

Table 300: Distribution of Respondents

Profile		Details
Urban vs. Rural	Urban	63%
	Rural	37%
Gender Profile	Male	69%
	Female	31%
Age Group	15-25 years	50%
	26-35 years	33%
	36-45 years	12%
	46-55 years	03%
	56-59 years	01%
Educational Level	Up to Xth	59%
	Up to XIIth	24%
	Any Graduation	17%
Occupational Profile	Worker	57%
	Non - Worker	43%
Average monthly household income for those working (INR)		6,123

As can be seen in the figure 126, significant number of respondents (85%) shared that they had not undergone any technical/non-technical job related training in the past. 10% reported that they have taken some training in the past and 5% mentioned that they are currently undergoing training. Out of those who did not attend, 75% were not aware about the training being organised, and other mentioned high fees as the main deterrent for attending the training, which is in contrast to the reason cited in Mumbai City for not attending the training. The second reason for not attending the training is the distance of the training institute from the town of the respondent.

Figure 126: Type of training provider, in %

Employment, Training and Educational Aspiration

Key findings related to educational attainment:
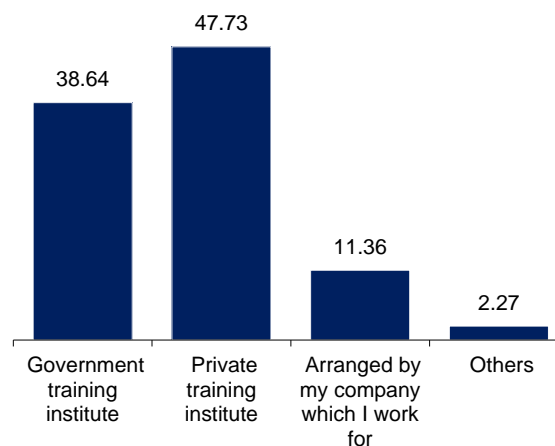
As per the figure 128, in the district, majority (66%) of the respondents aspire to be self-employed and 34% reported a preference for being wage-employed. The preference can also be explained by the difference in the expected monthly income, which is higher in self – employment than wage – employment. Amongst the respondents, almost double % of wage employment aspirants than self-employment aspirants have an inclination towards undertaking further education and training. Further almost 26% of both self-employment and wage-employment training aspirants are keen on undertaking graduate non-technical trainings and almost 23% are interested in graduate technical training.

Figure 127: Key Findings related to educational attainment of the labor force
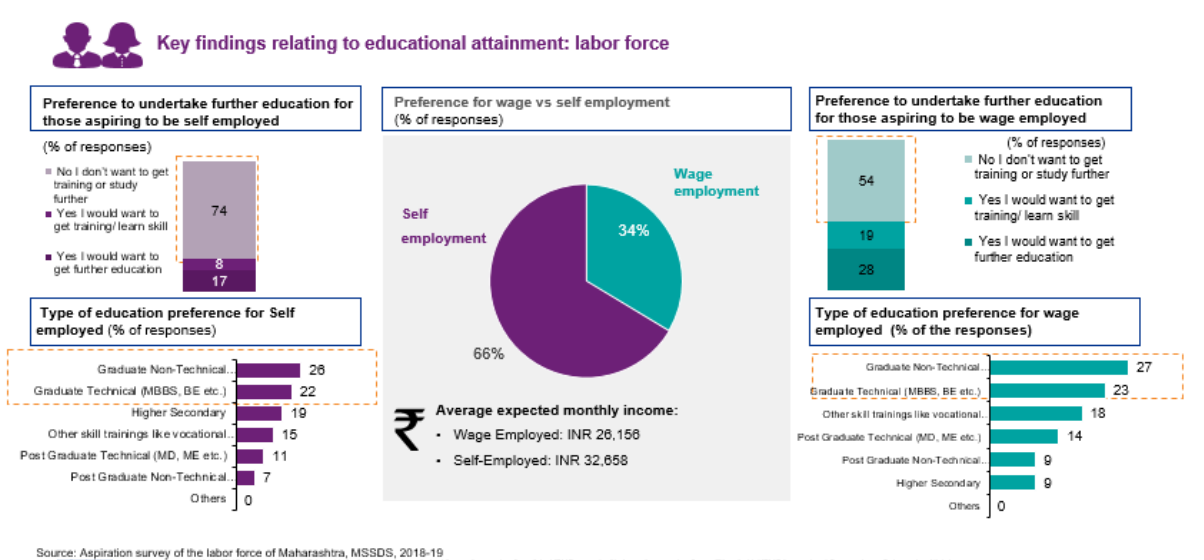
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 301: Aspirational sub-sectors for labor force

For wage employment	For self-employment
Other Manufacturing	Retail
Engineering & Capital Goods	Restaurant/ Tea Stall
Agri & Allied	Food Products & Handicrafts
Art & Culture	Educational/Training Institutes
Energy & Power	

Some respondents chose 'other' sectors for future economic activity, and the preferences was given to working in housekeeping sector. Amongst the aspirants looking to be self-employed specifically, an interest in opening a retail or a wholesale shop for grocery/stationery/medical shop/pan shop/clothes etc. was expressed.

94% of the respondents have expressed that they would prefer to work within their state, Maharashtra and 27% of the respondents shared that they are willing to work outside their state if they are being paid relatively higher than their wages in Maharashtra.

Perceived benefits of acquiring training:

Out of those who attended the training, 77% felt that the training has reaped benefit such as increase in income and opportunity to move to a new sector. However, the respondents also faced challenges after attending the training, such as employers are not providing these kind of training program in-house and the skill levels expected by the employers were not matched even after attending such programs.

18.5 Incremental Demand & Estimation of Manpower Supply

Transportation, Finance & Insurance Activities, Human health & social work activities, Administrative and support service activities, Other Service Activities, Professional, Scientific & Technical Activities, and Information & Communication are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in Manufacture of machinery and equipment n.e.c., Manufacture of fabricated metal products, except machinery and equipment, Manufacture of textiles, Manufacture of wearing apparel; dressing and dyeing of fur and Manufacture of chemicals and chemical products.

Table 302: Incremental Demand estimates (2019-2028) for Mumbai Suburban district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2023-2027) in persons
Agriculture and Allied		
	1,870	**1,943**
Registered Manufacturing		
Food processing	1,019	1,072
Textiles	11,896	19,096
Apparel	7,406	9,613
Leather	241	164
Chemicals and Pharmaceuticals	2,715	3,040
Rubber and Plastics	242	250
Fabricated Metal products (except machinery and equipment)	14,050	13,718
Machinery and Equipment	85,945	1,09,750
Automotive	609	654
Automotive (transport equipment)	179	233
Construction	14,413	15,128
Services		
Wholesale & Retail Trade	8,119	10,313
Transportation	98,785	1,19,097
Warehousing, Postal & Courier services	12,395	14,943
Information & Communication	20,699	24,955
Accommodation & Food Services	5,475	5,841
BFSI	55,970	72,810
Real Estate	11,194	14,562
Professional	29,242	38,039
Adiministrative + public admn	2,11,828	2,75,560
Education	34,927	45,435

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2023-2027) in persons
Healthcare	46,721	60,777
Others	1,88,600	2,45,343
Sub-Total	7,23,953	9,27,674

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 55% of employment in registered manufacturing, remaining is concentrated in Manufacture of jewelry and related articles and Manufacture of computer, electronic and optical products.

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1. Security sector
2. Apparel design

Estimation of Manpower Supply

Mumbai Suburban district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be approx. 32.63 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 303: Manpower supply for Mumbai Suburban district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Mumbai Suburban	64,94,304	33,49,111	32,63,052

Table 304: Projected workforce by education levels

Education level	Projected work force
Illiterate	2,95,586
Literate but below matric/secondary	10,35,206
Matric/secondary but below graduate	10,27,925
Technical degree or diploma equal to degree or post-graduate degree	1,37,494
Technical diploma or certificate not equal to degree	47,915
Graduate and above other than technical degree	6,22,971
Literate others	95,954

The table below depicts the target population for various skill development initiatives (central and state schemes, ITIs and Polytechnics)

Table 305: Size of target population in the district

Particular	Numbers
Enrolment in VIII	29,370
Enrolment in X	12,362
Enrolment in XII	0
Dropout at VIII	**15,272**
Passing out of VIII*	14,098
Students not transitioned to IX	**2,321**
Dropout at X	**12,046**
Passing out of X*	316
Students not transitioned to XI	**52**
Passing out at XII**	0
Students not transitioned to Higher Education	0
Total Target population	**14,418**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 306: Vocational Education annual capacity for Mumbai Suburban district

Particular	Annual Capacity in Numbers
Short Term Skilling	25,230
ITI (Government & Private)	1,816

18.6 Recommendations

The economic growth of Mumbai Suburban district is predominantly driven by the secondary and tertiary sectors. Manufacturing along with services forms the core of the employment generation activities in the district.

Manufacturing of machinery and equipment, transportation, Finance & Insurance services, Education and health sector have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 307: Sector specific economic growth, employment potential and aspirations

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production	🟥	🟥	🟧
Forestry & Logging	🟥	🟥	🟧
Fishing & Aquaculture	🟧	🟥	🟧
Food processing	🟩	🟥	🟧
Tobacco	🟩	🟥	🟥
Textiles	🟧	🟥	🟥
Apparel	🟧	🟥	🟥
Leather	🟥	🟥	🟥
Wood work	🟥	🟥	🟥

Sectors	Economic Growth	Employment Potential	Aspirational
Paper and Paper products			
Publishing, printing and recorded media			
Hydrocarbons			
Chemicals and Pharmaceuticals			
Rubber and Plastics			
Non-metallic mineral products			
Iron and Steel			
Metal products (except machinery and equipment)			
Machinery and Equipment			
Automotive			
Automotive (transport equipment)			
Construction			
Wholesale and Retail Trade			
Transportation			
Logistics			
IT/ITES			
Hospitality			
BFSI			
Real Estate			
Professional, Scientific & Technical Activities			
Public Administration and Administrative Services			
Education			
Healthcare			
Other Services			

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 response- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:

- **High economic growth sectors**: Manufacturing of food products and beverages, manufacturing of chemical and chemical products, manufacturing of machinery and equipment, Manufacture of motor vehicles, trailers and semi-trailers, manufacture of other transport equipment, Information & communication, real estate activities, Professional, Scientific & Technical Activities, Administrative and support service activities, education, Human health & social work activities, Arts, entertainment & Recreation and Other Service Activities
- **High incremental employment potential sectors**: Manufacture of machinery and equipment, transportation, Finance & Insurance activities, Public Administration & defence, compulsory social security, education and Human health & social work activities
- **High Aspiration Sectors**: Manufacturing of motor vehicles, trailers and semi-trailers, Manufacturing (others).

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the

labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 308: Priority sectors for MSSDS

Sl. No.	Sector	High / Medium Growth	High / Medium Employment Potential	High / Medium aspiration
1	Food Processing	✓		✓
2	Machinery and equipment n.e.c.	✓	✓	
3	Automotive	✓		✓
4	Transportation	✓	✓	
5	Finance and Insurance activities	✓	✓	
6	Healthcare	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Professional, Scientific & Technical Activities
- Administrative and support service activities
- Media & Entertainment
- Education

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 309. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 309: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Food Processing	- Supervisor: Fruits and vegetable processing - Baking technician - Multi skill technician (food processing) - Dairy products processor - Industrial production worker – food processing
Machinery and equipment	- CNC Operator – Turning - Fitter – fabrication - Service engineer – installation - Forger - Fitter – electrical and electronic assembly
Automotive (including transport equipment)	- Auto body technician - Automotive electrician - Forging operator - Welding technician - Surface treatment technician

High demand sectors	Identified Job Roles
Transportation	• Transport consolidator • Courier delivery executive • Cargo surveyor • Ground operation associate • Courier branch sales executive
Finance and Insurance activities	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant

19. Nagpur

19.1 About the district

Nagpur district is located in eastern part of Maharashtra in the Vidharba Region. The district is divided into 14 sub districts and 1,628 inhabited villages.

The district has a total land area of 9,892 sq. km. and constitutes 3.2% of the total state area. The district is headquarter of Nagpur region comprising of districts of Nagpur, Bhandara, Chandrapur, Gondia, Nagpur and Wardha.

This district is bordered by Chandrapur, Amravati, Wardha in Maharashtra and Chindwara district of Madhya Pradesh.

The district is strategically located in the geographic center of India and the city has well connected with rest of the country by highways, railways and air. The district has its own airport which is well connected with the major cities of India.

Nagpur is popularly known as the 'Orange city', it being a major producer of oranges in India.

Table 310: Comparison of District with Maharashtra

Indicator	Nagpur	Maharashtra
Area in sq.km.	9,892	3,07,713
Percentage share in state geographical area, %	3.21	100
No. of Sub-districts	14	353
No. of inhabited villages	1,617	40,959
No. of households	9,95,808	24,421,519
Forest area as a % of total geographical area	20.33	16.94

Source: Census 2011

19.2 Demography

The population of Nagpur is 46,53,171 per census 2011, with urban population of 68.3 %. The district has a literacy rate of 89.5% and a sex ratio of 925 females per thousand males, which is higher than the state average of 82% and 948 females per 1000 males, respectively. 52.5% of the district's population is in the working age group (15-59 years), 40% is actually working.

Table 311: Demographic Indicators of district

Indicator	Nagpur	Maharashtra
Population, No.	46,53,171	11,23,74,333
Decadal growth rate of population, %	14.4	16
Urban Population as a percentage of total population, %	68.3	45.2
SC Population, %	18.6	10.2
ST Population, %	9.4	8.8
Sex ratio, No. of females per 1000 males	948	925
Population density, per sq.km.	510	365
Literacy rate, %	89.5	83
Working age population* as a percentage of total population, %	52.5	59
Work participation rate^, %	40.1	44
HDI Index	0.786	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district, with a total workforce of 18.6 lakh persons, is predominantly agrarian with of which 71% of its workforce engaged in primary sector (agriculture and allied activities and mining), compared to 54% for Maharashtra.

Only about 9% of the workforce is engaged in the secondary sector compared to the state average of 16.4%. 19% of the workforce is engaged in the tertiary sector. As indicated in the figure 110, Nagpur has a higher rate of unemployment in urban areas and for males, at 1.9% and 2.2% respectively.

Figure 128 Share of workforce and employment rate for the district
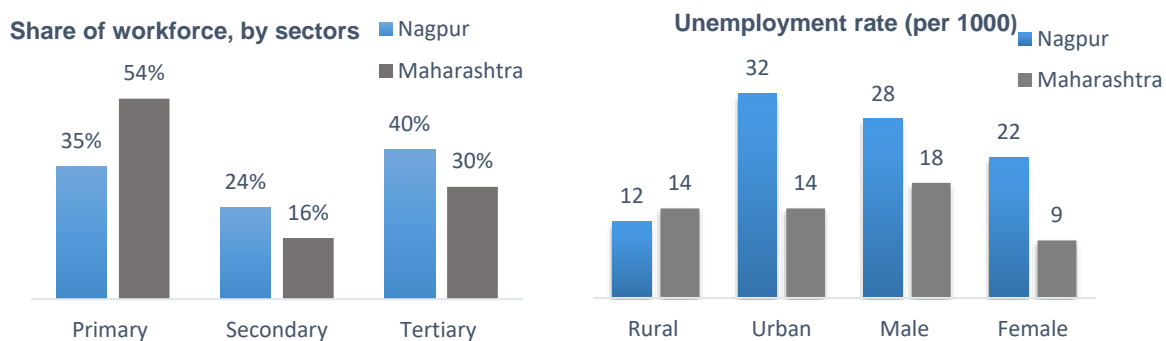
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 129: Type of employment in the district

As per figure 130, a higher percentage of workforce wage employed (28%) compared to 20.9% in the state and a lower percentage of self-employed (45%) compared to 52.8% in the state.
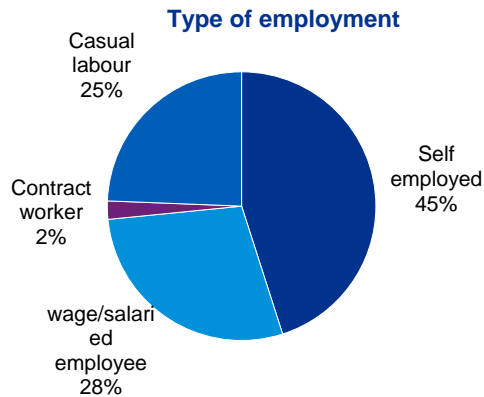
Source: Ministry of Labour & Employment

Education Profile of the District:

Traditional Education:

The district has 5,078 schools of which 1,127 are primary. Total enrolment in schools was 9,13,128. The student-teacher ratio in the district is 26.

The district also has 339 general and technical colleges in the district with the enrolment of approx. 1,16,000 students.

Table 312: Educational Profile of District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,951	6,21,954
Secondary Schools (IX to XII)	1,127	2,91,174
General Colleges & Technical Education	339	~1,16,000[41]

Source: AISHE, U-DISE

Vocational Education:

Nagpur district has a total of 82 government and private ITIs with 8,235 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Electronics, Information and Communication Technology, Retail and Beauty and Wellness.

Table 313: Total no. of ITI and there training number in Nagpur district

Particular	Number
ITIs (Government & Private)	82
Trainee Count	8,235

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 19,692 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Beauty culture and hair dressing, and Medical and nursing. Table below illustrates sector-wise annual training numbers in the district.

Table 314: Sector wise short- term skilling trained numbers in PMKUVA for Nagpur district

Sectors	Trained
Information and communication technology	7,167
Garment making	2,089
Fashion design	630
Medical and nursing	2,141
Banking and accounting	1,523
Beauty culture and hair dressing	2,467
Soft skills	390
Retail	90
Electrical	655
Electronics	55
Construction	60
Business and commerce	104
Automotive repair	234
Renewable energy	295
Hospitality	1,216
Remaining sectors	576
Total	**19,692**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

---

[41]Enrolment figures at State run general and technical education colleges only

Majority of private training centers in the district offer various courses for enhancing the skills of the persons.

19.3 Economy

At 1,00,394 crore, Nagpur district has the 4th highest GVA (as per current prices) in the state as of 2016-17. Per capita GVA of Nagpur stood at Rs.1,99,035 ranking 4th in the state.

As per the figure 131, major contributors to the GDDP of the district are Trade, Hotels and Restaurants, Banking and Insurance and Registered Manufacturing.

Figure 130: Sector wise GDDP Distribution of the District
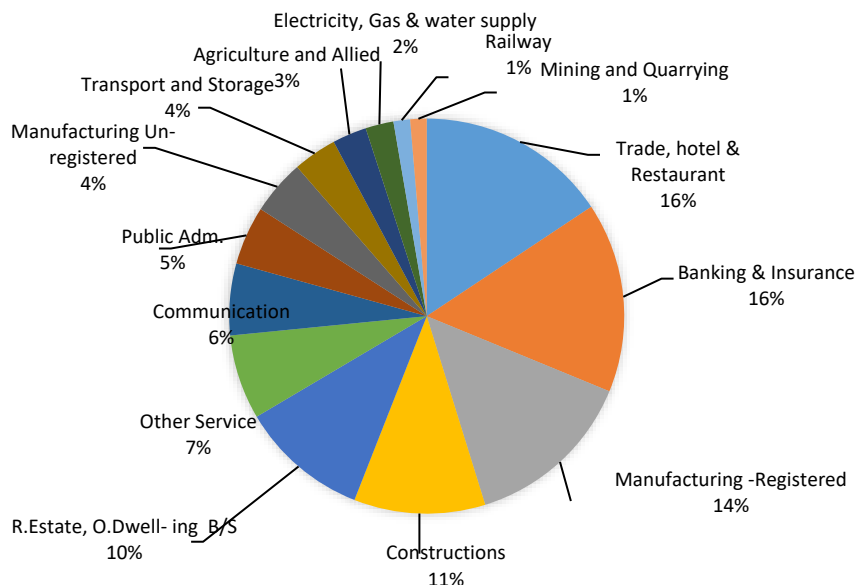
Source: District Domestic Product of Maharashtra 2013-14 (Base 2004-05), published by DES Maharashtra

Agriculture and allied activities contribute to 3% of the district's GDDP. Major crops cultivated in the district are paddy, jowar and wheat, oranges and cotton.

Industry accounts for around 33% of the district GDDP, with registered manufacturing accounting for 14% of the output and construction contributing to 11%.

The district has about 29,724 micro, small and medium and large industrial units in the manufacturing.

4 major manufacturing industries of the district are, metals, textiles, machinery and equipment and rubber and plastic products

Food processing is the major industry of the district, engaging more than 15,000 persons. The industry in the district boasts of a wide range of food products. Major part of the employment in the district in this sector is distributed across manufacture or processing of other food products which includes tea, coffee, edible nuts, spices etc., manufacture of dairy products, bakery products, meat processing. Among beverages, manufacturing of soft drinks, mineral water and other bottled water is the largest. The sector has a high growth potential in the district, especially fruit processing. Currently close to 300 persons are engaged in processing and preserving fruits and vegetables. The district is abundant in oranges and there is a potential for growth and expansion of orange processing facilities in the district.

Basic metals is the second largest industry by employment employing over 14,500 persons. About 70% of this industry is concentrated in manufacture of basic iron and steel. Remaining employment is distributed across casting or iron and manufacture of basic precious and other non-ferrous metals.

Textiles is another major industry in Nagpur. Close to 13,000 persons are engaged in this industry in the district, over which about 73% are employed in preparation and spinning of textile fibres alone. Close to 3,000 are engaged in weaving and finishing of textiles.

Machinery and equipment in the district engages more over 11,500 persons. Of these over 5000 are engaged in the manufacturing of agricultural and forestry machinery. Apart from this, machinery for textile, apparel and leather is manufacture in the district.

Manufacture of rubber and plastic products engages over 10,000 persons. Of these about 65% are engaged in rubber industry.

Table 315: Employment in registered manufacturing sector in the district 2017-18

Registered Manufacturing Sub-Sector	Employment
Manufacture of food products and beverages	15,436
Manufacture of basic metals	14,618
Manufacture of textiles	13,054
Manufacture of machinery and equipment n.e.c.	11,820
Manufacture of rubber and plastics products	10,073
Manufacture of fabricated metal products, except machinery and equipment	9,782
Manufacture of chemicals and chemical products	8,544
Manufacture of other non-metallic mineral products	3,469
Manufacture of paper and paper products	2,961
Manufacture of motor vehicles, trailers and semi-trailers	2,667
Publishing, printing and reproduction of recorded media	1,729
Manufacture of other transport equipment	761
Manufacture of wearing apparel; dressing and dyeing of fur	390
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	379
Manufacture of coke, refined petroleum products and nuclear fuel	366
Manufacture of tobacco products	364

Source: Annual Survey of Industries, 2017-18

Service sector contributing to over 48% of the district's economy, is led by Trade, Hotels and Restaurants, followed by banking and insurance services and Real estate, ownership of dwellings and business services.

Investments in the districts:

Nagpur district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Other electronics, Road transport infrastructure services and Conventional electricity are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Sector Name	Proposed Investment (in INR Million)	No of projects
Other electronics	6,80,000	1
Road transport infrastructure services	5,98,086.4	51
Conventional electricity	5,62,560.7	21
Railway transport infrastructure services	5,03,266.3	19
Irrigation	1,61,335.8	5
Natural gas trading & distribution	1,37,040	2
Coal & lignite	39,068.8	22
Commercial complexes	38,000	19
Housing construction	34,336.9	153
Education	33,296.2	13
Others	3,88,653.6	276
Total	**31,75,644.7**	**582**

Source: CMIE

19.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 316: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	46%
	Rural	54%
Gender Profile	Male	74%
	Female	26%
Age Group	15-25 years	30%
	26-35 years	35%
	36-45 years	21%
	46-55 years	12%
	56-59 years	2%
Educational Level	Upto Xth	58%
	Upto XIIth	33%
	Any Graduation	9%
Occupational Profile	Worker	67%
	Non-Worker	33%

Figure 131: Past/Current participation in training, %
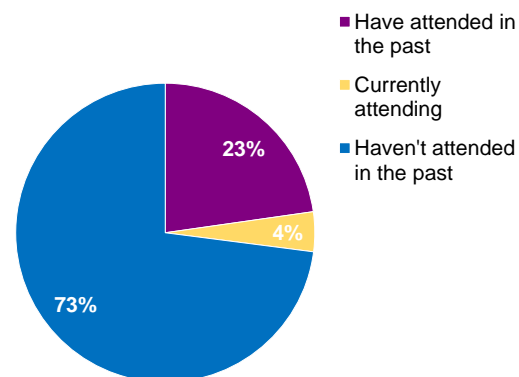
In addition to the above in figure 132, most respondents (73%) responded that they hadn't attended any technical/ non-technical job related training in the past. 23% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, 54% were attended at Private training institutes.

Figure 132: Type of training provider, in %
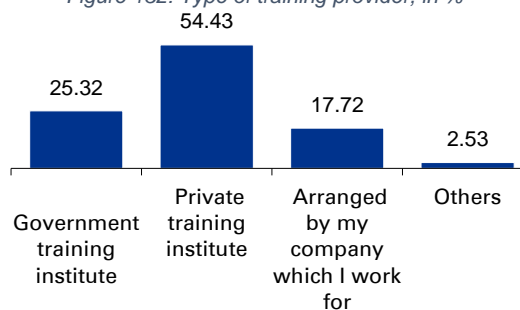
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 134, in the district, majority (57%) of the respondents aspire to be self-employed and 43% reported a preference for being wage employed. Amongst the respondents, the wage employment and self-employment aspirants have similar preferences for undertaking further education and training.

Additionally, there is a higher preference for acquiring vocational education among self-employed aspirants and graduate non-technical education among wage employment aspirants. Among those who stated a preference for acquiring further training, topmost aspirational areas of training include entrepreneurial courses among self-employment aspirants, while wage employment aspirants prefer to acquire technical skills related to the job.

Figure 133: Key Findings related to educational attainment of the labour force

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 317: Aspirational sub-sectors for labour force

For wage-employment	For self-employment
Real Estate - construction work/ broker work	Art & Culture
Railways	Agriculture & Allied
Governance & Administration	Food Processing
Other Manufacturing	Other Manufacturing

Some respondents expressed a preference for working in 'other' sectors which included working as manual wage labour for wage employed and opening a kirana store for self-employed.

For those aspiring to be self-employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, opening a skill based business (mechanic, plumbing, electrical etc.)

Additionally, all of the respondents would like to work within Maharashtra. As large as 66% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

79% of those who attended a training programme stated that they benefited from attending the training. Among those who did benefit from the training, majority state increase in income as the main benefit. When asked about the challenges faced after attending training programmes, majority stated that these types of training programmes are not being offered by the employers in house.

19.5 Incremental Demand & Estimation of Manpower Supply

Key drivers of incremental demand in the district are in the manufacturing sector are expected to be manufacture of machinery and equipment, fabricated metal products, textiles.

Among services transportation, healthcare, finance and insurance activities, education, public administration and professional, technical and scientific activities and public administration will drive incremental employment in the district.

Crop production and animal husbandry related work is also expected to be a key contributor of employment in the district.

Table 318: Incremental Demand estimates (2019-2028) for Nagpur district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and Allied19.5	26,515	27554
Sub Total	**26,312**	**27343**
Registered Manufacturing		
Food processing	815	858
Textiles	8,686	13,943
Apparel	122	159
Wood Work	39	43
Chemicals and Pharmaceuticals	1,044	1,169
Rubber and Plastics	329	340
Iron and Steel	700	733
Fabricated Metal products (except machinery and equipment)	19,863	19,394
Machinery and Equipment	61,609	78,673
Automotive	200	215
Automotive (transport equipment)	241	314
Construction	9,562	10,037
Services		
Wholesale and Retail Trade	2,906	3,691
Transportation	24,793	29,890
Logistics	3,111	3,750
IT/ITES	5,195	6,263
Hospitality	1,746	1,862
BFSI	11,893	15,472
Real Estate	2,379	3,094
Professional, Scientific & Technical Activities	6,214	8,083
Public Administration and Administrative Activities	49,188	63,987
Education	18,466	24,022
Healthcare	24,702	32,134
Others	60,608	78,842
Sub Total	**2,11,200**	**2,71,092**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 93% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:
- Healthcare sector with job roles in medical & nursing, paramedics etc.
- The district has a potential for growth and job creation in food processing sector.

- Agriculture & Allied sector with job roles related to fisheries, dairy etc.
- Transportation sector is also important in the district.

Estimation of Manpower Supply

Nagpur district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 20.51 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 319: Manpower Supply for District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Nagpur	54,69,141	21,40621	20,51,429

Table 320: Projected workforce by education levels

Education level	Projected work force
Illiterate	2,70,408
Literate but below matric/secondary	8,38,212
Matric/secondary but below graduate	5,37,287
Technical degree or diploma equal to degree or post-graduate degree	69,521
Technical diploma or certificate not equal to degree	25,308
Graduate and above other than technical degree	2,26,335
Literate others	84,358

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~70,755 annually.

Table 321: Size of target population in the district

Particular	Numbers
Enrolment in VIII	77,288
Enrolment in X	76,599
Enrolment in XII	34,822
Dropout at VIII	**5,913**
Passing out of VIII*	71,375
Students not transitioned to IX	**11,748**
Dropout at X	**7,384**
Passing out of X*	69,215
Students not transitioned to XI	**11,393**
Passing out at XII**	59,161
Students not transitioned to Higher Education	40,230
Total Target population	**70,755**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 322: Vocational Education annual capacity for Nagpur district

Particular	Annual Capacity in Numbers
Short Term Skilling	42,540
ITI (Government & Private)	18,756

19.6 Recommendations

The district has potential for incremental demand generation in agriculture and allied activities, metal products, including machinery and equipment, construction, transportation and logistics, banking and financial services, healthcare, education, administrative and support services, professional, scientific and technical services. Among these, all activities are high or medium on economic growth, except agriculture and public administration.

Agriculture, although low on economic growth is highly aspirational in the district and is closely aligned with food processing, a high economic growth and aspirational activity in the district.

Additionally, retail trade, arts and recreation have a potential in the district on account of either their economic growth or aspirational value. Based on primary inputs, tourism and Hospitality has emerged as a high potential sector in the district. It is also a high/medium economic growth activity.

The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below.

Table 323: Sector specific economic growth, employment potential and aspirations

Sector	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production	🟥	🟩	🟩
Forestry & Logging	🟥	🟥	🟥
Fishing & Aquaculture	🟧	🟥	🟥
Food processing	🟩	🟥	🟧
Tobacco	🟩	🟥	🟥
Textiles	🟧	🟥	🟥
Apparel	🟧	🟥	🟥
Leather	🟥	🟥	🟥
Wood work	🟥	🟥	🟥
Paper and Paper products	🟩	🟥	🟥
Publishing, printing and recorded media	🟧	🟥	🟥
Hydrocarbons	🟥	🟥	🟥
Chemicals and Pharmaceuticals	🟩	🟥	🟥
Rubber and Plastics	🟧	🟥	🟥
Non metallic mineral products	🟥	🟥	🟥
Iron and Steel	🟥	🟥	🟥

Sector	Economic Growth	Employment Potential	Aspirational
Metal products (except machinery and equipment)	Amber	Green	Red
Machinery and Equipment	Green	Green	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Green
Wholesale and Retail Trade	Amber	Red	Amber
Transporation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Amber	Red
Real Estate	Green	Red	Green
Professional, Scientific & Technical Activities	Green	Amber	Red
Public Administration and Administrative services	Amber	Green	Amber
Education	Green	Green	Red
Healthcare	Green	Green	Red
Media and Entertainment	Green	Green	Green

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the above analysis of the district and keeping in view the primary insights from field visits the sectors, the following sectors are proposed to be taken on priority by MSSDS:

Sl. No.	Sector	High or Medium Economic Growth	High or Medium Employment Potential	High or medium Aspiration
1	Agriculture and Allied		✓	✓
2	Food processing	✓		✓
3	Real Estate and Construction	✓		✓
4	Healthcare	✓	✓	
5	Transportation and Logistics	✓	✓	
6	Tourism and Hospitality	✓	✓	
8	Metal products (Machinery and Equipment)	✓	✓	

Apart from the above priority sectors, MSSDS can also explore the potential of following sectors in the district –

- Aviation and Defence (emerging sector)
- Media and Entertainment
- Professional Scientific and technical activities
- Education

These sectors although low on aspirational value, have a growth or employment generation potential in the district.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 325. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 325: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Agriculture – Crop and Animal production	- Goat Farmer - Dairy Farmer - Micro Irrigation Technician - Greenhouse Operator - Poultry Farmer - Scientific agriculture – surface coating, soil testing, Crop Technician
Food processing	- Supervisor: Fruits and vegetable processing - Baking technician - Multi skill technician (food processing) - Dairy products processor - Industrial production worker – food processing
Metal products including machinery and equipments	- CNC operators - Fitter- Mechanical Assembly - Manual Metal Arc Welding - Draughtsman- Mechanical - Lab Technician- Metal Tester
Construction	- Mason General - Bar Bender and Steel Fixer - Assistant Electician

High demand sectors	Identified Job Roles
	• Construction Welder
Transportation and Logistics	• Transport Coordinator • Transport Duty Manager • Liquid Transport Operator • Transport Consolidator • Tank Lorry Driver • Warehouse supervisor • Loader/Unloader • Delivery Executive-Food Related
BFSI	• Insurance Agent • Banking Correspondent • ATM operator • Cash Collection • Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • Goods & Services Tax (GST)
Healthcare	• General Duty Assistant • Home Health Aide • Diet Assistant • Emergency Medical Technician – Basic • Pharmacy Assistant
Tourism and Hospitality	• Housekeeping Attendant • Billing executive • Food & Beverage Service-Steward • Tour Vehicle driver
Textiles & Apparel	• Sewing Machine Operator • Garment Cutter • Inline Checker • Hand Embroider

20. Nanded

20.1 About the district

Nanded district is located towards the south eastern side of the Maharashtra state with the district headquarters in Nanded City. The district is divided into 16 sub-districts and 1,546 inhabited villages.

Nanded has a total land area of 10,528 sq.km. and constitutes 3.42% of the total state area. The district lies in the south eastern side of Aurangabad region. It is bordered by Yavatmal district on the north, Parbhani, Latur and Osmanabad on the west, Bidur district of Karnataka on the south and Nizamabad and Adilabad district of Andhra Pradesh on the east.

The district has good connectivity with airport, railways and roads which connects it to the bigger cities such as Mumbai, Hyderabad, Pune and Delhi which makes markets accessible and helping trade and businesses.

The district is not rich on mineral resources. However, the deposits of lime stones and granite are noteworthy which are found in Kinwat, Biloli and Degloor talukas. The forest area in the district covers nearly 8 % of the total land area in which Teakwood and Bamboo are major forest produces. Sachkhand Gurudwara, Mahur Gadh and Malegaon Yatra are popular destinations among tourists.

Table 326: Comparison of Nanded District with Maharashtra

Indicator	Nanded	Maharashtra
Area in sq.km.	10,528	3,07,713
Percentage share in state geographical area, %	3.42	100
No. of Sub-districts	17	353
No. of inhabited villages	1,546	40,959
No. of households	5,27,875	24,421,519
Forest area as a % of total geographical area	8.3	16.94

Source: Census 2011

20.2 Demography

According to latest census data, the district has a population of nearly 33.5 lakh persons which is ~2.99% of the state. Of the total population, 73% are residing in the rural areas whereas 27% are residing in the urban areas of the district. The density of population according to 2011 census is 319 persons/Sq. Km.

The district's literacy rate is at 76.94% which is lower than the state average of 82.91%. Nanded has sex ratio (no. of females per 1000 males) of 937 which is higher than the state average of 925. While 52% of the population in the district are in the working age group (i.e. 15-59 years), about 36% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 327: Demographic Indicators of Nanded district

Indicator	Nanded	Maharashtra
Population No.	33,56,566	11,23,74,333
Decadal growth rate of population, %	16.7	16
Urban Population as a percentage of total population, %	27	45.2
SC Population, %	17	10.2
ST Population, %	9	8.8
Sex ratio, No. of females per 1000 males	937	925
Population density, per sq.km.	319	365
Literacy rate, %	76.94	83
Working age population* as a percentage of total population, %	52	59
Work participation rate^, %	35.91	44
HDI Index	0.657	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 14.9 lakh persons. Of this, nearly 72.82% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 8.05% of workers are working in secondary sector and 19.13% workers are working in tertiary sector. As shown in the figure 135 below, Nanded's unemployment (per 1000) in rural areas is same to the state average, whereas in urban areas it is similar. Additionally, if we compare male and female unemployment (per 1000) of Nanded to the state, male unemployment rate is slightly higher than the state average. Whereas female employment is slightly less than the state average.

Figure 134: Share of workforce & Employment Rate for Nanded District
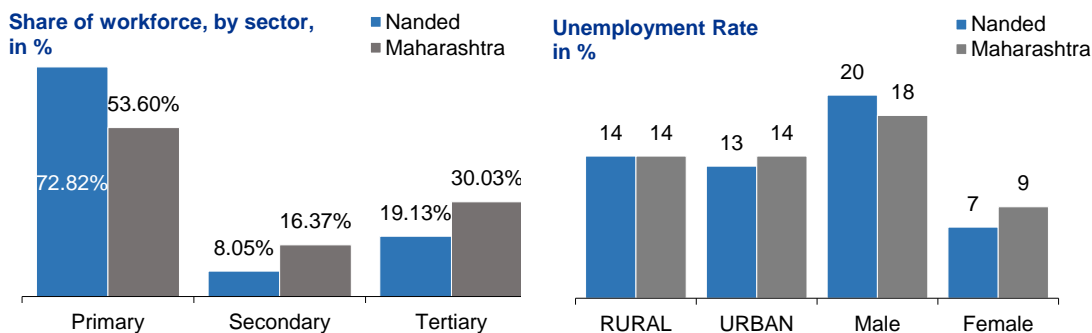
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As per figure 136, maximum persons are self-employed in the district which is slightly higher than the state average followed by casual labours which is significantly higher than the state average and salaried employees which is significantly lower to the state average.

Figure 135: Type of employment numbers per 1000
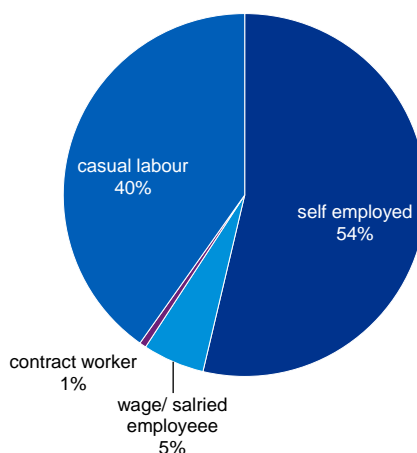
Source: Ministry of Labour & Employment

Education Profile of the District:

Traditional Education:

Nanded district has a total of 4,403 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 5.17 lakh students. The student teacher ratio is 22:1.

The district also has 119 general and technical colleges in the district with the enrolment of 48,000 students.

Table 328: Educational Profile of Nanded District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,618	3,29,004
Secondary Schools (IX to XII)	785	1,88,580
General Colleges & Technical Education	119	48,000[42]

Source: AISHE, U-DISE

Vocational Education:

Nanded district has a total of 23 government and private ITIs with 3163 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Gems & Jewelry, Agriculture, Beauty & Wellness, Garment Making, Textile & Clothing and Healthcare.

Table 329: Total no. of ITI and there training number in Nanded district

Particular	Number
ITIs (Government & Private)	23
Trainee Count	3,163

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 11,534 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment making, Banking and accounting, and Beauty culture and hair dressing. Table below illustrates sector-wise annual training numbers in the district.

Table 330: Sector wise short- term skilling trained numbers in PMKUVA for Nanded district

Sectors	Trained
Information and communication technology	5,342
Garment making	2,114
Fashion design	180
Banking and accounting	1,490
Electrical	121
Soft skills	314
Industrial electrical	481
Medical and nursing	475
Construction	30
Beauty culture and hair dressing	898
Fabrication	30
Remaining sectors	59
Total	**11,534**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI). Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries

---

[42]Enrolment figures at State run general and technical education colleges only

and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Majority of private training centers in the district offer various courses for enhancing the skills of the persons.

20.3 Economy

As of 2016-17, Nanded district had the 15th highest Gross District Domestic Product (GDDP) in the state at Rs. 28,728 crores (as per current prices). The per capita GDP of the district is Rs. 1,00,799.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 66% towards the GDDP. Secondary sector is at 18% and primary sector is at 16%.

As per the figure indicated below, major contributors to the GDDP of the district are Trade, Hotel & Restaurant, Agriculture & Allied activities, Real Estate, Ownership of dwellings and business services, Banking & Insurance and Other Services.

Figure 136: Sector wise GDDP Distribution of Nanded District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

Agriculture and allied activities contributes to 16% of the GDDP in the district. Nearly 76 % of the population is depended upon agriculture. Major crops grown in the district are Soyabean, Jowar, pulses, sugarcane, banana and cotton. Major forest produces are teakwood and bamboo.

Nanded district has 18 registered large and medium enterprises which employs approximately 4,843 persons. The district also has nearly 1464 Micro, Small and Medium Enterprises (MSME) employing nearly 10,000 persons. Major manufacturing industries include food products & beverages, wholesale and retail trade of repair of motor vehicles and motorcycles, printing and reproduction of recorded media and manufacture of pharmaceuticals.

Manufacture of food products and beverages is an important industry in the district**.** It includes processing and preserving of fruits and vegetables, manufacture of vegetable and animal oil and fats, manufacture of dairy products, manufacture of grain mill products, starches and starch products, manufacture of bakery products, manufacture of sugar, distilling, rectifying and blending spirits and manufacture of soft drinks. It employs nearly 2,750 persons in the district which constitutes to 56% of the employment in registered manufacturing sector. Major players in the industry include Humata Jaiwantrao Patil Sugar Mills Ltd, Kirti Food Ltd and Pioneer Distilleries Ltd.

Wholesale trade of repair of motor vehicles and motorcycles is also an important industry in the district. It includes mechanical repair, electric repair, electronic injection system repair, ordinary servicing, body

work repair, repairs of motor vehicles parts and tire and tube repair. It employs nearly 580 persons in the district which constitutes to 11% of the employment in registered manufacturing sector.

Printing and reproduction of recorded media is also an important industry in the district. It includes printing of newspapers, magazines, flexographic plastic, glass and metals. It employs nearly 540 persons in the district which constitutes to 11% of the employment in registered manufacturing sector.,

Manufacture of pharmaceuticals, medicinal chemical & botanical products is also an important industry in the district. It includes manufacture of medicinal substances in manufacture of pharmaceuticals, manufacture of allopathic pharmaceutical preparations and manufacture of ayurvedic and homoeopathic medicinal preparations. It employs nearly 470 persons in the district which constitutes to 9% employment in the registered manufacturing sector. Major players in the industry include Godaveri Drug Ltd.

Other important manufacturing industries include manufacture of chemical & chemical products, manufacture of basic metals, manufacture of fabricated metal products, manufacture of tobacco products, manufacture of paper & paper products, manufacture of computer, electronic and optical products and manufacture of wood and wood products.

Table 331: Employment in registered manufacturing sector in the district as of 2017-18

Sector	Employment
Manufacture of food products and beverages	2,748
Wholesale trade of repair of motor vehicles and motorcycles	577
Printing and reproduction of recorded media	541
Manufacture of pharmaceuticals, medicinal chemical & botanical products	473
Manufacture of chemical & chemical products	249
Manufacture of basic metals	79
Manufacture of fabricated metal products, except machinery and equipment	68
Manufacture of tobacco products	43
Manufacture of paper and paper products	21
Manufacture of computer, electronic and optical products	16
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	13
Water collection, treatment and supply	8
Manufacture of furniture	8
Manufacture of other non-metallic mineral products	5
Manufacture of rubber and plastics products	4
Manufacture of machinery and equipment n.e.c.	3

Source: Annual Survey of Industries 2017-18

As shown above in the figure 137, Tertiary Sector is the largest contributor towards the GDDP of the district. Of all the services Trade, Hotel & Restaurant is the highest at 18%, followed by Real estate, ownership of dwellings and business services with banking and insurance at 13%. Other services, public administration, communication and transportation and storage are at 10%, 5%, 4% and 3% respectively.

Investments in the districts:

Nanded district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Housing construction, Railway transport infrastructure services and Irrigation are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Sector Name	Proposed Investment (in INR Million)	No of projects
Housing construction	1,00,000	4
Railway transport infrastructure services	71,785.2	10
Road transport infrastructure services	65,195.7	17
Irrigation	52,593.2	3
Renewable electricity	17,350	3
Storage & distribution	2,492.6	2
Organic chemicals	715.5	3
Other agricultural products	632.9	2
Other chemical products	400	1
Electricity transmission	379.8	2
Others	387.4	13
Total	**3,11,932.3**	**60**

Source: CMIE

20.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 333: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	48%
	Rural	52%
Gender Profile	Male	55%
	Female	45%
Age Group	15-25 years	59%
	26-35 years	27%
	36-45 years	11%
	46-55 years	3%
	56-59 years	0%
Educational Level	Upto Xth	52%
	Upto XIIth	28%
	Any Graduation	20%
Occupational Profile	Worker	64%
	Non-Worker	36%

Figure 137: Past/Current participation in training, %
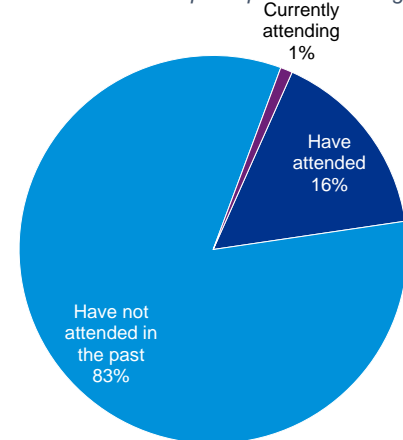
Figure 138: Type of training provider, in %
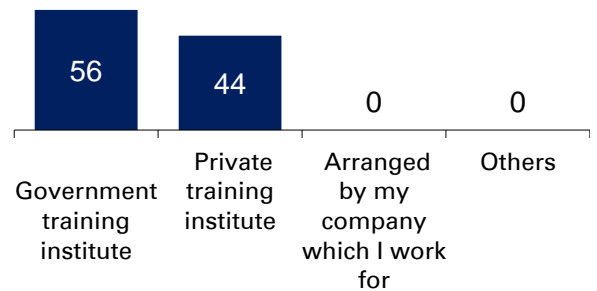
In addition to the above in figure 138, majority respondents (83%) responded that they hadn't attended any technical/ non-technical job related training in the past. 16% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings (~44 %) were attended at Private training institutes and 56% attended government training institutes.

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 140, in the district, 35% of the respondents aspire to be wage-employed and 65% reported a preference for being self-employed. Amongst the respondents there is a preference to undertake further education/ learn skill for those aspiring to be wage employed as compared to those aspiring to be self-employed. Additionally, there is preference for acquiring vocational trainings or get a post-graduation degree amongst both self-employed respondents whereas acquiring a post-graduation degree and graduate non-technical degree among wage employed respondents.

Figure 139: Key Findings related to educational attainment of the labour force
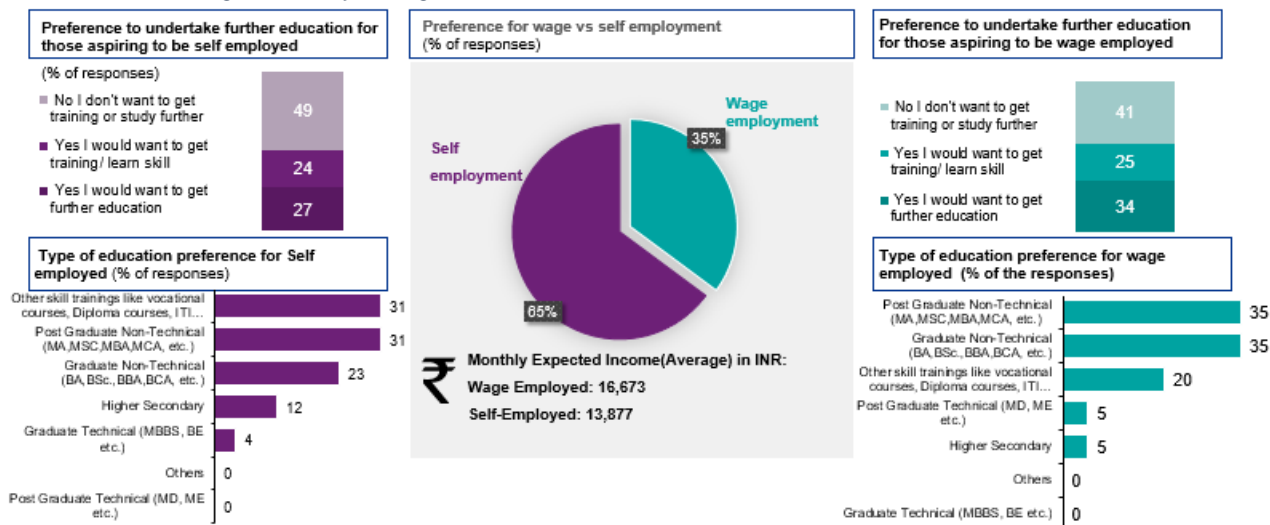
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 334: Aspirational sub-sectors for labour force in Nanded

For wage employment	For self-employment
Governance & Administration	Retail
Agriculture & Allied	Opening a beauty parlour/spa/salons
Healthcare	Agriculture & Allied
Railways	Skill Based Business (Plumbing, Electrician etc.)
Auto & Auto Ancillaries	Jewelry Business

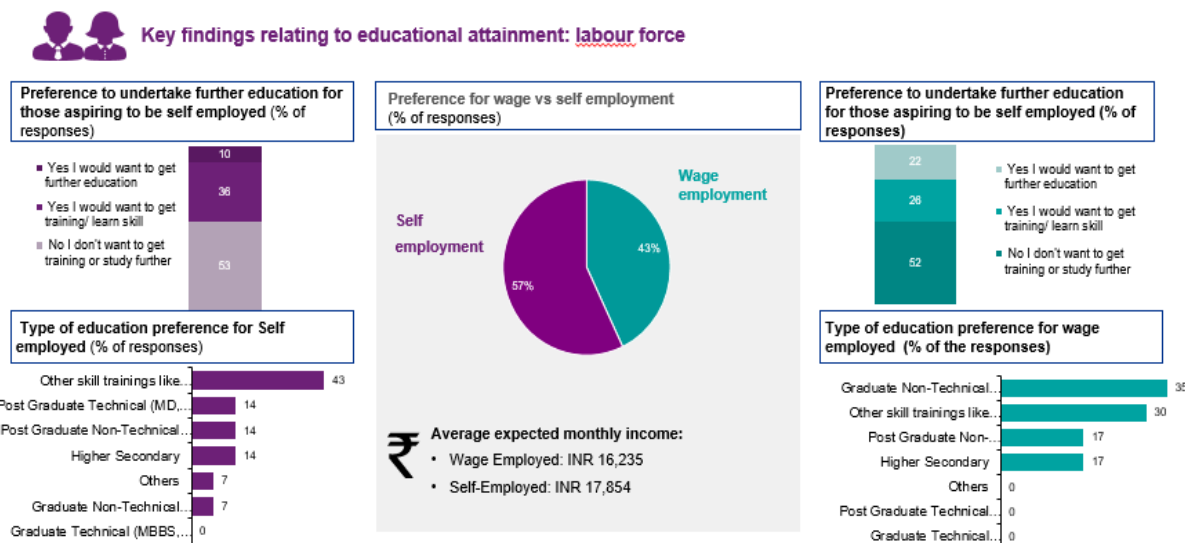For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, beauty parlour/spa/salons, Agriculture & Allied, skill based business (Plumbing, mechanic etc.) and setting up Jewellery business.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Governance 7 Administration, Agriculture & Allied, Healthcare, Railways and Auto & Auto ancillaries sub-sectors.

Many respondents also selected 'other' which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 16,673 and Rs. 13,877 respectively.

Additionally, 96% of the respondents would like to work within Maharashtra. However, 78% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

77% of those who attended a training programme stated they actually benefit from attending the training, majority state access to a new profession and getting certification. Whereas, among those who didn't benefit from the training, majority state that employers engagement was not good during the training program.

20.5 Incremental Demand & Estimation of Manpower Supply

Agriculture-Crop & Animal Production, Education, Finance & Insurance activities, Transportation, Healthcare and Construction sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is low as compared to other districts, however it is concentrated in high growth sub sectors of food products and beverages, fabricated metal products and chemical and chemical products.

Table 335: Incremental Demand estimates (2019-2028) for Nanded district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and Allied		
Agriculture - Crop & Animal production	44,624	46,372
Forestry & Logging	157	163
Fishing & Aquaculture	111	115
Sub Total	**44,547**	**46,293**
Registered Manufacturing		
Food Processing	145	153
Fabricated metal products (except machinery and equipment)	138	135
Construction	3,203	3,362
Services		
Wholesale and Retail Trade	1,024	1,301
Transportation	7,513	9,058
Logistics	943	1,137
IT/ITES	1,574	1,898
Hospitality	519	553
BFSI	2,136	2,779
Real Estate	427	556
Professional, Scientific & Technical Activities	1,116	1,452
Public Administration and Administrative services	14,105	18,349
Education	8,919	11,603
Healthcare	11,931	15,521
Other services	35,426	46,085
Sub Total	**57,322**	**73,494**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:
- Teakwood furniture manufacturing is an important economic activity of the district. Thus, jobs in carpentry are in high demand.

- The district has a potential for growth and job creation in Tourism and Hotel management.
- Sericulture and Seed production are activities also growing in the district. About 2000-2500 farmers are engaged in sericulture.
- Quinoa production and Apiculture are also emerging economic activities in the district.

Estimation of Manpower Supply

According to KPMG estimates, Nanded district has a significant opportunity in terms of a favourable demographic dividend- with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 15.3 lakhs work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 336: Manpower Supply for Nanded District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Nanded	21,03,508	15,65,302	15,35,861

The workforce is further split across the educational attainment within the district as shown below in the table 337.

Table 337 Educational Attainment of projected workforce

Educational Level	Projected Workforce
Illiterate	4,60,374
Literate but below matric/secondary	6,02,339
Matric/secondary but below graduate	2,70,739
Technical degree or diploma equal to degree or post-graduate degree	27,337
Technical diploma or certificate not equal to degree	6,375
Graduate and above other than technical degree	70,616
Literate others	98,081

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~49423 annually.

Table 338: Size of target population in the district

Particular	Numbers
Enrolment in VIII	61,894
Enrolment in X	52,742
Enrolment in XII	15,726
Dropout at VIII	**9,228**
Passing out of VIII*	52,666
Students not transitioned to IX	**8,669**
Dropout at X	**12,880**
Passing out of X*	39,862
Students not transitioned to XI	**6,561**
Passing out at XII**	31,343
Students not transitioned to Higher Education	21,313
Total Target population	**49,423**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 339: Vocational Education annual capacity for Nanded district

Particular	Annual Capacity in Numbers
Short Term Skilling	9,060
ITI (Government & Private)	5,380

20.6 Recommendations

Nanded, being one of the bordering districts with the state of Andhra Pradesh is predominantly driven by primary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 340: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Red
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Amber
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Amber
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Public Administration and Administrative activities	🟧	🟩	🟩
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟧
Other Services	🟩	🟩	🟧

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Below top 6 responses- Low

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Agriculture-Crop & Animal production, Transportation, Finance & Insurance activities, Public Administration, Education and Healthcare.
- **High Aspiration Sectors**: Agriculture & Allied and Public Administration

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 341: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture & Allied		✓	✓
2	Transportation	✓	✓	
3	Public Administration, Administrative and Social Security	✓	✓	✓
4	Healthcare	✓	✓	✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Chemicals and Pharmaceuticals
- Media and Entertainment
- Furniture & Fittings
- Tourism & Hospitality
- Education

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 342. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers

Table 342: Top Job Roles Identified for the district as per incremental demand & aspiration of the labourforce

Sector Name	Top Job Roles
Agriculture and allied	Goat Farmer
	Dairy Farmer
	Micro Irrigation Technician
	Quality Seed Grower
	Sericulturist
Transportation	Reach Truck Operator
	Crane Operator
	Shipment Classification Agent
	Clearance Support Agent
	Consignment Booking Assistant
Healthcare	General Duty Attendant
	Home Health Aide
	Diet Assistant
	Emergency Medical Technician- Basic
	Pharmacy Assistant
Furniture & Fittings	Assistant Carpenter- Wooden Furniture
	Carpenter Wooden Furniture
	Fitter- Modular Furniture
	Junior Assistant - Door Installation
	Lead Furniture Maker
Tourism & Hospitality	Bell Boy
	Food & Beverage Service-Steward
	Tour Guide
	Meet & Greet officer
	Food Server

21. Nandurbar

21.1 About the district

Nandurbar district is located in the north-western tip of the Maharashtra state with the district headquarters in Nandurbar City. The district is included in Nashik division. Nandurbar is divided into 6 sub-districts and 930 inhabited villages.

Nandurbar constitutes 1.9% of the total state area with a land area of 5,955 sq.km. It is bordered by Dhule district to the South and South-east, Gujarat state to the North and West, Madhya Pradesh state to the North and North-east. With about one-fourth of the area as the forest area, the proportion of forest cover in the district is more than the state. The district has several religious places to visit.

As far as connectivity is concerned, the district is well-connected with roads and railways.

Table 343: Comparison of Nandurbar District with Maharashtra

Indicator	Nandurbar	Maharashtra
Area in sq.km.	5,955	3,07,713
Percentage share in state geographical area, %	1.9	100
No. of Sub-districts	6	353
No. of inhabited villages	930	40,959
No. of households	3,19,623	2,44,21,519
Forest area as a % of total geographical area	20.18	16.94

Source: Census 2011

21.2 Demography

According to 2011 census data, the district has a population of over 16.4 lakh persons which is ~1.5% of the state. Nandurbar is one of the ten least populous districts of Maharashtra. It is a primarily a rural district having 16.7% of its population in urban areas where as 45.2% of the state population lives in urban areas. With a population density of 277 persons/Sq. Km which is significantly lower than the state average, the district is one of the many medium-intensity regions.

Table 344 lists down multiple demographic indicators of the district. Nandurbar district has higher sex ratio (number of female per 1000 males) compared to the state. The literacy rate of the district is significantly lower than the state. About three-fifth of the district's population falls in the working age group (i.e. 15-59 years) while a little less than half of its population is actually working i.e. % of total workers (main and marginal workers) to the total population. The remaining ~52% of the population are non-workers.

Table 344: Demographic Indicators of Nandurbar district

Indicator	Nandurbar	Maharashtra
Population, No.	16,48,295	11,23,74,333
Decadal growth rate of population, %	25.66	16
Urban Population as a percentage of total population, %	16.71	45.2
SC Population, %	0.36	10.2
ST Population, %	10.86	8.8
Sex ratio, No. of females per 1000 males	978	925
Population density, per sq.km.	277	365
Literacy rate, %	64.38	83
Working age population* as a percentage of total population, %	58	59
Work participation rate^, %	48	44
HDI Index	0.604	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 7.9 lakh persons. Figure 141, suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by

tertiary and secondary sector. As small as 4% of the total workforce is engaged in the secondary sector in the district which is one-fourth of the state average. As shown in the figure 122 below, the rate of unemployment (per 1000) in the district is significantly lower than the state average across all the categories. The rate of female unemployment (per 1000) in Nandurbar district points towards a good gender demographic.

Figure 140: Share of workforce & Employment Rate for Nandurbar District
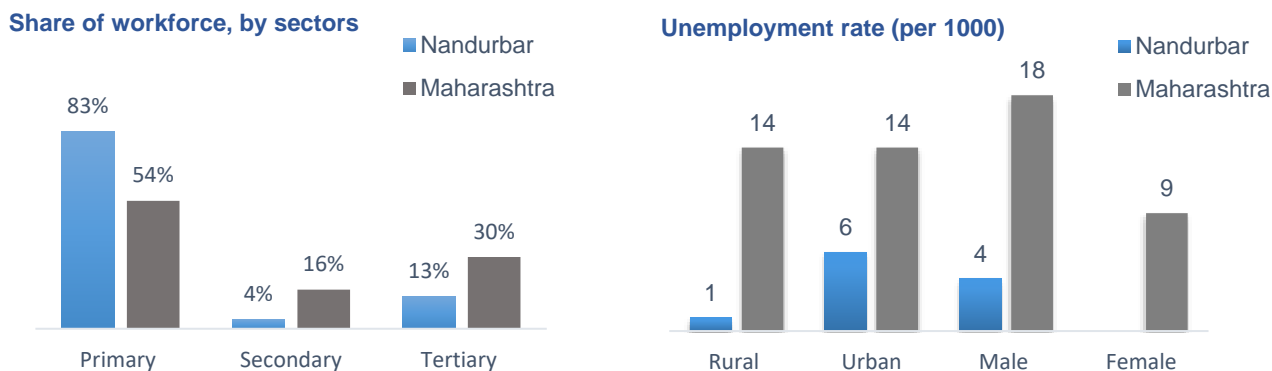
Share of workforce, by sectors

Source: Census 2011

Unemployment rate (per 1000)

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in figure 142, about three-fifth of the working population is self- employed in Nandurbar. While proportion of salaried employment in the workforce is the lowest in Nandurbar district when compared against other districts of the state, proportion of contract workers in the workforce is the highest in Nandurbur. This shows a higher dependence on irregular employment in the district as against regular from of employment. 28% of the workforce is employed as casual labor which is significantly high as compared to the state average of 3%.
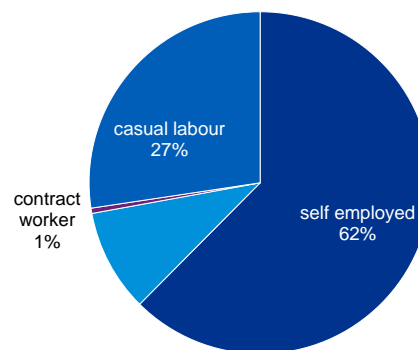
Figure 141: Type of employment in the district
Source: Ministry of Labour & Employment

Education Profile of the District:
Traditional Education:

Nandurbar district has a total of 2,402 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of over 3.5 lakh students. The Pupil-Teacher ratio of the district is 25:1. The district also has 43 general and technical colleges with an enrolment of about 20,600 students in state-run general and technical colleges.

Table 345: Educational Profile of Nandurbar District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1996	2,65,314
Secondary Schools (IX to XII)	406	85,196
General Colleges & Technical Education	43	20,600[43]

Source: AISHE, U-DISE

---

[43]Enrolment figures at State run general and technical education colleges only

Vocational Education:

Nandurbar district has a total of 10 government and private ITIs with 1,621 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Beauty and Wellness, Informal sectors such as domestic help, beauticians, facility management, Information and Communication technology and Electronics.

Table 346: Total no. of ITI and there training number in Nadurbar district

Particular	Number
ITIs (Government & Private)	10
Trainee Count	1,621

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 4,606 students are trained annually in the district under the scheme. Top Sectors include Garment making, Information and Communication Technology, and Beauty culture and hair dressing. Table below illustrates sector-wise annual training numbers in the district.

Table 347: Sector wise short- term skilling trained numbers in PMKUVA for Nandurbar district

Sectors	Trained
Information and Communication Technology	1,160
Garment Making	1,360
Fashion Design	150
Beauty Culture and Hair Dressing	600
Automotive Repair	210
Electrical	208
Electronics	30
Banking and Accounting	180
Remaining Sectors	90
Total	**4,606**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Majority of the surveyed respondents in the district stated receiving their training from a private training institute.

21.3 Economy

As of 2016-17, Nandurbar district ranked amongst the bottom five districts of the state in terms of Gross District Value Added (value at current prices) with the figure at Rs. 13,580 crores. The per capita GDVA (at current prices) for 2016-17 was recorded at Rs. 78,531. When compared against other districts of the state, the district had the lowest per capita GDVA (at current prices) for 2016-17. It is one of the twelve districts in Maharashtra currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

In Nandurbar, the service sector contributes to 61% of the district economy despite employing only around 19% of the district's workforce. The agriculture and allied activities contribute to 17% and the industry sector contributes to 22% of the GDDP.

A deeper look into each of these sectors reveals that the major sub-sectors in the services sector are Retail and Hospitality, Banking and Insurance, Ownership of dwellings and Business Services and Real Estate Services.

The primary crops cultivated in the district include Cotton, Jowar, Maize and Mango.

Figure 142: Sector wise GDDP Distribution of Nandurbar District
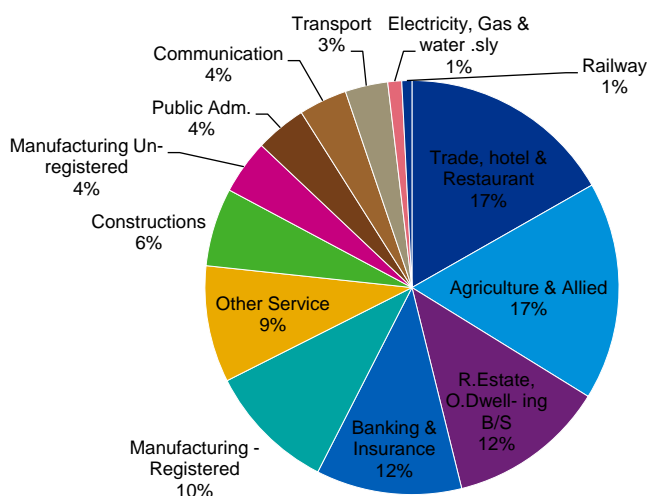
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra(2013-14)

Nandurbar district has 9 registered large and medium enterprises which employs approximately 3,195 persons. Top registered manufacturing industry of the district is manufacture of food products and beverages which employs about 57% of the workforce engaged in registered manufacturing in the district. Under this industry, employment is highly concentrated in **manufacturing of sugar** which alone employs 44% of the workforce. Shri Satpuda Tapi Parisar Sahakari Sakhar Ltd is one of the top sugar mill plants in Nandurbar.

Manufacture of textiles is another industry which offers employment to about 1,269 persons in the district which is about 40% of the workforce employed in registered manufacturing. It is interesting to note that 100% of the employment in this industry is concentrated in the early stage of value chain of the textile industry i.e. **preparation and spinning of textile fibres**. Loknayak Jaiprakash Narayan Shetkari Sahakari Soot Girni Ltd is a major enterprise involved in supplying and trading of cotton yarn in Nandurbar.

Other small registered manufacturing industries include manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials and manufacture of basic metals.

Table 348: Employment in major registered manufacturing sub-sectors in the district 2017-18

Sector	Employment
Manufacture of food products and beverages	1,769
Manufacture of textiles	1,269
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	24
Manufacture of basic metals	16

Source: Annual Survey of Industries 2016-17

Investments in the districts:

Nandurbar district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Railway transport infrastructure services, Renewable electricity, and Paper and newsprint are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 349: Sector wise investments in Nandurbar District

Sector Name	Proposed Investment (in INR Million)	No of projects
Railway transport infrastructure services	14,363.5	1
Renewable electricity	11,689	3
Paper & newsprint	10,500	1
Conventional electricity	1,010	1
Road transport infrastructure services	438.8	2
Other agricultural products	323	1
Health services	89.9	2
Others	-	5
Total	**38,414.2**	**16**

Source: CMIE

21.4   Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 350: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	44%
	Rural	56%
Gender Profile	Male	62%
	Female	38%
Age Group	15-25 years	57%
	26-35 years	26%
	36-45 years	10%
	46-55 years	7%
	56-59 years	1%
Educational Level	Upto Xth	48%
	Upto XIIth	38%
	Any Graduation	14%
Occupational Profile	Worker	51%
	Non-Worker	49%

Figure 143: Past/ Current participation in training, %

- Have attended in the past — 10%
- Currently attending — 4%
- Haven't attended in the past — 86%
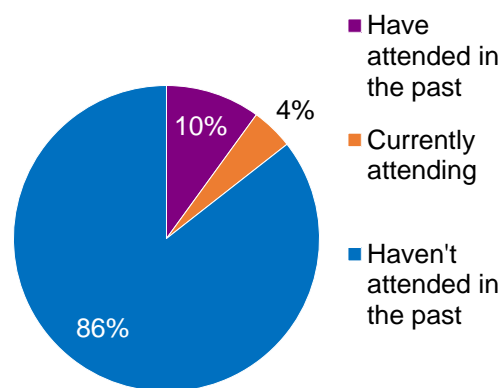
About 86% of the respondents in Nandurbar stated that they hadn't attended any technical/ non-technical job related training in the past while 10% reported having attended a training programme in the past.

It is to be noted that a little less than two-fifth of the respondents stated receiving their training from a government training institute. The district also has private training providers to enhance the skills of the people and about three-fifth of the respondents were found to be receiving their training from them. None of the respondents mentioned receiving trainings organized by their employers.

Figure 144: Type of training provider, in %
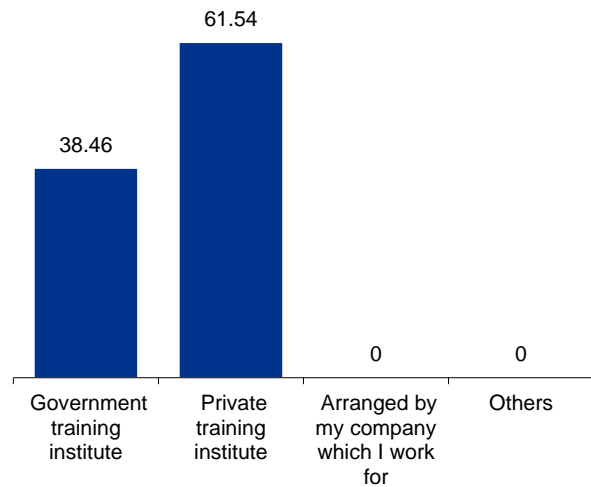
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per Figure 146, 41% of the respondents in Nandurbar aspire to be self-employed and 59% reported a preference for being wage-employed. Almost an equal percentage of respondents who aspire to be self-employed and those who aspire to be wage-employed prefer to undertake further education/ training. There is preference for acquiring secondary education amongst self-employment aspirants. About one-fourth of the self-employment aspirants also preferred technical education in graduation. The respondents who aspire to be wage-employed preferred non-technical and vocational education over technical education.

Figure 145: Key Findings related to educational attainment of the labour force
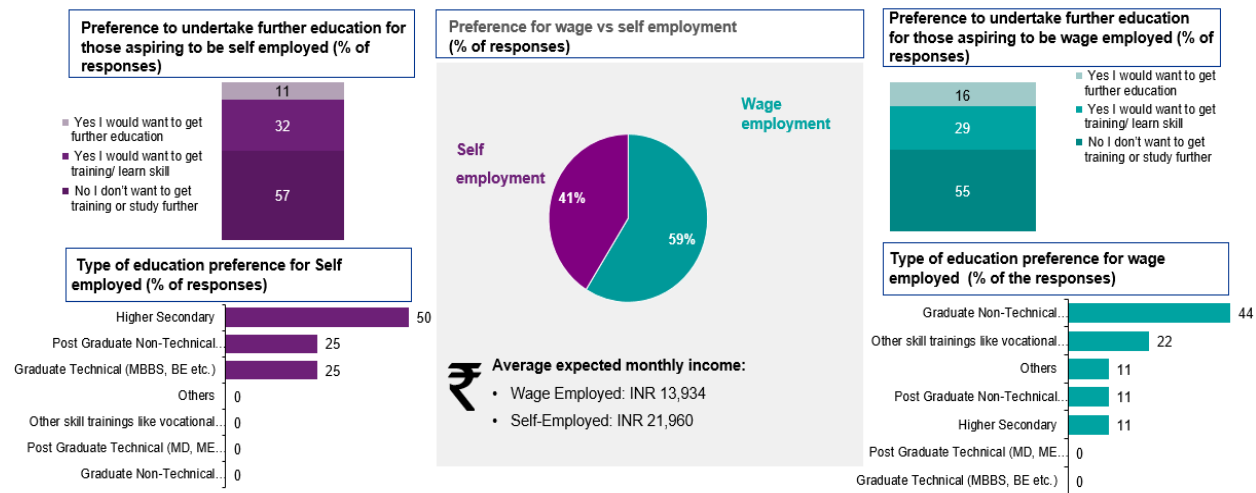
Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 351: Aspirational sub-sectors for labour force in Nandurbar

For wage employment	For self-employment
Manual wage labor	Own business/ Kirana shop
Agriculture and allied activities	Agriculture and allied activities
Finance, Banking & Insurance	Other Manufacturing
Other Manufacturing	Art & Culture
Governance & Administration	Food Processing

For those aspiring to be self-employed, there was a preference towards opening a retail or wholesale shop (grocery, stationery, medical shop, pan shop, clothes).

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 13,934 and Rs. 21,960 respectively.

Additionally, 96% the respondents would like to work within Maharashtra. As many as 82% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra at a lower wage and expressed a lower inclination towards migrating to other regions outside the state for better economic opportunities.

Perceived benefits of acquiring training:

As many as 69% of the respondents who attended a training programme stated that they actually benefited from attending the training. The primary benefit which was highlighted by the respondents was smooth movement to a new sector. Other stated benefits include increase in income and acquisition of new skills or upgradation of current skill set. The primary challenge reported by majority of the respondents after attending the training was that the skills imparted by the trainings were not at par with the expectations of the employers in the industry. It is found that among the respondents who reported not having attended any training programme, 67% of the respondents stated having no awareness on any employment oriented training programs that help gain expertise/ enhance job skills.

21.5 Incremental demand and Estimation of Manpower supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities. Finance and Insurance services, Crop and animal production, Human health & social work activities, Transportation, Administrative and support service, Professional, Scientific and Technical activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sector of manufacture of textiles even though a high proportion of the current workforce is also engaged in the sub-sector of manufacture of sugar under manufacture of food and beverages.

Table 352: Incremental Demand estimates (2019-2028) for Nandurbar district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and Allied		
Agriculture - Crop & Animal production	26,845	46,372
Forestry & Logging	94	163
Fishing & Aquaculture	67	115
Sub Total	**26,800**	**27,850**
Registered Manufacturing		
Textiles	844	1,355
Construction	643	**675**
Services		

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Wholesale and Retail Trade	321	408
Transportation	2,154	2,596
Logistics	270	326
IT/ITES	451	544
Hospitality	149	159
BFSI	583	758
Real Estate	117	152
Professional, Scientific & Technical Activities	304	396
Public Administration and Administrative services	3,778	4,915
Education	3,412	4,439
Healthcare	4,565	5,938
Other Services	18,167	23,633
Sub Total	**34,271**	**44,263**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- In **food processing sector,** need for mango powder and chilli processing was highlighted. There is also a need for enhancing marketing, packaging and entrepreneurial skills.
- **Manufacturing of** Ganesh idols and murthis
- **In Forestry** related activities, bamboo cultivation, extraction of medicinal and aromatic products

Estimation of Manpower Supply

Nandurbar district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 9.72 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 353: Manpower supply for Nandurbar district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Nandurbar	11,35,009	9,72,864	9,72,864

Table 354: Projected workforce by education levels

Education level	Projected work force
Illiterate	4,71,196
Literate but below matric/secondary	2,47,787
Matric/secondary but below graduate	1,24,558
Technical degree or diploma equal to degree or post-graduate degree	11,273
Technical diploma or certificate not equal to degree	5,332
Graduate and above other than technical degree	26,868
Literate others	85,849

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~22,610 annually.

Table 355: Size of target population in the district

Particular	Numbers
Enrolment in VIII	30,080
Enrolment in X	24,567
Enrolment in XII	7,186
Dropout at VIII	**4,437**
Passing out of VIII*	25,643
Students not transitioned to IX	**4,221**
Dropout at X	**5,962**
Passing out of X*	18,605
Students not transitioned to XI	**3,062**
Passing out at XII**	13,771
Students not transitioned to Higher Education	9,364
Total Target population	**22,610**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Particular	Annual Capacity in Numbers
Short Term Skilling	15,840
ITI (Government & Private)	3,216

21.6 Recommendations

The economic growth of the district is predominantly driven by the secondary and tertiary sectors. Manufacturing forms the core of the employment generation activities in the district with a growth rate of more than 10% for manufacturing of food products, chemical and chemical products, machinery, motor vehicles, etc. However, agriculture, transportation, Public administration & defence, compulsory social security and education have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 356: Sector specific economic growth, employment potential and aspirations

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production	🟥	🟩	🟩
Forestry & Logging	🟥	🟥	🟩
Fishing & Aquaculture	🟨	🟥	🟩
Food processing	🟩	🟥	🟥
Tobacco	🟩	🟥	🟥
Textiles	🟨	🟥	🟥
Apparel	🟨	🟥	🟥
Leather	🟥	🟥	🟥
Wood work	🟥	🟥	🟥

Sectors	Economic Growth	Employment Potential	Aspirational
Paper and Paper products	🟩	🟥	🟧
Publishing, printing and recorded media	🟧	🟥	🟥
Hydrocarbons	🟥	🟥	🟥
Chemicals and Pharmaceuticals	🟩	🟥	🟥
Rubber and Plastics	🟧	🟥	🟧
Non-metallic mineral products	🟥	🟥	🟥
Iron and Steel	🟥	🟥	🟥
Metal products (except machinery and equipment)	🟧	🟥	🟥
Machinery and Equipment	🟩	🟥	🟥
Automotive	🟩	🟥	🟥
Automotive (transport equipment)	🟩	🟥	🟥
Construction	🟥	🟥	🟥
Wholesale and Retail Trade	🟧	🟥	🟥
Transportation	🟧	🟧	🟥
Logistics	🟧	🟥	🟥
IT/ITES	🟩	🟥	🟧
Hospitality	🟧	🟥	🟥
BFSI	🟧	🟥	🟩
Real Estate	🟩	🟥	🟥
Professional, Scientific & Technical Activities	🟩	🟧	🟥
Public Administration and Administrative services	🟧	🟩	🟧
Education	🟩	🟩	🟥
Healthcare	🟩	🟧	🟥
Other Services	🟩	🟩	🟧

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Manufacturing of food products and beverages, manufacturing of paper and paper products, manufacturing of chemical and chemical products, manufacturing of machinery and equipment, Manufacture of motor vehicles, trailers and semi-trailers, manufacture of other transport equipment, Information & communication, education, human health & social activities, arts, entertainment & recreation and other service activities.
- **High incremental employment potential sectors**: Agriculture, Finance and Insurance activities, Public administration and defence, compulsory social security and education.
- **High Aspiration Sectors**: Agriculture and allied sectors; Finance and Insurance services.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 357: Priority sectors for MSSDS

Sl. No.	Sector	High or medium Growth	High Economic Potential	High aspiration
1	Agriculture - Crop & Animal production		✓	✓
2	Fishing and Aquaculture	✓		✓
3	Transportation	✓	✓	
4	IT / ITeS	✓		✓
5	Healthcare	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Administrative and Support services
- Public Administration and Social Security
- Media and Entertainment
- Other services
- Education

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 358. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 358: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

High demand sectors	Identified Job Roles
Agriculture and allied	• Dairy farmer • Goat farmer • Micro irrigation technician • Small poultry farmer • Green house operator
Transportation	• Transport consolidator • Courier delivery executive • Cargo surveyor • Ground operation associate • Courier branch sales executive
IT / ITeS	• Domestic data entry operator • CRM domestic voice • Domestic IT helpdesk attendant • Collections executive • Domestic biometric data operator

High demand sectors	Identified Job Roles
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant

22. Nashik

22.1 About the district

Nashik district is located in the north-western region of Maharashtra. The district is divided into 15 sub districts and 1919 inhabited villages.

Nashik has a total land area of 15,530 sq. km. and constitutes 5% of the total state area. The district is and bordered by districts of Dhule, Jalgaon, Aurangabad and Ahmadnagar and Thane in Maharashtra and Valsad, Navsari and Dang districts in Gujarat. The district is well connected to major cities of India by air, rail and road. The city has its own airport. It is the regional headquarter of the Nashik region, comprising of the districts of Nashik, Dhule, Jalgaon, Nandurbar and Ahmadnagar.

Nashik is the topmost contributor to the agricultural output of Maharashtra. The district is popular for grape and wine production. The district also has thriving manufacturing and engineering units.

Table 359: Comparison of District with Maharashtra

Indicator	Nashik	Maharashtra
Area in sq.km.	15,530	3,07,713
Percentage share in state geographical area, %	5	100
No. of Sub-districts	15	353
No. of inhabited villages	1,919	40,959
No. of households	11,80,293	24,421,519
Forest area as a % of total geographical area	7.01	16.94

Source: Census 2011

22.2 Demography

With a population of 61,01,187 per census 2011, Nashik is the third largest district in terms of population. 42.53 % of the district's population resides in urban areas.

The district has a literacy rate of 82.1%, close to the state average and a sex ratio of 934 females per 1000 males, which is higher than state average of 925.

At 61.6%, the district has a higher working age population compared to the state. A large potential workforce can be strengthened through education and training.45.3 % of the district's population is actually working.

Table 360: Demographic Indicators of district

Indicator	Nashik	Maharashtra
Population, No.	61,09, 052	11,23,74,333
Decadal growth rate of population, %	22.3	16
Urban Population as a percentage of total population, %	42.53	45.2
SC Population, %	9	10.2
ST Population, %	15	8.8
Sex ratio, No. of females per 1000 males	934	925
Population density, per sq.km.	393	365
Literacy rate, %	82.31	83
Working age population* as a percentage of total population, %	61.6	59
Work participation rate^, %	45.25	44
HDI Index	0.746	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a total workforce of 27.6 lakh persons, of which 62% are engaged in primary sector (agriculture and allied activities and mining), compared to around 53.6% in Maharashtra. 16% of the workforce is engaged in the secondary sector and 22% in the tertiary sector. As indicated infigure below,

Nashik has a lower rate of unemployment compared to the state. 6 per 1000 people the labour force are unemployed in urban areas in Aurangabad compared to 14 per 1000 for Maharashtra.

Figure 146: Share of workforce & Employment Rate for district
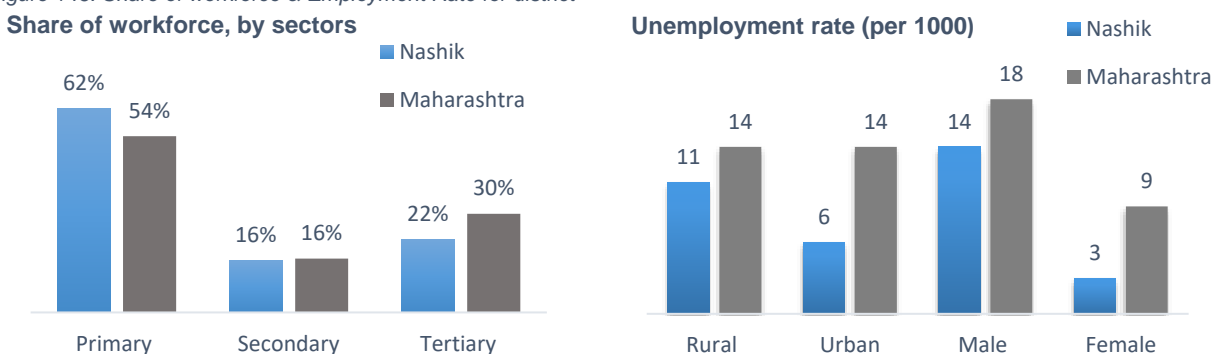
Share of workforce, by sectors

Source: Census 2011

Unemployment rate (per 1000)

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As per figure 148, the district has a significantly higher percentage of casual labour compared to the state – 37.4% in the district compared to 23.4% in the state. The share of self-employed and wage-employed as lower compared to the state.

Figure 147: Type of employment in the district
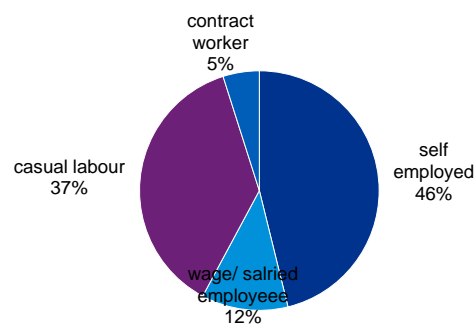
Source: Ministry of Labour & Employment

Education Profile of the District:

Traditional Education:

The district has 6,632 schools of which 5,443 are primary. Total enrolment in schools was 12,96,936. The student-teacher ratio in the district is 26. The district also has 227 general and technical colleges in the district with the enrolment of aprrox. 1,21,930 students.

Table 361: Educational Profile of District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	5,443	9,57,855
Secondary Schools (IX to XII)	1,189	3,39,081
General Colleges & Technical Education	277	~1,21,930[44]

Source: AISHE, U-DISE

[44]Enrolment figures at State run general and technical education colleges only

Vocational Education:

Nashik district has a total of 47 government and private ITIs with 7,124 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication technology, Auto and Auto Components, Gems and Jewellery and Healthcare.

Table 362: Total no. of ITI and there training number in Nashik district

Particular	Number
ITIs (Government & Private)	47
Trainee Count	7,124

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 17,527 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Banking and accounting, Garment making, and Beauty culture and hair dressing. Table below illustrates sector-wise annual training numbers in the district.

Table 363: Sector wise short- term skilling trained numbers in PMKUVA for Nashik district

Sectors	Trained
Information and communication technology	4,927
Garment making	2,004
Banking and accounting	2,075
Medical and nursing	886
Beauty culture and hair dressing	1,942
Fashion design	958
Soft skills	422
Electrical	1,661
Production and manufacturing	1,219
Business and commerce	60
Fabrication	353
Counselling skill	30
Construction	109
Remaining sectors	881
Total	**17,527**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Majority of private training centers in the district offer various courses for enhancing the skills of the persons.

22.3 Economy

At 92,545 crore, Nashik district has the 5th highest GVA (as per current prices) in the state as of 2016-17. Per capita GVA of Nashik stood at Rs. 1,42,081, ranking 8th in the state. The district economy is led by registered manufacturing, agriculture and allied, and trade, hotels and restaurant sectors.

Figure 148: Sector wise GDDP Distribution of the District
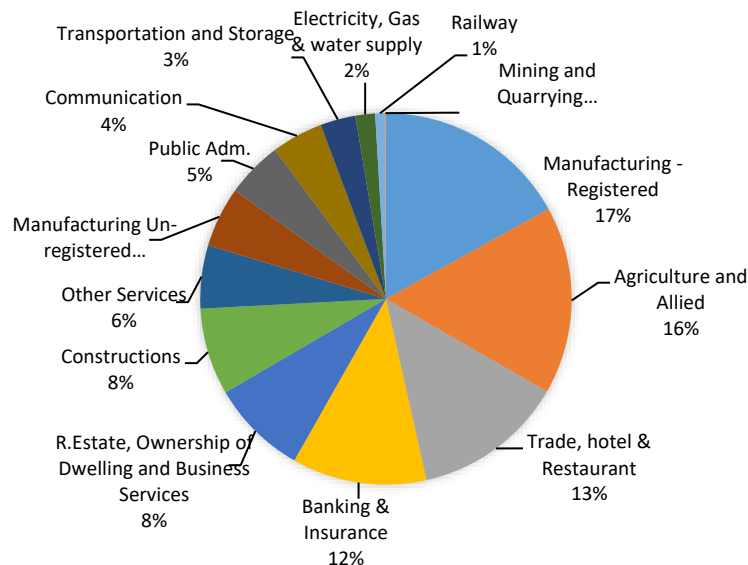
Source: District Domestic Product of Maharashtra 2013-14 (Base 2004-05), published by DES Maharashtra

Agriculture and allied activities contribute to 16% of the district's GDDP. Major crops grown in the district are: Bajra, Maize, Onion, Paddy, Wheat, Grape, Pomegranate, Tomato, and mangoes. Nashik is a major exporter of grapes, accounting more than half of the grape exports.

Industry accounts for around 31.5% of the district GDDP, led by registered manufacturing accounting for 17% of the district's economy followed by constructions with an 8% share.

Auto and auto components is the major industry of the district, engaging more than 50,000 persons. This alone accounts for over one-third of the district's registered manufacturing workforce. Of these roughly half are engaged in the manufacture of passenger cars, commercial vehicles, chassis, motor vehicle engines etc. the remaining half are engaged in manufacture of parts and accessories for motor vehicles. Manufacturing plant of Mahindra and Mahindra Ltd. is located in Nashik.

Food processing is the second largest manufacturing industry in the district by employment. Majority of the workforce in this industry is engaged in manufacture of sugar and other food products such as processing and blending of tea, processing of spices and salt, coffee and coffee products, edible nuts, etc. Fruit processing and preservation is another important part of this industry in the district.

Manufacture of fabricated metal products and electrical equipment are also large industries in the district engaging more than 11,000 persons each followed by rubber and plastic industry. The rubber and plastic industry employs about 9741 workers of which 7400 are engaged in manufacture of plastic products alone.

Table 364: Employment in registered manufacturing sector in the district 2017-18

Sector	Employment
Manufacture of motor vehicles, trailers and semi-trailers	50,701
Manufacture of food products and beverages	16,843
Manufacture of fabricated metal products, except machinery and equipment	12,159
Manufacture of electrical equipment	11,159
Manufacture of rubber and plastics products	10,431
Manufacture of chemicals and chemical products	9,741
Manufacture of basic metals	8,378
Manufacture of paper and paper products	6,390
Manufacture of machinery and equipment n.e.c.	6,309

Sector	Employment
Manufacture of other non-metallic mineral products	5,363
Manufacture of computer, electronic and optical products	3,881
Manufacture of textiles	2,128
Manufacture of other transport equipment	752
Publishing, printing and reproduction of recorded media	730
Manufacture of tobacco products	715

Source: Annual Survey of Industries, 2017-18

Service sector contributing to over 52% of the district's economy, is led by Trade, Hotels and Restaurants, followed by banking and insurance services and Real estate, ownership of dwellings and business services.

Investments in the districts:

Nashik district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Railway transport infrastructure services, Irrigation, and Road transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 365: Sector wise investments in Nashik District

Sector Name	Proposed Investment (in INR Million)	No of projects
Railway transport infrastructure services	3,16,814.6	9
Irrigation	3,13,121.6	7
Road transport infrastructure services	1,98,390.1	29
Conventional electricity	1,13,489.8	2
Plastic films & flexible packaging	26,005	6
Passenger vehicles	20,500	4
Health services	14,757.2	7
Commercial complexes	14,522.6	20
Other automobile ancillaries	10,651.3	8
Storage & distribution	9,253	5
Others	86,818.7	364
Total	**11,24,323.9**	**461**

Source: CMIE

22.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 366: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	51%
	Rural	49%
Gender Profile	Male	65%
	Female	35%
Age Group	15-25 years	52%
	26-35 years	29%
	36-45 years	12%
	46-55 years	4%
	56-59 years	3%
Educational Level	Upto Xth	55%
	Upto XIIth	32%
	Any Graduation	13%
Occupational Profile	Worker	52%
	Non-Worker	48%

Figure 149: Past/Current participation in training (in %)
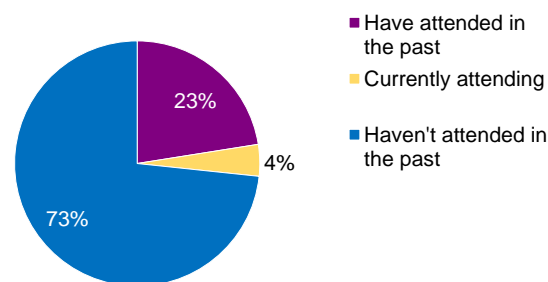
Figure 150: Type of training provider, in %

In addition to the above in figure 150, most respondents (73%) responded that they hadn't attended any technical/ non-technical job related training in the past. 23% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, 50% were attended at Private training institutes.

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 152, in the district, majority (59%) of the respondents aspire to be wage-employed and 41% reported a preference for being wage employed. Amongst the respondents, the wage employment aspirants have a slightly higher preference to undertake further education and training.

Among the self- employed aspirants, there is a preference to undertake graduate non-technical education, whereas those who aspire to be wage employed, would like to undertake skill training courses.

Figure 151: Key Findings related to educational attainment of the labour force
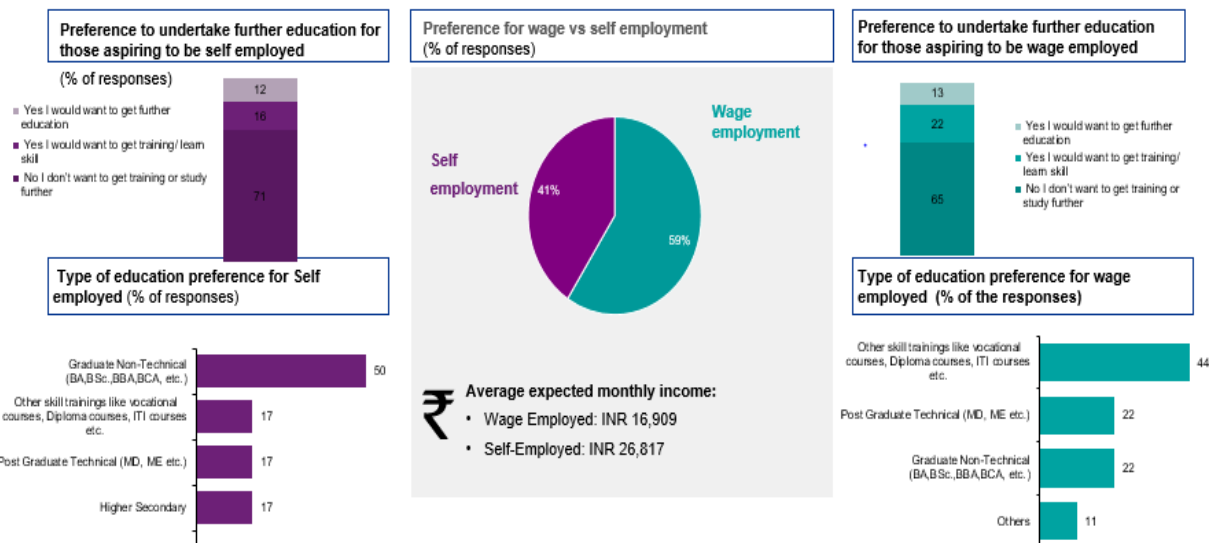
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 367: Aspirational sub-sectors for labour force

For wage-employment	For self-employment
Agriculture and allied	Agriculture and allied
Food Processing	Automobiles and auto ancillaries
Art & Culture	Finance, Banking & Insurance
	Other Manufacturing
	Agriculture and allied

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop or agricultural or animal husbandry related work.

Additionally, 94% the respondents would like to work within Maharashtra. However, only 27% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home. This may indicate possibility of migrating to other districts for better opportunities.

Perceived benefits of acquiring training:

69% of those who attended a training programme stated that they benefited from attending the training. Among those who did benefit from the training, majority state increase in income as the main benefit. There was a mixed response when the respondents were asked to highlight the major challenges after attending the training programmes.

22.5 Incremental demand & estimation of manpower supply

Key drivers of incremental demand in the district are expected to be crop and animal production, Manufacture of fabricated metal products, machinery and equipment, motor vehicles, transportation, banking and finance and healthcare, education and public administration.

Table 368: Incremental Demand estimates (2019-2028) for Nashik district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	70,297	73,051
Forestry & Logging	247	257
Fishing & Aquaculture	174	181
Sub Total	70,718	73,489
Registered Manufacturing		
Food processing	889	936
Textiles	1,416	2,273
Chemicals and Pharmaceuticals	1,190	1,333
Rubber and Plastics	341	352
Iron and Steel	401	420
Fabricated Metal products (except machinery and equipment)	24,690	24,107
Machinery and Equipment	32,884	41,992
Automotive	3,807	4,088
Automotive (transport equipment)	238	310
Construction	5,653	5,934
Services		
Wholesale and Retail Trade	2,222	2,822
Transportation	18,287	22,047
Logistics	2,295	2,766
IT/ITES	3,832	4,620
Hospitality	1,370	1,461
BFSI	7,862	10,228
Real Estate	1,572	2,046
Professional, Scientific & Technical Activities	4,108	5,343
Public Administration and Administrative and services	37,336	48,570
Education	16,386	21,316
Healthcare	21,919	28,514
Other services	63,784	82,974
Sub Total	1,80,972	2,32,707

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 88% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and electrical equipment.

In the healthcare sector, maximum demand is expected for health professionals (except nursing), followed by Nursing and Midwifery Associate Professionals. Numerical clerks, finance and sales associate professionals are expected to be in demand with the growth of BFSI sector. In the transportation sector,

maximum new jobs are expected for motor vehicle drivers. Demand in agriculture sector will mainly be across market gardeners, crop Growers and agricultural laborers.

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1. A major proportion of the district's population is engaged in Powerlooms, which are expected to generate upto 10,000 jobs annually
2. Plastic processing (PVC pipes), and meat processing were highlighted as other major sectors
3. Powerloom operators, sewing machine operators, CNC operators are expected to be in high demand in the district
4. In rural areas, employment opportunities exist in agriculture & allied activities (including grape production, horticulture, animal husbandry)
5. Healthcare (nursing aid) and Tourism are the emerging service sectors in the district.
6. Need observed for trainings in financial management skills, in addition to technical skills for Paithani weaving cluster

Estimation of Manpower Supply

Nashik district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 26.64 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 369: Manpower Supply for District

District name	Projected Working Age population (2023)	Projected labour force (2023)	Projected workforce (2023)
Nashik	43,23,779	27,09,024	26,64,855

Table 370: Projected workforce by education levels

Education level	Projected work force
Illiterate	5,88,834
Literate but below matric/secondary	10,30,634
Matric/secondary but below graduate	5,69,975
Technical degree or diploma equal to degree or post-graduate degree	53,001
Technical diploma or certificate not equal to degree	35,076
Graduate and above other than technical degree	1,70,392
Literate others	2,16,943

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~89,478 annually.

Table 371: Size of target population in the district

Particular	Numbers
Enrolment in VIII	114,476
Enrolment in X	96,751
Enrolment in XII	30,672
Dropout at VIII	**19,060**
Passing out of VIII*	95,416

Particular	Numbers
Students not transitioned to IX	**15,705**
Dropout at X	**23,269**
Passing out of X*	73,482
Students not transitioned to XI	**12,095**
Passing out at XII**	56,483
Students not transitioned to Higher Education	38,408
Total Target population	**89,478**

Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
*** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force*
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 372: Vocational Education annual capacity for Nashik district

Particular	Annual Capacity in Numbers
Short Term Skilling	22,440
ITI (Government & Private)	12,760

22.6 Recommendations

The district has potential for incremental demand generation in agriculture and allied activities, manufacture of metal products including machinery and equipment, transportation, banking and financial services, healthcare, education, administrative, professional, scientific and technical services. Among these, all activities are high or medium on economic growth, except agriculture and public administration.

Agriculture, although low on economic growth is highly aspirational in the district and is closely aligned with food processing, a high economic growth and aspirational activity in the district. Auto and auto ancillaries is a high growth and highly aspirational activity in the district.

Additionally, arts and recreation have a potential in the district on account of either their economic growth or aspirational value.

The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below

Figure 152: Sector Specific economic growth, employment potential and aspirations

Sector	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production			
Forestry & Logging			
Fishing & Aquaculture			
Food processing			
Tobacco			
Textiles			
Apparel			
Leather			
Wood work			
Paper and Paper products			

Sector	Economic Growth	Employment Potential	Aspirational
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Green	Amber
Machinery and Equipment	Green	Green	Amber
Automotive	Green	Red	Green
Automotive (transport equipment)	Green	Red	Green
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration and Administrative services	Amber	Green	Amber
Education	Green	Green	Red
Healthcare	Green	Amber	Amber
Other services	Green	Green	Amber

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the above analysis of the district and keeping in view the primary insights from field visits the sectors, the following sectors are proposed to be taken on priority by MSSDS:

Table 373: Priority sectors for MSSDS

Sl. No.	Sector	High or Medium Economic Growth	High or Medium Employment Potential	High or medium Aspiration
1	Agriculture and Allied		✓	✓
2	Metal products and machinery & equipment	✓	✓	✓
3	Automotive	✓		✓
4	BFSI	✓		✓
5	Healthcare	✓	✓	✓
6	Transportation	✓	✓	

Additionally, power looms and meat processing were highlighted as emerging activities in the district with a potential for employment generation.

Apart from the above priority sectors, MSSDS can also explore the potential of following sectors in the district –

- Media and Entertainment
- Administrative and support services

These sectors although low on aspirational value, have a growth or employment generation potential in the district.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in Figure 153. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Figure 153: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Agriculture & Allied	- Goat Farmer - Dairy Farmer - Micro Irrigation Technician - Greenhouse Operator - Poultry Farmer - Scientific agriculture – surface coating, soil testing, Crop Technician
Automotive	- Vehicle Assembly Fitter/ Technician - Automotive Service Technician - Maintenance Technician - CNC operators - Auto Component Assembly Fitter - E-vehicles related job roles
Metal products and machinery & equipment	- CNC operators - Fitter- Mechanical Assembly - Manual Metal Arc Welding - Draughtsman- Mechanical - Lab Technician- Metal Tester
Textiles and Apparel	- Power loom operators - Sewing machine operators

High demand sectors	Identified Job Roles
Transportation	• Transport Coordinator • Transport Duty Manager • Liquid Transport Operator • Transport Consolidator • Tank Lorry Driver
BFSI	• Insurance Agent • Banking Correspondent • ATM operator • Cash Collection • Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • Goods & Services Tax (GST)
Healthcare	• General Duty Assistant • Home Health Aide • Diet Assistant • Emergency Medical Technician – Basic • Pharmacy Assistant
Paints & Coatings	• Powder Paint Extrusion Operator • General Industrial (Liquid) Painter • Paint Filling & Packing Operator • Assistant Decorative Painter

23. Osmanabad

23.1 About the district

Osmanabad district is located in the southern region of the Maharashtra state with the district headquarters in Osmanabad City. The district falls under the Aurangabad division. Osmanabad is divided into 8 sub-districts and 728 inhabited villages.

Osmanabad constitutes 2.45% of the total state area with a land area of 7,569 sq.km. The district is situated on the Deccan Plateau. It is bordered by Beed district to the north, Latur district to the east, Solapur district to the west, Ahmednagar district to the north-west and the Bidar and Gulbarga districts of state of Karnataka to the south.

Osmanabad station comes under Central Railway (CR) zone. Three National Highways pass through the district. Osmanabad is well connected with Mumbai, Pune, Latur, Parbhani, Nanded, Amravati, Nagpur, Kolhapur, Miraj, Parli.

Table 374: Comparison of Osmanabad District with Maharashtra

Indicator	Osmanabad	Maharashtra
Area in sq.km.	7,569	3,07,713
Percentage share in state geographical area, %	2.45	100
No. of Sub-districts	8	353
No. of inhabited villages	728	40,959
No. of households	3,48,760	24,421,519
Forest area as a % of total geographical area	0.57	16.94

Source: Census 2011

23.2 Demography

According to 2011 census data, the district has a population of over 16.6 lakh persons which is ~1.5% of the state. Osmanabad is a primarily rural district with 83% of its population residing in the rural areas. The percentage of urban population in the district is significantly lower than the state average, as can be seen in Table 375. With a population density of 219 persons/Sq. Km which is lower than the state average, the district is one of the low-intensity regions in the state.

Table 375 lists down multiple demographic indicators of the district. A cursory glance at the human development indicators reveal that the district's literacy rate is at 78.44% which is lower than the state average of 82.91%. Osmanabad has sex ratio (no. of females per 1000 males) of 924 which is almost equivalent to the sex ratio of the state. While around 58% of the population in the district are in the working age group (i.e. 15-59 years), around 47% are actually working i.e. % of total workers (main and marginal workers) to the total population. The workforce participation rate in the district is higher than the state average of 44%.

Table 375: Demographic Indicators of Osmanabad district

Indicator	Osmanabad	Maharashtra
Population, No.	16,57,576	11,23,74,333
Decadal growth rate of population, %	11.5	16
Urban Population as a percentage of total population, %	16.96	45.2
SC Population, %	2	10.2
ST Population, %	0.34	8.8
Sex ratio, No. of females per 1000 males	924	925
Population density, per sq.km.	219	365
Literacy rate, %	78.44	83
Working age population* as a percentage of total population, %	58.1	59
Work participation rate^, %	46.68	44
HDI Index	0.649	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 7.45 lakh persons. Figure 155 suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by tertiary and secondary sector. As shown in figure below, the rate of unemployment (per 1000) in rural and urban areas of the district is lower than the state average. The rate of female unemployment (per 1000) in Osmanabad is higher than the state average while the same pattern doesn't hold true for male unemployment rate.

Figure 154: Share of workforce & Employment Rate for Osmanabad District

Share of workforce, by sectors in %
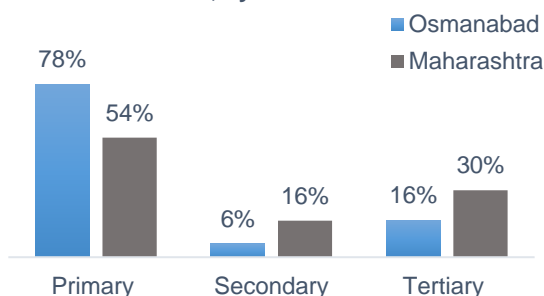
Source: Census 2011

Unemployment rate (per 1000)
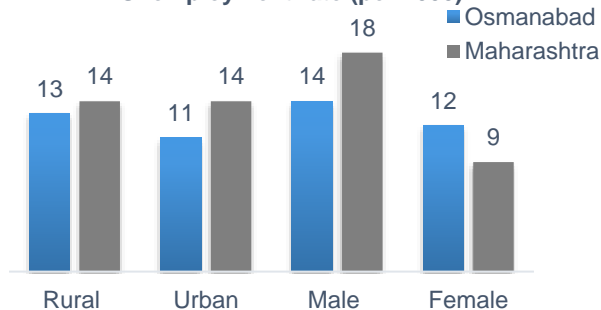

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in figure 156, more than half of the working population is self- employed in Osmanabad. A large percentage of people which is significantly higher than the state average of 3% is working as casual labor and the percentage of salaried employees in the district is less than half of the state average.
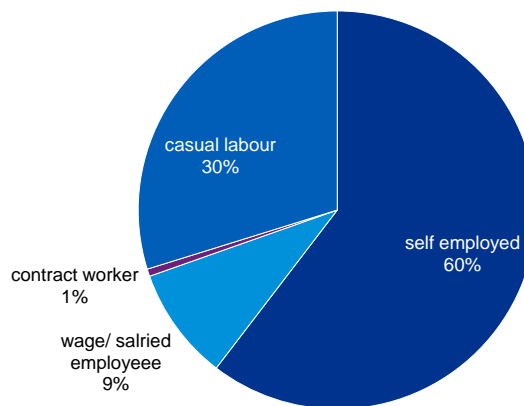
Source: Ministry of Labour & Employment

Figure 155 Type of employment in the district

Education Profile of the District:

Traditional Education:

Osmanabad district has a total of 2,247 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 3.07 lakh students. The Pupil-Teacher ratio of the district is 20.

The district also has 66 general and technical colleges with an enrolment of approx. 29,980 students in state-run general and technical colleges.

Table 376: Educational Profile of Osmanabad District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1,763	2,17,646
Secondary Schools (IX to XII)	484	89,584
General Colleges & Technical Education	66	~29,980[45]

Source: AISHE, U-DISE

Vocational Education:

Osmanabad district has a total of 15 government and private ITIs with 1,648 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Electronics, Information & Communication Technology, Gems and Jewellery, and Banking & Accounting.

Table 377: Total no. of ITI and there training number in Osmanabad district

Particular	Number
ITIs (Government & Private)	15
Trainee Count	1,648

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 5,121 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment making, Fashion design, and Soft skills. Table below illustrates sector-wise annual training numbers in the district.

Table 378: Sector wise short- term skilling trained numbers in PMKUVA for Osmanabad district

Sectors	Trained
Information and communication technology	2,609
Garment making	1,619
Fashion design	780
Soft skills	113
Total	**5,121**

*Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019*

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are also offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

More than half of the surveyed respondents received their training from private training providers.

23.3 Economy

As of 2016-17, the Gross District Value Added (at current prices) of Osmanabad district was Rs. 16,382 crores which was the lowest in Aurangabad division and amongst the bottom ten values in the state. The district had a per capita GDVA (at current prices) of Rs. 94,188 in 2016-17.

In Osmanabad, the service sector contributes to 56% of the district economy despite employing only around 16% of the district's workforce. The agriculture and allied activities contribute to 27% and the industry sector contributes to 17% of the GDDP.

---

[45]Enrolment figures at State run general and technical education colleges only

A deeper look into each of these sectors reveals that the major sub-sectors in the services sector are Trade, Hotel & Restaurant, Real estate, Ownership of dwellings and business services, and Banking and Insurance- each accounting for a share of 12% in the GDDP, as can be seen in Figure 3. The major crops cultivated in the district are Jowar, Soybean, Red gram, Onion and Mango.

Figure 156: Sector wise GDDP Distribution of Osmanabad District
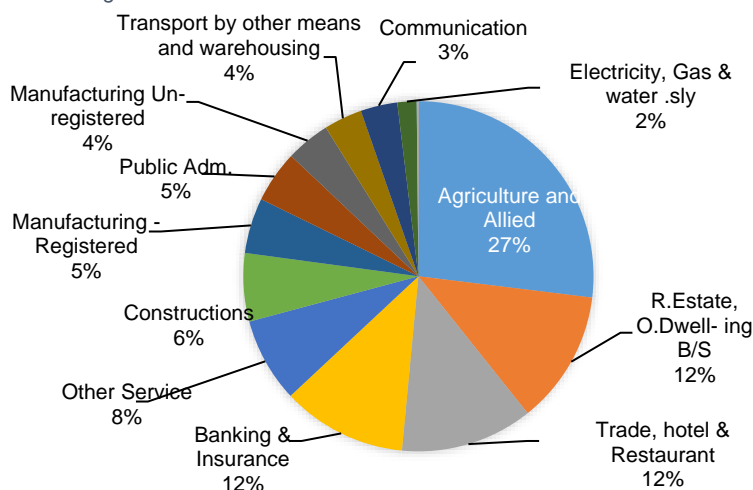
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharshtra

Industry accounts for around 17.4% of the district's GDDP, with registered manufacturing accounting for 5% share and constructions accounting for 6% share of the district's economy.

The major registered manufacturing industry of the district is manufacturing of food products and beverages. It employs about 2418 persons of which over 80% are employed in **manufacturing of sugar** alone. Natural Sugar and Allied Industries Ltd. is a major industry player located in Kallam Taluka in Osmanabad engaged in sugar manufacturing. The beverage manufacturing employs close to 300 people mainly engaged in distilling, rectifying and blending of spirits and ethyl alcohol production from fermented materials.

Other major registered manufacturing industries include manufacture of chemical, and chemical products, pharmaceuticals, and other medicinal products, manufacture of textiles and manufacture of other non-metallic mineral products.

Table 379: Employment in registered manufacturing sector in the district 2017-18

Sector	Employment
Manufacture of food products and beverages	2,418
Manufacture of chemicals and chemical products, pharmaceuticals, medicinal chemical and botanical products	508
Manufacture of textiles	266
Manufacture of other non-metallic mineral products	206
Manufacture of rubber and plastics products	95

Source: Annual Survey of Industries, 2017-18

Investments in the districts:

Osmandabad district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Renewable electricity, Road transport infrastructure services and Railway transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 380: Sector wise investments in Osmanabad District

Sector Name	Proposed Investment (in INR Million)	No of projects
Renewable electricity	78,080	9
Road transport infrastructure services	74,847.4	10
Railway transport infrastructure services	9,050	1
Sugar	3,831.7	2
Storage & distribution	1,820	1
Beer & alcohol	1,471.9	4
Organic chemicals	383	3
Other agricultural products	325.9	1
Transport logistics services	238	1
Processed foods	149.8	1
Others	147.1	11
Total	**1,70,344.8**	**44**

Source: CMIE

23.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 381: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	46%
	Rural	54%
Gender Profile	Male	76%
	Female	24%
Age Group	15-25 years	38%
	26-35 years	29%
	36-45 years	24%
	46-55 years	7%
	56-59 years	2%
Educational Level	Upto Xth	65%
	Upto XIIth	23%
	Any Graduation	12%
Occupational Profile	Worker	62%
	Non-Worker	38%

Figure 157: Past/Current participation in training, %

- Have attended in the past: 9%
- Currently attending: 0%
- Haven't attended in the past: 91%
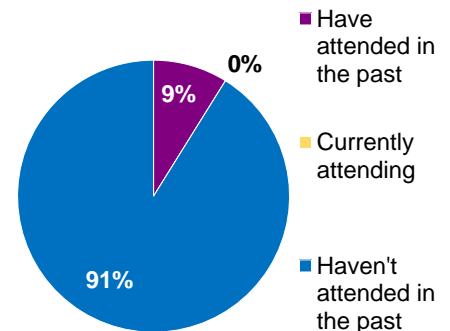
More than 90% of the respondents in Osmanabad stated that they hadn't attended any technical/ non-technical job related training in the past.

It is to be noted that while the majority of the respondents stated receiving their trainings from the private training institutes, the government training institutes also contribute significantly towards enhancing the skills of the persons in the district. Around 45% of the respondents reported that they received their trainings from the government training institutes.
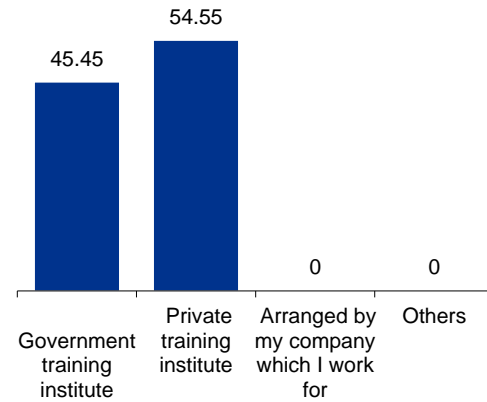
Figure 158: Type of training provider, in %

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure 160, 69% of the respondents in Osmanabad aspire to be self-employed and 31% reported a preference for being wage employed. Amongst the respondents who aspire to be wage-employed, there is a higher preference to undertake further education/ training as compared to self-employment aspirants. Additionally, there is preference for acquiring non-technical education amongst those who aspire to be wage-employed. The respondents who aspire to be self-employed laid a higher emphasis on acquiring vocational skill trainings.

Figure 159: Key Findings related to educational attainment of the labour force
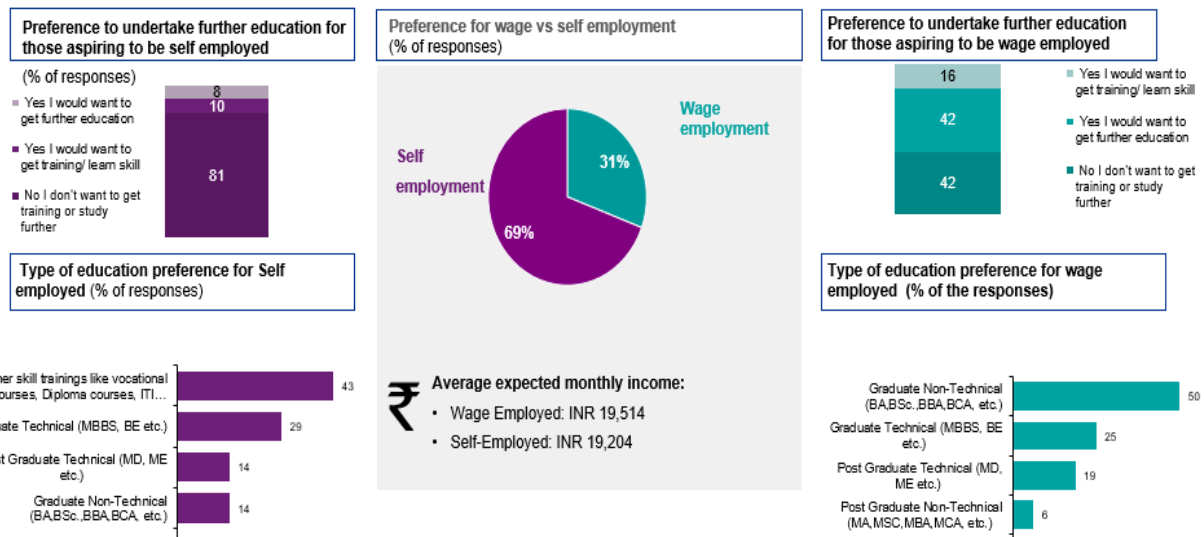
Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 382: Aspirational sub-sectors for labour force in Osmanabad

For wage employment	For self-employment
Other manufacturing	Other manufacturing
Railways	Own business/ Kirana shop

For wage employment	For self-employment
Agriculture and allied activities	Agriculture and allied activities
Governance and Administration	Art and Culture
Telecommunications	Automobiles and auto ancillaries

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Setting up own business/ kirana store, engaging in agriculture and allied activities, art and culture, automobiles and auto ancillaries.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Railways, Agriculture and allied activities, Governance and Administration, Telecommunications sub-sectors.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 19,514 and Rs. 19,204 respectively.

Additionally, all the respondents would like to work within Maharashtra. A proportion of as high as 77% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra at a lower wage. This indicates a lesser inclination among the respondents to emigrate to other regions for better economic opportunities.

Perceived benefits of acquiring training:

As large as 82% of the respondents who attended a training programme stated that they actually benefited from attending the training. The primary benefits which were highlighted by the respondents were increase in income, skill upgradation, new skill acquisition, and getting certification post the training programme. The primary challenge faced by the respondents after attending the training was difficulty in access to the job market due to inadequate employer's engagement during the training programme. It is found that among the respondents who reported not having attended any training programme, there is no awareness on any employment oriented training programs that help gain expertise/ enhance job skills.

23.5 Incremental demand and estimation of manpower supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities with the registered manufacturing sector playing only a nominal role. The trend is predictable because even at present, industry sector employs the least amount of workforce in the district. Crop and animal production, Finance and Insurance services, Human health & social work activities, Transportation, Administrative and support services, and Professional, Scientific & Technical activities are expected to be the major drivers of incremental labour demand in the district. The limited incremental registered manufacturing sector demand would be seen in the manufacture of textiles which is expected to be the highest growing sector and manufacture of food products and beverages.

Table 383: Incremental Demand estimates (2019-2028) for Osmanabad district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied	**24,791**	**25,762**
Registered Manufacturing		
Textiles	177	284
Food processing	128	134
Construction	902	947
Services		
Wholesale and Retail Trade	305	388
Transportation	3,391	4,088

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Logistics	425	513
IT/ITES	710	857
Hospitality	245	262
BFSI	967	1,258
Real Estate	193	252
Professional, Scientific & Technical Activities	505	657
Public Administration and Administrative services	5,939	7,726
Education	4,003	5,208
Healthcare	5,355	6,967
Other services	20,411	26,552
Sub Total	42,452	54,727

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1. Being an agrarian district, **agriculture sector** has a good potential with generating substantial number of manpower requirement. Within the agriculture sector, **dairy farming** was highlighted as the key emerging sector.
2. **Food processing sector** has been identified as a potential sector for the district.
3. Sericulture, goat farming, sugarcane processing, unorganized fabrication industry were identified as areas with potential employment generation

Estimation of Manpower Supply

Osmanabad district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2021, there will be 7.75 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 384: Manpower supply for Osmanabad district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Osmanabad	9,96,171	7,82,741	7,75,625

Table 385: Projected workforce by education levels

Education level	Projected work force
Illiterate	2,01,937
Literate but below matric/secondary	2,92,492
Matric/secondary but below graduate	1,68,260
Technical degree or diploma equal to degree or post-graduate degree	13,725
Technical diploma or certificate not equal to degree	4,073
Graduate and above other than technical degree	40,812
Literate others	54,326

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~24,589 annually.

Table 386: Size of target population in the district

Particular	Numbers
Enrolment in VIII	28,271
Enrolment in X	26,088
Enrolment in XII	7,815
Dropout at VIII	**4,569**
Passing out of VIII*	23,702
Students not transitioned to IX	**3,901**
Dropout at X	**7,310**
Passing out of X*	18,778
Students not transitioned to XI	**3,091**
Passing out at XII**	15,128
Students not transitioned to Higher Education	10,287
Total Target population	**24,589**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 387: Vocational Education annual capacity for Osmanabad district

Particular	Annual Capacity in Numbers
Short Term Skilling	12,810
ITI (Government & Private)	3,256

23.6 Recommendations

The economic growth of the district is predominantly driven by the secondary and tertiary sectors. Manufacturing forms the core of the employment generation activities in the district with a growth rate of more than 10% for manufacturing of food products, chemical and chemical products, machinery, motor vehicles, etc.

However, agriculture, transportation, Finance & Insurance services, public administration and defence, compulsory social security and education have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 388: Sector specific economic growth, employment potential and aspirations

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production			
Forestry & Logging			
Fishing & Aquaculture			
Food processing			
Tobacco			

Sectors	Economic Growth	Employment Potential	Aspirational
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Light Green
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Light Green
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Amber	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration and Administrative services	Green	Green	Amber
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other services	Green	Green	Amber

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Manufacturing of food products and beverages, manufacturing of paper and paper products, manufacturing of chemical and chemical products, manufacturing of machinery and equipment, Manufacture of motor vehicles, trailers and semi-trailers, manufacture of other transport equipment, Information & communication, education, human health & social activities, arts, entertainment & recreation and other service activities.
- **High incremental employment potential sectors**: Agriculture, transportation, Finance & Insurance services, Public Administration & defence, compulsory social security, education and human health & social activities.
- **High Aspiration Sectors**: Agriculture and allied sectors; Manufacturing (other sectors).

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 389: Priority sectors for MSSDS

Sl. No.	Sector	High or medium Growth	High Economic Potential	High aspiration
1	Agriculture - Crop & Animal production		✓	✓
2	Fishing & aquaculture	✓		✓
3	Transportation	✓	✓	
4	Healthcare	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Automotive
- Administrative and support services
- Public Administration & social security
- Media and Entertainment

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in Table 390. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 390: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

High demand sectors	Identified Job Roles
Agriculture and allied	- Dairy farmer - Goat farmer - Micro irrigation technician - Small poultry farmer - Green house operator
Transportation	- Transport consolidator - Courier delivery executive - Cargo surveyor - Ground operation associate - Courier branch sales executive
Healthcare	- General Duty Attendant - Home Health Aide - Diet Assistant - Emergency Medical Technician- Basic - Pharmacy Assistant

High demand sectors	Identified Job Roles
Tourism and Hospitality	• Tour Guide • Meet &Greet Officer • Tour Vehicle Driver • Travel Consultant • Front Office Associate
Food processing	• Butter and Ghee Processing Operator • Milk Powder Manufacturing Technician • Convenience Food Maker
Green Jobs	• Solar PV Installer • Solar PV Technician
Leather & Garment Making	• Scudding Operator (Machine) • Skiving Operator (Machine) • Sewing Machine Operator

24. Palghar

24.1 About the district

Palghar district is located on the Konkan division and on August 01, 2014 became the 36th district of Maharashtra.

Palghar District has 9,558 sq.km of the total geographical area in a total 1008 villages and a total of 8 talukas - Jawhar, Mokhada, Talasari, Vasai, Vikramgad, Palghar, Dahanu and Wada. The original district is comprised of around 112km of linear sea rays and according to geographical structure the district generally falls in three departments - Sahyadri Mountain, known by the name 'jangalapatti'; the second known by 'bandarpatti' and the third section known by the plain land.

Well connected through roads, highways, railways, Palghar district is a popular destination among tourists for the rich Culture and Heritage Value, such as the Jawhar Rajwada, Arnala Fort, Vasai Fort and Gambhirgad. Besides, it also some known beaches such as Kelva Beach and Arnala Beach Religious Temples like Jidvani Temple and Mahalakshmi Temple Dahanu.

Table 391: Comparison of Palghar District with Maharashtra

Indicator	Palghar[1]	Maharashtra
Area in sq. km.	9,558	3,07,713
Percentage share in State geographical area, %	3.1%	100%
No. of Sub-districts	15	353
No. of inhabited villages	1,704	40,959
No. of households	25,16,599	2,44,21,519
Forest area as a % of total geographical area	37.1%	16.94%

Data contains Thane + Palghar numbers from Census 2011
Source: Census 2011

24.2 Demography

Total population of Palghar is around 29,90,116, and the district is more rural dominated as the urban population is 13,52,283 and the rural population is 16,43,145. The literacy rate of the district is lower than the state's, and with a noticeable gap between male and female literacy, the numbers stand at 66.6% district literacy rate at 66.65%, with male percentage at 72.23% and female literacy rate is 59.28%.

Table 392: Demographic Indicators of the district

Indicator	Palghar[1]	Maharashtra
Population, No.	1,10,60,148	11,23,74,333
Decadal growth rate of population, %	35.94%	16%
Urban Population as a percentage of total population, %	77%	45.2%
SC Population, %	6.60%	10.2%
ST Population, %	13.95%	8.8%
Sex ratio, No. of females per 1000 males	886	925
Population density, per sq.km.	1157	365
Literacy rate, %	84.53%	83%
Working age population* as a percentage of total population, %	67%	59%
Work participation rate^, %	41%	44%
HDI Index	0.800	0.75

*Data contains Thane + Palghar numbers from Census 2011*
*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

As can be seen in figure 161, almost 18% of the population is engaged in primary activity, followed by 32% in secondary and almost 50% in tertiary activities. The % of workforce in secondary and tertiary sector is

much higher than the state's total % in these sectors. Palghar' s unemployment (per 1000) in rural areas is higher than the state unemployment rate, however the urban unemployment is half of the state average, and male and female unemployment is 66% of the state unemployment. The prevalence of the industry and tertiary sector can be identified as the major contributing factor to lower unemployment rate in urban areas.

Figure 160: Share of workforce & Employment Rate for District
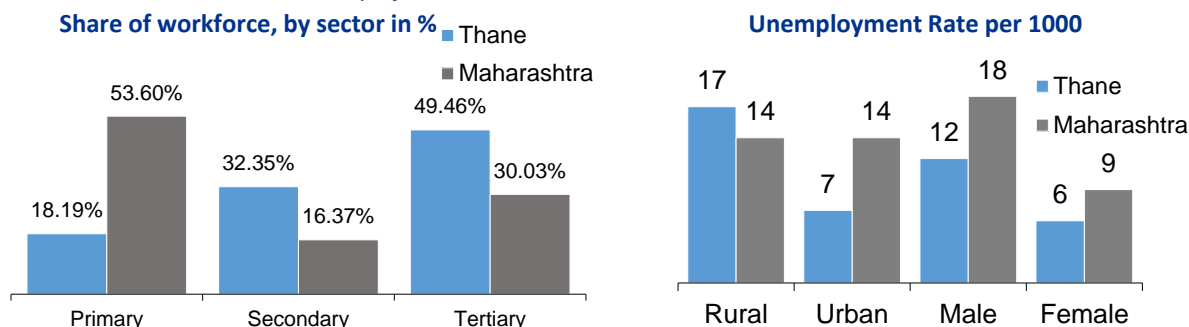
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 161: Type of employment in the district
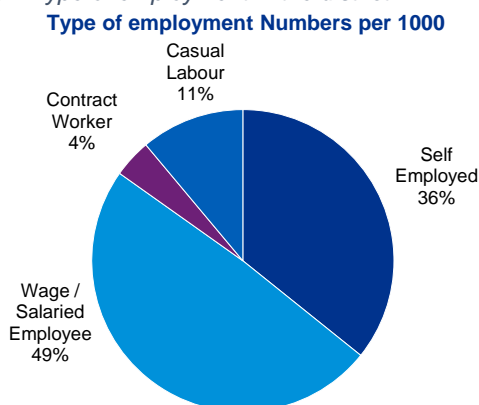
Source: Ministry of Labor & Employment

As can be seen in figure 162, a significant proportion of the workforce is reported to be wage / salaried employed (49%), which is the second highest in the state after Mumbai, followed by self-employed, casual labor and then contract labor.

In addition to above, the major sub-sectors which provide maximum employment in registered manufacture sector are manufacture of textiles, of fabricated metal products, except machinery and equipment, and manufacture of pharmaceuticals

Education Profile of the District:
Traditional Education:

Palghar district has a total of 3,754 schools which includes primary, upper primary, secondary and higher secondary with an enrolment of 7,46,673 students and a student teacher ratio is 29. The Net Enrolment Ratio at secondary level is 40.9. The district also has 54 general and technical colleges in the district with the enrolment of 58,000 students.

Table 393: Education Profile of District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	3,170	5,63,167
Secondary (9-12th)	584	1,83,506
Colleges (General and Technical)	54	58,000[46]

Source: AISHE, U-DISE

---

[46]Enrolment figures at State run general and technical education colleges only

Vocational Education:

Palghar district has 1 government/ private ITI with where no students are currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Banking and Accounting, Healthcare, Soft Skills and Production and Manufacturing.

Particular	Number
ITIs (Government & Private)	1
Trainee Count	0

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 4,674 students are trained annually in the district under the scheme. Top Sectors include Garment making, Information and Communication Technology, Banking and accounting, and Production and Manufacturing. Table below illustrates sector-wise annual training numbers in the district.

Sectors	Trained
Information and Communication Technology	1,247
Garment Making	2,019
Banking and Accounting	319
Beauty Culture and Hair Dressing	150
Production and Manufacturing	220
Fabrication	140
Electrical	164
Agriculture	20
Automotive Repair	199
Remaining Sectors	196
Total	**4,674**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Trainings are offered by private training centers in the district across various courses for enhancing the skills of the persons.

24.3 Economy

As of 2016-17, Palghar district (along with Thane) had the 4th highest Gross District Domestic Product (at current prices) (GDDP) in the state at INR 2,84,685 crores. The per capita income of the district is INR. 2,36,199.

The economy of Palghar has been largely primary and tertiary sector, but with the emergence of Boisar as an industrial town the concentration of industries has increased in Boisar and reduced in other towns of Palghar. Therefore, the district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 66% towards the GDDP, secondary sector 33% and primary sector 01%.

Figure 162: Sector Wise GDDP Distribution of district
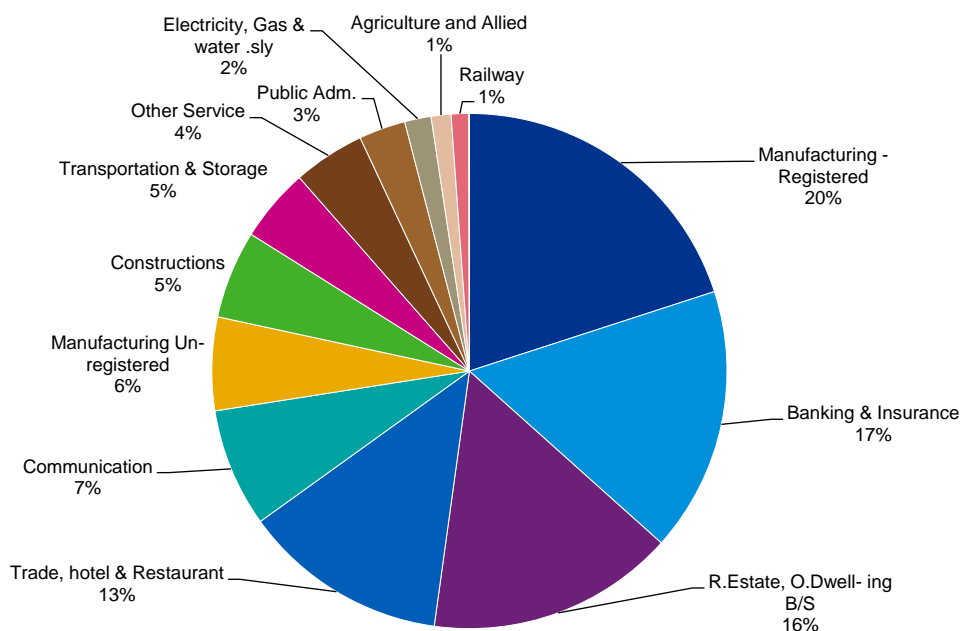
As shown above in figure 163, Tertiary Sector, which is the largest contributor towards the GDDP encompasses of services such as by banking and insurance leading the sector by a contribution of 17%, followed by Real Estate, and Trade, Hotel and Restaurant at 16% and 13% respectively, followed by other contributing services, such as communication, transportation and storage and public administration, with 07%, 05% and 03% contribution respectively.

In Palghar, agriculture, animal husbandry, dairy and fisheries are practiced in abundance in the rural areas around the city and acts as a fuel the economy of the city. The main crops for agriculture are rice, ginger millet and turmeric; from forest collecting firewood, honey and medicinal plants etc. are secondary products. Jawhar, Mokhada & Vikramgad Mountain are the main forest areas, where the main business is of farming. In port strip areas the major business is fishing, based on drying fish, prawn culture etc.

Under the industrial sector which contributes second highest to the GDDP of the economy, in Palghar District one Maharashtra Industrial Development Corporation(MIDC) has been developed, three Government Cooperative industrial colonies, 5757 small registered Industries, 1883 temporary small registered industries and 427 large/medium industries exist. With the help of Government the three industrial cooperative colonies have been setup that are: The Palghar Taluka Cooperative limited Industrial colonies, Taluka Palghar; The Vasai Taluka Cooperative limited Industrial colonies, Taluka Vasai and Priyadarshini Cooperative limited Industrial colonies, Taluka Wada. In Boisar, Maharashtra Industrial Development Corporation, the Industrial Department of Tata Steel, JSW Steel, Viraj Steel, such factories produce steel and de-decor, Siyaram like clothes producing companies exists. From this small and large scale businesses and industries there is wide possibility of of job opportunities available. The Wada Taluka has been assigned as the 'D' class industrial level, with factories like Onida, Coca-Cola. In Vasai Taluka Vasai, Virar, Nallasopara, small as well as large industrial areas have developed. And Dahanu Taluka chinchani, Tarapur has major businesses in traditional Dye makings.

Manufacture of textiles is the largest industry employing over 23000 people, with sub sector – Weaving of Textiles employing 41% of the people in companies like Siyaram Silk Mills Industries, followed by finishing of textiles employing 27% people and manufacture of made-up textile articles, except apparel sub sector employing over 4500 people. Besides these sub sectors, few other noteworthy sub sectors creating livelihood opportunities include - Preparation and spinning of textile fibres, Manufacture of knitted and crocheted fabrics and Manufacture of cordage, rope, twine and netting, with leading the employers list**.**

Manufacture of chemicals and chemical products is the second highest sub-sector, with manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations taking lead by employing around 62% of the people employed in the sector at companies such as Anush Pharma Ltd. and Custom Capsules P. Ltd. The other sub sectors employing people include manufacture of basic chemicals manufacture of other chemical product, manufacture of paints, varnishes and similar coatings, printing ink and mastics and manufacture of plastics and synthetic rubber in primary forms

Manufacture of fabricated metal products, except machinery and equipment is the third largest sector in the industry, with Manufacture of other fabricated metal products contributing 69% to the employment space, followed by Manufacture of cutlery, hand tools and general hardware, and Manufacture of structural metal products

Table 394: Major Industries in registered manufacturing

Major Industries in registered manufacturing	Employment
Manufacture of basic metals	61,958
Manufacture of chemicals and chemical products	27,345
Manufacture of textiles	23,628
Manufacture of fabricated metal products, except machinery and equipment	11,519
Manufacture of wearing apparel; dressing and dyeing of fur	6,961
Manufacture of rubber and plastics products	6,093
Manufacture of machinery and equipment n.e.c.	5,640

More sectors supplementing job creation opportunities in the district include manufacture of wearing apparel; dressing and dyeing of fur, manufacture of rubber and plastics products and manufacture of machinery and equipment n.e.c.

Investments in the districts:

Palghar district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Conventional electricity, Road transport infrastructure services and Housing construction are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Sector Name	Proposed Investment (in INR Million)	No of projects
Conventional electricity	2,55,750	3
Railway transport infrastructure services	1,06,990.4	8
Housing construction	38,000	42
Road transport infrastructure services	17,176.4	5
Retail trading	12,000	1
Organic chemicals	6,001.6	4
Pesticides	2,270.6	1
Steel	1,200	2

| Sector Name	Proposed Investment (in INR Million)	No of projects
Transport logistics services	460.6	1
Dyes & pigments	350	2
Others	635.9	12
Total	**4,40,835.5**	**81**

Source: CMIE

24.4 Labor force Aspiration

The main findings of the youth aspirations include:

Respondent Profile

Table 395: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	53%
	Rural	47%
Gender Profile	Male	81%
	Female	19%
Age Group	15-25 years	53%
	26-35 years	33%
	36-45 years	12%
	46-55 years	01%
	56-59 years	01%
Educational Level	Up to Xth	65%
	Up to XIIth	27%
	Any Graduation	09%
Occupational Profile	Worker	61%
	Non-Worker	39%
Average monthly household income for those working (INR)		10,851

Figure 163: Past/Current participation in training (in %)

- ■ Have attended in the past
- ■ Currently Attending
- ■ Have not attended
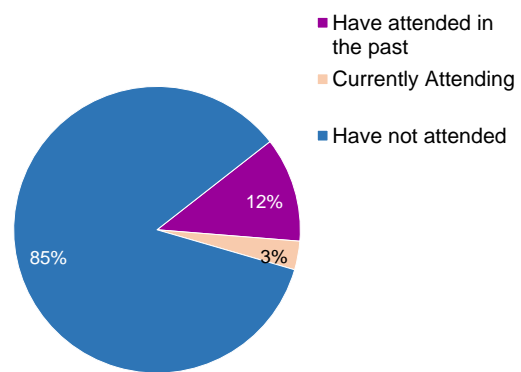
As can be seen in figure 164, most respondents (85%) shared that they have not attended any technical/ non-technical job related training in the past. 12% reported that they have undergone trainings in the past and 3% are currently attending the training. It is of significance to know that amongst those who did not attend the training, 80% were not aware about the training being organized. Of those who underwent vocational training in the past, the maximum trainings (~41 %) were attended at company where the worker is employed, followed by Private training institutes, and then Government training institutes.

Figure 164: Type of training provider (in %)
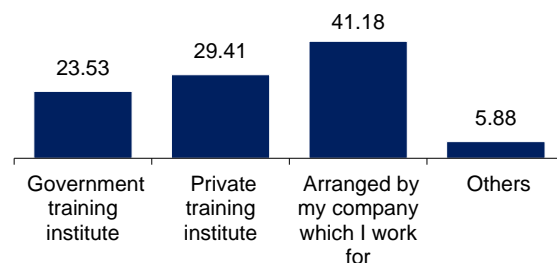
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 166, in the district, majority (63%) of the respondents aspire to be self-employed and 37% reported a preference for being wage-employed. This preference can be seen also because of a high difference in the average expected monthly income, which is higher in self-employment as compared to wage employment by almost 50%. Amongst the respondents, a higher % of self-employment aspirants (38%) are keen on undertaking further training as compared to wage employment, where it is only 30%. The preference is towards attending Graduate Non – Technical Training under both the categories.

Figure 165: Key Findings related to educational attainment of the labor force

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 396: Aspirational sub-sectors for labor force

For Wage Employment	For Self-Employment
Others	Others
Agri & Allied	Retail
Food Processing	Food Products & Handicrafts
Auto & Auto Components	Beauty Parlors/Spa/Salons
Others	Fabrication

Maximum respondents chose 'other' sectors for their employment. To elaborate, under self-employment, the preference was for housekeeping, followed by Beauty, Hair & Personal Health, Carpenter Work and Manual Wage labor. Under wage employment, the preference was for Beauty, Hair & Personal Health or opening a kirana store.

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop for grocery/stationery/medical shop/pan shop or clothes or working on handicraft products from home. Additionally, 96% of the respondents shared that they would like to work within Maharashtra, but 46% said they are willing to work out of Maharashtra if they are paid higher.

Perceived benefits of acquiring training:

93% of those who attended a training programme stated that they benefited from attending the training. Among those who did benefit from the training, majority stated increase in income as the main benefit and some stated possibility of moving to a new sector. There were certain challenges that the respondents highlighted after receiving the training, such as poor engagement of employers during the training program and gap in the skills expected by the employers that were not matched even after attending such programs.

24.5 Incremental demand and estimation of manpower supply

Transportation and financial and insurance are expected to be the major drivers of incremental labor demand in the district. The incremental registered manufacturing sector demand is concentrated in sub sectors of Manufacture of machinery and equipment n.e.c, Manufacture of fabricated metal products, except machinery and equipment, Manufacture of textiles and Manufacture of wearing apparel; dressing and dyeing of fur.

Table 397: Incremental Demand estimates (2019-2028) for Palghar district; in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	33,027	34,321
Forestry & Logging	116	121
Fishing & Aquaculture	82	85
Sub Total	33,225	34,526
Registered Manufacturing		
Textiles	15,722	25,238
Apparel	2,185	2,836
Chemicals and Pharmaceuticals	3,342	3,741
Rubber and Plastics	199	206
Iron and Steel	2,967	3,108
Fabricated Metal products (except machinery and equipment)	23,391	22,838
Machinery and Equipment	29,397	37,539
Construction	14,619	15,345
Services		
Wholesale and Retail Trade	7,197	9,142
Transportation	85,902	1,03,565
Logistics	10,778	12,994
IT/ITES	18,000	21,700
Hospitality	4,698	5,012
BFSI	39,374	51,220
Real Estate	7,875	10,244
Professional, Scientific & Technical Activities	20,571	26,760
Public Administration and Administrative and services	1,83,208	2,38,329
Education	39,033	50,776
Healthcare	52,213	67,922
Other services	1,91,424	2,49,017

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Other Services	7,197	9,142
Sub Total	**4,54,692**	**5,79,630**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing
The estimates for Agriculture and allied and Services are for Thane and Palghar combined

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Garment Making
- Food Processing
- Healthcare
- Aviation

Estimation of Manpower Supply

Palghar district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 47.08 lakh labor force participating in the labor market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 398: Manpower Supply for Palghar District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Palghar[1]	96,36,273	48,03,185	47,08,593

1. *Data Contains Thane + Palghar*

The workforce is further split across the educational attainment within the district as shown below in the Table 399.

Table 399 Educational Attainment of projected workforce

Educational Level	Projected Workforce
Illiterate	8,33,730
Literate but below matric/secondary	14,72,588
Matric/secondary but below graduate	12,76,303
Technical degree or diploma equal to degree or post-graduate degree	1,59,898
Technical diploma or certificate not equal to degree	68,726
Graduate and above other than technical degree	6,12,838
Literate others	2,84,508

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~44,695 annually.

Table 400: Size of target population in the district

Particular	Numbers
Enrolment in VIII	70,280
Enrolment in X	50,726
Enrolment in XII	16,061

Particular	Numbers
Dropout at VIII	**9,242**
Passing out of VIII*	61,038
Students not transitioned to IX	**10,047**
Dropout at X	**7,599**
Passing out of X*	43,127
Students not transitioned to XI	**7,099**
Passing out at XII**	29,339
Students not transitioned to Higher Education	19,950
Total Target population	**44,695**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Particular	Annual Capacity in Numbers
Short Term Skilling	4,830
ITI (Government & Private)	40

24.6 Recommendations

Palghar, being one of the newly formed district is predominantly driven by primary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 401: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	🟥	🟧	🟩
Forestry & Logging	🟥	🟥	🟩
Fishing & Aquaculture	🟧	🟥	🟩
Food processing	🟩	🟥	🟩
Tobacco	🟩	🟥	🟥
Textiles	🟧	🟩	🟥
Apparel	🟧	🟥	🟥
Leather	🟥	🟥	🟥
Wood work	🟥	🟥	🟥
Paper and Paper products	🟩	🟥	🟥
Publishing, printing and recorded media	🟧	🟥	🟥
Hydrocarbons	🟥	🟥	🟥
Chemicals and Pharmaceuticals	🟩	🟧	🟥
Rubber and Plastics	🟧	🟥	🟥
Non-metallic mineral products	🟥	🟥	🟥
Iron and Steel	🟥	🟧	🟥

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Metal products (except machinery and equipment)	Amber	Green	Red
Machinery and Equipment	Green	Green	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Amber
Hospitality	Amber	Red	Red
BFSI	Amber	Amber	Red
Real Estate	Green	Red	Amber
Professional, Scientific & Technical Activities	Green	Red	Red
Administrative and Support services	Green	Green	Red
Education	Green	Amber	Red
Healthcare	Green	Green	Red
Other services	Green	Green	Amber

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses- Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Transportation, Finance & Insurance activities, Public Administration Education and Healthcare.
- **High Aspiration Sectors**: Agriculture & Allied and Food Processing

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 402: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture & Allied	✓	✓	✓
2	Machinery & Equipment		✓	✓
3	Automotive	✓	✓	
4	Healthcare	✓	✓	
5	Textiles	✓	✓	
6	Chemicals and Pharmaceuticals	✓	✓	
7	IT & ITeS	✓		✓
8	BFSI	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Agriculture and Allied
- Real Estate
- Transportation
- Media and Entertainment
- Administrative & Other Support services
- Food processing
- Other services

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 403. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers

Table 403: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

Sector Name	Top Job Roles
Healthcare	General Duty Attendant
	Home Health Aide
	Diet Assistant
	Emergency Medical Technician- Basic
	Pharmacy Assistant
Agriculture & Allied	Goat Farmer
	Dairy Farmer
	Micro Irrigation Technician
	Quality Seed Grower
	Small Poultry Farmer
BFSI	Accounts Executive (Accounts Payable & Receivable)
	Business Correspondent & Business Facilitator
	ATM Operator
	Debt Recovery Agent
	Insurance Agent
Machinery & Equipment	Fitter- Mechanical Assembly
	Manual Metal Arc Welding

Sector Name	Top Job Roles
	CNC Operator
	Draughtsman- Mechanical
	Lab Technician- Metal Tester
Automotive	Vehicle Assembly Fitter/ Technician
	Automotive Service Technician
	Maintenance Technician Mechanical
	Auto Component Assembly Fitter
	Automotive Engine Repair Technician
Textiles and Apparel	Fitter- Spinning Preparatory
	Knitting Machine Operator
	Loom Fitter
	Sewing Machine Operator
	Assistant Ginning Fitter

25. Parbhani

25.1 About the district

Parbhani district is located in the center of the Maharashtra state with district headquarters in Parbhani City. The district is divided into 9 sub-districts and 830 inhabited villages.

Parbhani has a total land area of 6,214 sq.km and constitutes 2.02% of the total state area. Situated in the eastern side of Aurangabad region, it is bordered by Hingoli on the north, Nanded on the east, Latur on the south and Beed and Jalna on the west (Table 404). The district is well connected by railways and roads to bigger cities such as Mumbai, Jalgaon, Nagpur and Hyderabad, making markets accessible and helping foster trade and businesses.

Known as the Land of Saints, this district is a popular destination among tourists because of the presence of dargags, forts and religious temples. With only 0.79% of forest cover, Parbhani is not rich in natural resources and dense forests.

Table 404: Comparison of Parbhani District with Maharashtra

Indicator	Parbhani	Maharashtra
Area in sq. km.	6,214	3,07,713
Percentage share in State geographical area, %	2.02%	100%
No. of Sub-districts	9	353
No. of inhabited villages	830	40,959
No. of households	3,60,186	2,44,21,519
Forest area as a % of total geographical area	0.79%	16.94%

Source: Census 2011

25.2 Demography

According to latest census data, the density of population in Parbhani is 295 persons/sq. km. The district is rural dominant with a population of nearly 18.3 lakh persons residing in the rural areas. Parbhani has literacy rate of 73.34%, which is lower than the state average of 82.91%, but, it has a sex ratio (no. of females per 1000 males) of 947, which is higher than the state average of 925. While 51% of the population in the district is in the working age group (i.e. 15-59 years), about 45% is actually working i.e. % of total workers (main and marginal workers) to the total population. The district has an HDI of 0.75, which is higher than that of India and of many other districts.

Table 405: Demographic Indicators of Parbhani district

Indicator	Parbhani	Maharashtra
Population, No.	18,36,086	11,23,74,333
Decadal growth rate of population, %	20.19%	16%
Urban Population as a percentage of total population, %	31.03%	45.2%
SC Population, %	1.86%	10.2%
ST Population, %	0.39%	8.8%
Sex ratio, No. of females per 1000 males	947	925
Population density, per sq.km.	295	365
Literacy rate, %	73.34%	83%
Working age population* as a percentage of total population, %	51%	59%
Work participation rate^, %	44.81%	44%
HDI Index	0.683	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 8.23 lakh persons, out of which nearly 74.89% of workers are engaged in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), which can be explained by the rural dominant nature of the district. 7.49% of workers are engaged in secondary sector and 17.62% workers are working in tertiary sector. As shown in Figure 167 below, Parbhani's unemployment (per 1000) in rural areas is half of the state average, whereas in urban areas it is approximately 64% higher than the state average. Additionally, if we compare male and female unemployment rate (per 1000) of Parbhani to the state, male unemployment rate is similar to the state average, whereas the female unemployment rate is slightly lower to the state average.

Figure 166: Share of workforce & Employment Rate for Parbhani district
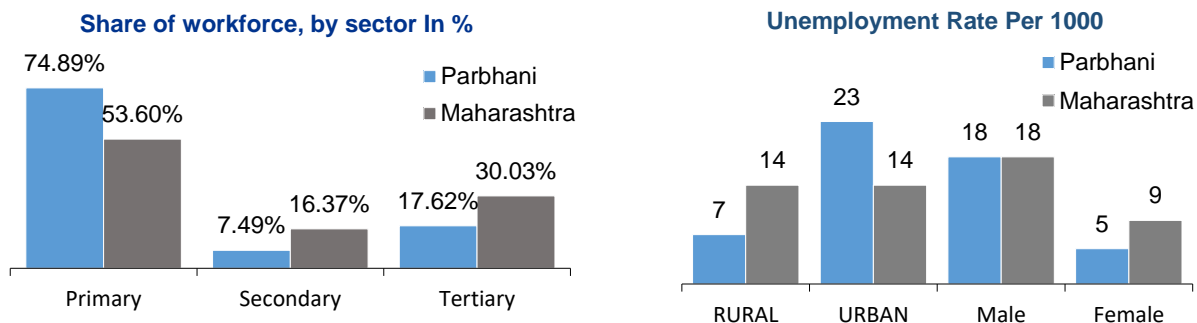
Share of workforce, by sector In %

Source: Census 2011

Unemployment Rate Per 1000

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 167: Type of employment in Parbhani district
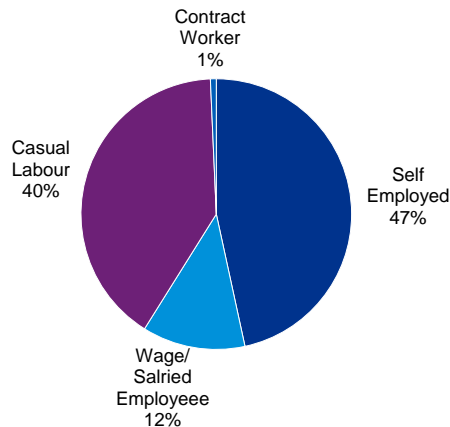
Source: Ministry of Labor & Employment

As can be seen in figure 168, significant proportion of the workforce is reported to be self-employed (47%) in the district, followed by 40% casual workers, 12% salaried/wage employed and 1% contract workers. The % of employment in casual labor is significantly high as compared to that of many other districts, and the dependence on agricultural activities could be a dominant reason for such hour based job engagement.

In addition to above, the major sub-sectors which provide maximum employment in registered manufacturing are manufacture of food products, electricity, gas, steam and air conditioning supply, manufacture of beverages, of rubber and plastics, of textiles, production of other non-metallic mineral products and of coke and refined petroleum products.

Education Profile of the District:

Traditional Education:

Parbhani district has a total of 2,436 schools, which includes primary, upper primary, secondary and higher secondary, and an enrolment of 4.19 lakh students with a student teacher ratio of 25. A significant decline of 63% can be observed in the enrollment of students from primary to secondary schools.

The district also has 77 general and technical colleges in the district with the enrolment of 20,000 students.

Table 406: Education Profile of Parbhani district

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1,871	3,06,922
Secondary Schools (IX to XII)	565	1,12,872
General Colleges & Technical Education	77	20,000

Source: AISHE, U-DISE

Vocational Education:

Parbhani district has a total of 11 government and private ITIs with 1,547 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Garment Making, Beauty Culture and Hair Dressing and Fashion Design.

Table 407: Total no. of ITI and there training number in Parbhani district

Particular	Number
ITIs (Government & Private)	11
Trainee Count	1,547

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 20,161 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment making, Fashion design, and Beauty culture and hair dressing. Table below illustrates sector-wise annual training numbers in the district.

Table 408: Sector wise short- term skilling trained numbers in PMKUVA for Parbhani district

Sectors	Trained
Garment making	5,308
Information and communication technology	6,122
Fashion design	2,867
Beauty culture and hair dressing	2,387
Banking and accounting	1,055
Electrical	270
Soft skills	90
Construction	297
Medical and nursing	177
Industrial electrical	540
Business and commerce	30
Insurance	30
Remaining sectors	300
Total	**20,161**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment trainings are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Trainings are offered by private training centers in the district across various courses for enhancing the skills of the persons.

25.3 Economy

As of 2016-17, Parbhani district had the 26th highest Gross District Domestic Product (GDDP) (at current prices) in the state at INR 19,902 crores. The per capita income of the district is INR.1,02,373.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 62% towards the GDDP, followed by primary sector with 24% and secondary sector contributing 14%.
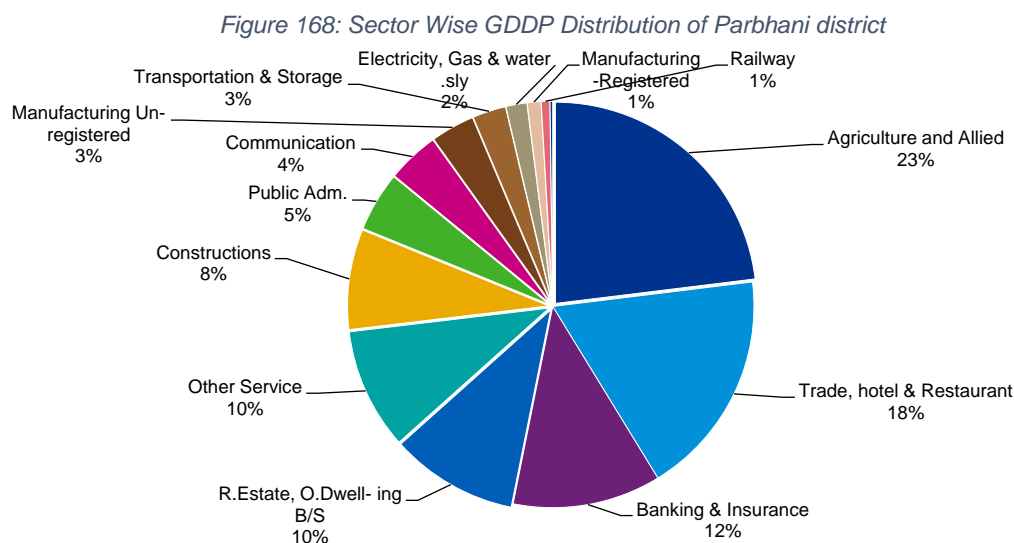
Figure 168: Sector Wise GDDP Distribution of Parbhani district

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

As shown above in figure 169, Tertiary Sector, which is the largest contributor towards the GDDP, encompasses of services such as Trade, Hotel & Restaurant leading the sector by a contribution of 18%, followed by banking and insurance at 12%, real estate, ownership of dwellings and business service at 10%, and other contributing services, such as public administration, communication, transportation and storage with 10%, 10%, 5% and 4% contribution respectively.

Agriculture sector is of paramount relevance to the Parbhani economy as more than 76% of the workforce is engaged in agriculture and allied activities, which contributes to 23% of the GDDP in the district. The major crops cultivated in the district are cotton, sorghum, soya bean, green gram, black gram and pigeon pea, with cotton having the highest land under cultivation within the district.

Parbhani district has 7 registered large and medium enterprises which employs approximately 2139 persons and has nearly 814 Micro, Small and Medium Enterprises (MSME) employing nearly 10,000 persons. The major manufacturing industries of the district include - Manufacture of Food Products and Beverages and Manufacture of Textiles (Table 409).

Manufacture of food products and beverages is the largest employer in the industry, with Manufacture of Sugar employing almost 70% of the people employed in the industry, in companies such as Yogeshwari Sugar Industries Ltd., Gangakhed Sugar & Energy Pvt. Ltd. and Baliraja Sakhar Karkhana Ltd. The remaining 30% of the people are engaged in sub sectors, namely, Processing and Preserving of Fruit and Vegetables, Manufacture of Vegetable and Animal Oils and Fats, Manufacture of Grain Mill Products and Distilling, Rectifying and Blending of Spirits. .

Manufacture of textiles is the second largest industry employing over 100 people in Manufacture of Cordage, Rope, Twine and Netting sector, majorly employed by Manorama Ropes India Pvt.Ltd.

Table 409: Major Industries in registered manufacturing

Major Industries in registered manufacturing	Employment
Manufacture of food products and beverages	1523
Manufacture of textiles	130
Manufacture of rubber and plastics products	44
Manufacture of other non-metallic mineral products	14
Manufacture of coke, refined petroleum products and nuclear fuel	4

Source: Annual Survey of Industries 2017-18

More sectors supplementing job creation activities in Parbhani include Manufacture of Rubber and Plastics Products, Manufacture of Other Non-Metallic Mineral Products and Manufacture of Coke, Refined Petroleum Products and Nuclear Fuel.

Investments in the districts:

Parbhani district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Irrigation, Railway transport infrastructure services and Sugar are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 410: Sector wise investments in Parbhani District

Sector Name	Proposed Investment (in INR Million)	No of projects
Irrigation	23,416.7	1
Railway transport infrastructure services	10,839.1	4
Sugar	7,777.1	3
Renewable electricity	4,340	3
Road transport infrastructure services	4,202	3
Cloth	3,000	2
Other agricultural products	423	2
Electricity transmission	85.9	2
Others	0	3
Total	**54,083.8**	**23**

Source: CMIE

25.4 Labor force Aspiration

The main findings of the youth aspirations include:

**Respondent Profile**

Table 411: Distribution of Respondents for Parbhani district

Profile	Details	
Urban vs. Rural	Urban	48%
	Rural	52%
Gender Profile	Male	76%
	Female	24%
Age Group	15-25 years	55%
	26-35 years	28%
	36-45 years	8%
	46-55 years	8%
	56-59 years	0%
Educational Level	Up to Xth	54%
	Up to XIIth	31%
	Any Graduation	15%
Occupational Profile	Worker	64%
	Non-Worker	36%
Average monthly household income for those working (INR)		6,123

Figure 169: Past/Current participation in training (in %)

- Have attended in the past
- Currently Attending
- Have not attended

6%
4%
90%
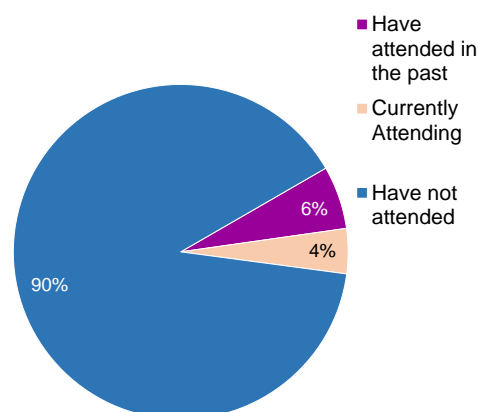
As can be seen in figure 170, majority respondents (90%) expressed that they have not attended any technical/ non-technical job related training in the past. 6% reported that they have undergone trainings in the past and 4% shared that they are currently enrolled for training. It is of significance to know that amongst those who did not attend the training more than 60% were informed (through word of mouth or newspapers) about the training being conducted, but did not attend either due to physical distance or due to high fees.

Of those who underwent vocational training in the past, ~58 % trainings were attended at Private Training Institutes, approximately 32% were arranged by the company for which the respondent worked and the remaining 10% were organised through government training institutes.

Figure 170: Type of training provider (in %)
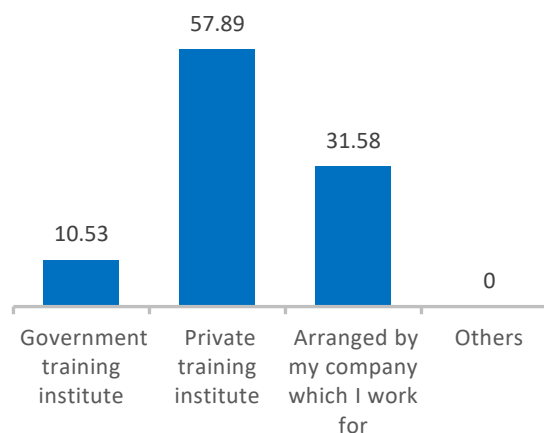
57.89
31.58
10.53
0

Government training institute | Private training institute | Arranged by my company which I work for | Others

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 172, in the district, majority (70%) of the respondents aspire to be self-employed and 30% reported a preference for being wage employed. This preference can be due to the difference in the average expected monthly income, which is higher in self-employment as compared to wage employment. Amongst the respondents, a slightly higher percentage of the self-employment aspirants have a preference to undertake further education and training.

Additionally, there is preference for acquiring vocational education amongst both wage and self-employed respondents.

Figure 171: Key Findings related to educational attainment of the labor force for Parbhani district
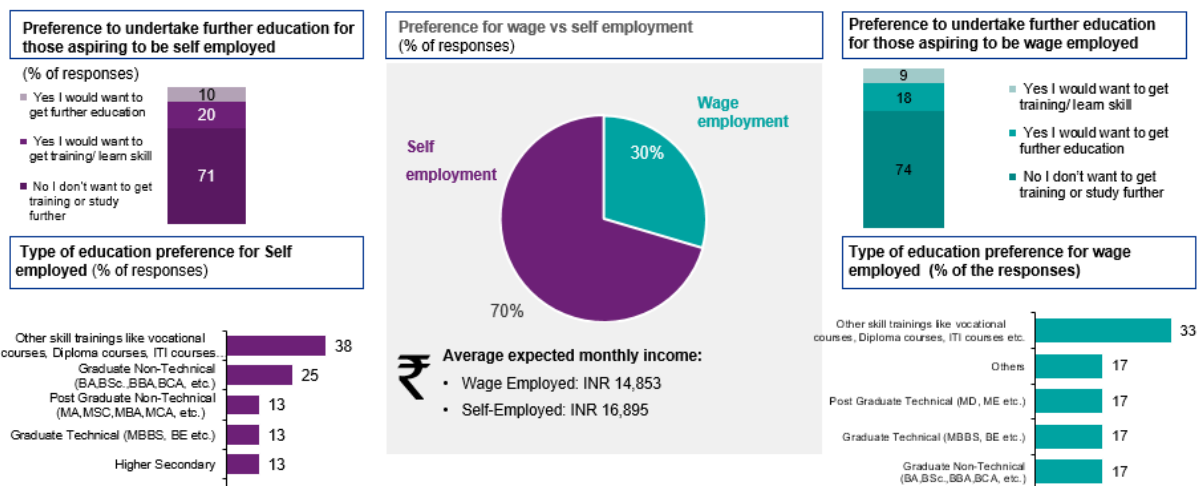
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 412: Aspirational sub-sectors for labor force

For wage employment	For self-employment
Agriculture and allied activities	Retail
Retail	Silk based business
Food Processing	Agriculture and allied activities
Art and Culture	Fabrication
Governance and Administration	
Cement	

Some respondents chose 'other' sectors which included preferences for opening a kirana store or working as a housekeeping staff. For those aspiring to be self - employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop for grocery/stationery/medical shop/pan shop or clothes. Additionally, 100% of the respondents shared that they would like to work within Maharashtra, from which 37% also confirmed working for a lower wage if the employment is within the state.

Perceived benefits of acquiring training:

75% of those who attended a training programme stated that they benefited from attending the training and majority stated increase in income as the main benefit, followed by possibility of moving to a new sector as another advantage. There were certain challenges that the respondents highlighted after receiving the training, out of which the ones which got the highest response included – poor employer engagement during the training program and lack of such training programs in-house.

25.5 Incremental Demand & estimation of manpower supply

Crop and Animal Production, Transportation Services, Construction Services, Financial and Insurance Services and Healthcare are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sector of Manufacture of Textiles.

Table 413: Incremental Demand estimates (2019-2028); in persons for Parbhani district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	25,319	26,311
Forestry & Logging	89	92
Fishing & Aquaculture	63	65
Sub Total	**25,470**	**26,468**
Registered Manufacturing		
Textiles	86	139
Construction	**1,728**	**1,814**
Services		
Wholesale and Retail Trade	536	680
Transportation	3,731	4,498
Logistics	468	564
IT/ITES	782	942
Hospitality	323	344
BFSI	1,197	1,558
Real Estate	239	312
Professional, Scientific & Technical Activities	626	814
Public administration and administrative services	6,538	8,505
Education	4,452	5,791
Healthcare	5,955	7,747
Other Services	17,887	23,269
Sub Total	**42,733**	**55,023**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified that are expected to generate job opportunities in the district:

- Sugar Industry
- Tourism & Hospitality, due to presence of forts and religious temples in the district
- Auto & Auto Components, Cold Storage, Transportation, Food Products & Milk Products processing, Healthcare and Solar Power sector.

Estimation of Manpower Supply

According to KPMG estimates, Parbhani district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2021, there will be 7.37 lakh work force participating in the

labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 414: Manpower Supply for Parbhani district

District name	Projected Working population (2023)	Projected labor force (2023)	Projected workforce (2023)
Parbhani	11,60,722	7,51,635	7,37,868

The workforce is further split across the educational attainment within the district as shown below in table 415.

Table 415: Projected workforce by education levels for Parbhani district

Education level	Projected work force
Illiterate	2,39,751
Literate but below matric/secondary	3,08,227
Matric/secondary but below graduate	1,14,802
Technical degree or diploma equal to degree or post-graduate degree	10,883
Technical diploma or certificate not equal to degree	2,285
Graduate and above other than technical degree	30,513
Literate others	31,406

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~29,891 annually.

Table 416: Size of target population in the district

Particular	Numbers
Enrolment in VIII	37,617
Enrolment in X	32,417
Enrolment in XII	9,382
Dropout at VIII	**4,901**
Passing out of VIII*	32,716
Students not transitioned to IX	**5,385**
Dropout at X	**7,093**
Passing out of X*	25,324
Students not transitioned to XI	**4,168**
Passing out at XII**	19,477
Students not transitioned to Higher Education	13,244
Total Target population	**29,891**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 417: Vocational Education annual capacity for Parbhani district

Particular	Annual Capacity in Numbers
Short Term Skilling	24,990
ITI (Government & Private)	2,868

25.6 Recommendations

Parbhani, is an agrarian district, whose economy is significantly driven by primary and tertiary sectors with opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 418: Sector specific economic growth, employment potential and aspirations for Parbhani district

Sector	Economic Growth	Employment Potential	Aspirational
Agriculture and Allied Activity	Red	Green	Green
Forestry & Logging	Red	Red	Red
Fishing & Aquaculture	Amber	Red	Red
Food processing	Green	Red	Amber
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Amber
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Green
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public administration and administrative services	Amber	Green	Amber

Sector	Economic Growth	Employment Potential	Aspirational
Education			
Healthcare			
Other Services			

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development in the district:

- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of Motor Vehicles, Trailers & Semi-Trailers, Professional, Scientific & Technical Activities, Education, Healthcare, Manufacture of Chemical & Chemical Products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Agriculture and Allied, Transportation, Public Administration and Administrative Services, Healthcare, Media And Entertainment and Other Services
- **High Aspiration Sectors**: Agriculture and Wholesale and Trade.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors, which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the Skill Gap Study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 419: Priority sectors for MSSDS for Parbhani district

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture and allied		✓	✓
2	Food processing	✓		✓
3	Automotive	✓		✓
4	Automotive (Transport equipment)	✓		✓
5	Wholesale and Retail	✓		✓
6	Healthcare	✓	✓	✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Education
- Other Services (includes Media and entertainment)
- Public Administrative and Administrative Services

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation (as presented above) are shown below sector-wise in table 420. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes and the primary inputs received while consulting various district officials and employers.

Table 420: Job roles across high demand sectors in Parbhani district

High demand sectors	Identified Job Roles
Agriculture and Allied	- Goat Farmer - Dairy Farmer - Micro Irrigation Technician - Greenhouse Operator - Poultry Farmer - Scientific agriculture – surface coating, soil testing, Crop Technician - Sugarcane Cultivator
Food processing	- Supervisor: Fruits and vegetable processing - Baking technician - Multi skill technician (food processing) - Dairy products processor - Industrial production worker – food processing - Cold Storage Technician
Automotive	- Auto body technician - Automotive electrician - Forging operator - Welding technician - Surface treatment technician - AC specialist
Automotive (transport equipment)	- Vehicle Assembly Fitter/ Technician - Automotive Service Technician - Maintenance Technician Mechanical - Auto Component Assembly Fitter - Automotive Engine Repair Technician - CNC Operator/Machine Technician
Healthcare	- Nursing - General Duty Assistant - Home Health Aide - Diet Assistant - Emergency Medical Technician – Basic - Pharmacy Assistant - Diabetes Educator / X ray technician
Retail	- Cashier - Retail Sales Associate - Store Ops Assistant - Retail Trainee Associate - Individual Sales Professional/ Self-employed Retailer

26. Pune

26.1 About the district

Pune district is located in western Maharashtra. The district is divided into 14 sub districts and 1,852 inhabited villages.

Pune has a total land area of 15,642 sq. km. and constitutes 5% of the total state area. Pune district is the headquarter of Pune division of Maharashtra, comprising of the districts of Sangli, Pune, Kolhapur, Satara and Solapur. The district is bordered by Ahmadnagar, Solapur, Satara, Raigad and Thane. The district is connected to other major cities by road and railways and by air and has its own international airport. Pune city, the headquarter of Pune district is the 7th largest metropolitan city of India.

Pune is considered an education hub with the city owning some of the best institutes in the country. It is also major IT hub of India, with the top IT companies like Wipro, Infosys, IBM, Dell, Cognizant having their offices located in various IT parks around the city.

Table 421: Comparison of Pune district with Maharashtra

Indicator	Pune	Maharashtra
Area in sq.km.	15,642	3,07,713
Percentage share in state geographical area, %	5.08	100
No. of Sub-districts	14	353
No. of inhabited villages	1,852	40,959
No. of households	7,80,108	2,44,21,519
Forest area as a % of total geographical area	14.38	16.94

Source: Census 2011

26.2 Demography

The population of Pune is 94,29,408 as per census 2011. The district is highly urbanized with more than 60% of the district population residing in urban areas. The district has a literacy rate of 86%, which is higher than the state average of 82% and a sex ratio of 915 females per 1000 males, lower than the state average of 925.

Table 422: Demographic Indicators of Pune district

Indicator	Pune	Maharashtra
Population, No.	94,29,408	11,23,74,333
Decadal growth rate of population, %	30.4	16
Urban Population as a percentage of total population, %	61	45.2
SC Population, %	12.52	10.2
ST Population, %	3.32	8.8
Sex ratio, No. of females per 1000 males	915	925
Population density, per sq.km.	603	365
Literacy rate, %	86.15	83
Working age population* as a percentage of total population, %	65.74	59
Work participation rate^, %	42.93	44
HDI Index	0.814	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a total workforce of 40.5 lakh persons, with maximum proportion (41.4%) of total workforce engaged in the tertiary sector, 32.8% of the workforce is engaged in primary activities, lower than the state average of 53.6% and 25.8% of the workforce is engaged in secondary sector, higher than the state average of 16.4%.

As indicated in figure 173, Pune overall has a lower rate of unemployment compared to the state average.

Share of workforce, by sectors

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 173: Type of employment in the Pune district
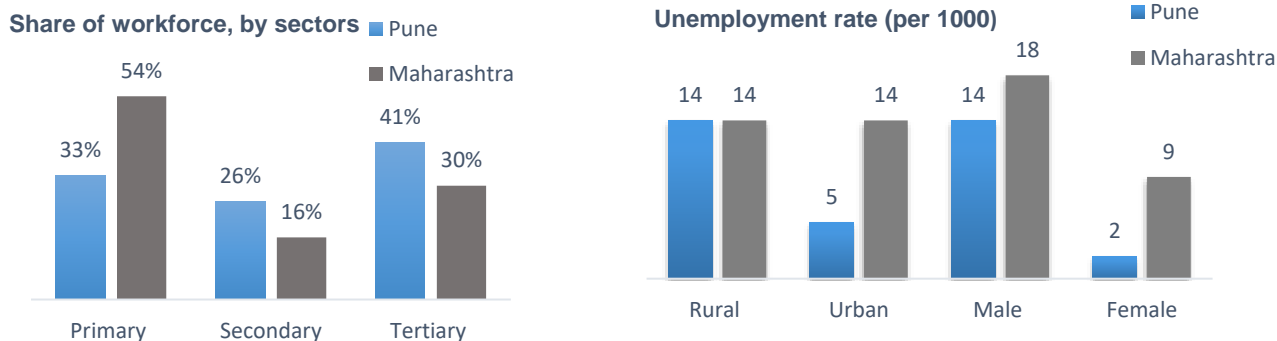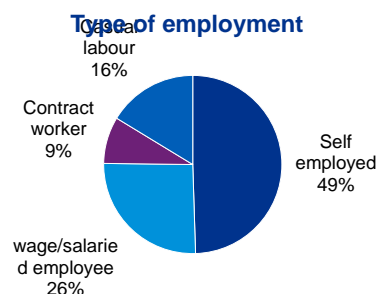
As per figure 174, 49.5% of the district workforce is self-employed and 25.7% is wage employed. 16.3% of the workforce constitute casual labour and 9% is contract labor. The district has lower percentage of workforce in self-employed and casual labour categories compared to the state.

Source: Ministry of Labour & Employment

.

*Education Profile of the District***:**

Traditional Education:

The district has 8,789 schools of which 7,008 are primary. Total enrolment in schools is 19,19,231 with a student-teacher ratio of 23 in the district.

The district also has 611 general and technical colleges with the enrolment of approx. 3,03,390 students.

Table 423: Educational Profile of Pune district

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	7,008	13,83,463
Secondary Schools (IX to XII)	1,781	5,35,768
General Colleges & Technical Education	611	~3,03,390[47]

Source: AISHE, U-DISE

---

[47]Enrolment figures at State run general and technical education colleges only

Vocational Education:

Pune district has a total of 54 government and private ITIs with 9,024 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Textile, Information and Communication Technology, Informal Sectors (Domestic Help, Beauticians, Facility Management) and Telecom.

Table 424: Total no. of ITI and there training number in Pune district

Particular	Number
ITIs (Government & Private)	54
Trainee Count	9,024

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 25,076 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Beauty culture and hair dressing, Garment making, and Fashion Design. Table below illustrates sector-wise annual training numbers in the district.

Table 425: Sector wise short- term skilling trained numbers in PMKUVA for Pune district

Sectors	Trained
Information and communication technology	7,732
Beauty culture and hair dressing	5,430
Fashion design	2,024
Garment making	3,869
Medical and nursing	1,521
Banking and accounting	1,796
Soft skills	299
Business and commerce	120
Hospitality	330
Automotive repair	293
Construction	613
Production and manufacturing	249
Electrical	218
Total	**25,076**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are offered through Rural Self Employment Training Institute (RSETI) in areas such as Garment Making, Dairy Farming, Retail and Textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) related to Agriculture and Allied Activities. Also, District Industries Centre (DIC) provides relating to Industries and Services Sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Majority of private training centers in the district offer various courses for enhancing the skills of the persons.

26.3 Economy

At 225,873 crore, Pune district has the 3rd highest GVA (at current prices) in the state as of 2016-17. The district also ranks 3rd in terms of per capita GVA.

As per figure below, major contributors to the GDDP of the district are Registered Manufacturing, Real Estate, Banking and Insurance services and Trade, Hotels and Restaurants.

Figure 174: Sector wise GDDP Distribution of the District
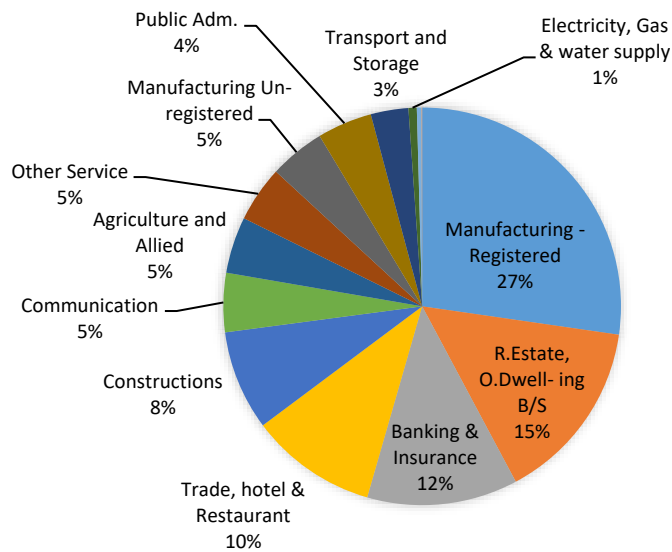
Source: District Domestic Product of Maharashtra 2013-14 (Base 2004-05), published by DES Maharashtra

Agriculture and Allied Activities contribute to 5% of the district's GDDP and the major crops cultivated in the district are paddy, jowar, wheat, oranges and cotton.

Industry Sector accounts for 40% the district's economy and the district has one of the largest registered manufacturing in the state, contributing to 27% of the district's output.

4 major manufacturing industries of the district are Auto, Machinery and Equipment, Fabricated Metal Products, and Pharmaceuticals.

Auto industry being the largest in the district employs more than 1.65 lakh persons. Majority of this employment is in Manufacture of Parts and Accessories for Motor Vehicles. Around 45,000 are engaged in Manufacture of Motor Vehicles. The district hosts manufacturing plants of major automotive players such as Kinetic, General Motors, Tata Motors, Fiat, Mercedez Benz, Jaguar, Volkaswagen.

Machinery and equipment is the second largest manufacturing industry by employment, engaging close to 96,000 persons. The major categories of machinery and equipment manufactured in this category include special purpose machinery such as Machinery for Making Paper Pulp and Paper Items, Printing and Bookbinding Machines etc, Pumps, Compressors, Taps and Valves, And Machinery for Food and Beverage Processing.

Fabricated metal products industry engages over 71,000 persons. Major activities within this industry in the district are Forging, Pressing, Stamping, and Roll Forming Of Metals, Powder Metallurgy, Manufacture Of Cutlery, Hand Tools and General Hardware, and Other Fabricated Metal Products (such as Containers, Household Articles, Sanitary ware).

Pharmaceuticals and chemicals is one of the largest sector in Pune by employment. Manufacture of pharmaceuticals, medicinal chemical and botanical products alone employs around 58,000 persons.

Table 426: Employment in registered manufacturing sector in the Pune district 2017-18

Sector	Employment
Manufacture of motor vehicles, trailers and semi-trailers	1,65,221
Manufacture of machinery and equipment n.e.c.	96,034
Manufacture of fabricated metal products, except machinery and equipment	71,964
Manufacture of chemicals and chemical products, pharmaceuticals	70,672

Sector	Employment
Manufacture of food products and beverages	45,052
Manufacture of basic metals	33,795
Manufacture of other transport equipment	31,118
Manufacture of electrical equipment	28,542
Manufacture of rubber and plastics products	25,911
Manufacture of computer, electronic, and optical products	25,456
Manufacture of paper and paper products	8,751
Manufacture of textiles	8,333
Manufacture of other non-metallic mineral products	5,866
Manufacture of tobacco products	5,245
Publishing, printing and reproduction of recorded media	4,435
Manufacture of other non-metallic mineral products	5,866

Source: Annual Survey of Industries, 2017-18

Service sector contributing to over 55% of the district's economy, is led by Real Estate, Banking and insurance, and Trade, Hotels and Restaurants.

Investments in the districts:

Pune district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Housing construction, Railway transport services and Railway transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 427: Sector wise investments in Pune District

Sector Name	Proposed Investment (in INR Million)	No of projects
Housing construction	10,08,085	558
Railway transport services	7,00,000	1
Railway transport infrastructure services	6,34,181.2	20
Road transport infrastructure services	6,04,349	76
Passenger vehicles	2,51,450	21
Air transport infrastructure services	1,60,657.4	9
Commercial vehicles	1,40,500	7
Computer software	1,12,558	98
Commercial complexes	91,958.6	67
Drugs & pharmaceuticals	81,029.7	30
Others	9,53,078.2	975
Total	**47,37,847**	**1,862**

Source: CMIE

26.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 428: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	78%
	Rural	22%
Gender Profile	Male	75%
	Female	25%
Age Group	15-25 years	41%
	26-35 years	43%
	36-45 years	14%
	46-55 years	1%
	56-59 years	1%
Educational Level	Upto Xth	41%
	Upto XIIth	33%
	Any Graduation	26%
Occupational Profile	Worker	64%
	Non-Worker	36%

Figure 175: Past/Current participation in training (in %)
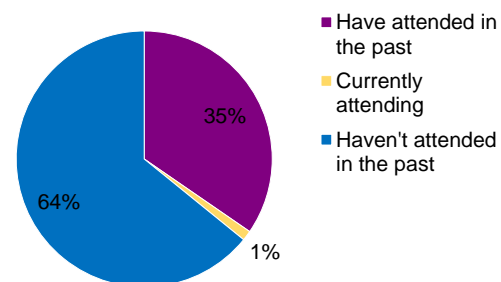
- Have attended in the past
- Currently attending
- Haven't attended in the past

35%
1%
64%

In addition to the above in figure, most respondents (64%) responded that they hadn't attended any technical/ non-technical job related training in the past and 35% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, 78% attended at Private training institutes.
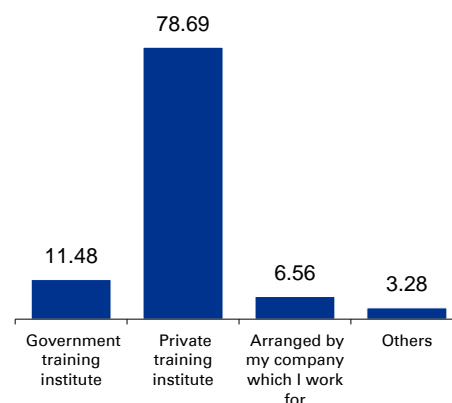
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure below, in the district, majority (62%) of the respondents aspire to be self-employed and 38% reported a preference for being wage employed. Amongst the respondents, the wage employment aspirants have a higher preference to undertake further education and training.

Figure 176: Type of training provider (in %)

11.48	78.69	6.56	3.28
Government training institute	Private training institute	Arranged by my company which I work for	Others

Additionally, there is a higher preference for acquiring vocational education among both wage and self-employed respondents. Among those who stated a preference for acquiring further training, topmost aspirational areas of training include technical job related skills.

Figure 177: Key Findings related to educational attainment of the labour force for Pune district

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 429: Aspirational sub-sectors for labor force

For wage-employment	For self-employment
BFSI	Food Processing
Healthcare	Automobiles and auto ancilliaries
Governance & Administration	Retail
Chemical and Fertilizers	Agriculture & Allied

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, restaurant/tea stall, setting up a manufacturing unit, setting up a service company, and opening a skill based business.

Additionally, 92% of the respondents would like to work within Maharashtra. However, 56% of the respondents would not be willing to accept a lower wage if they got employment in the state. This may indicate willingness to migrate for search of better job opportunities.

Perceived benefits of acquiring training:

88% of those who attended a training programme stated that they benefited from attending the training. Among those who did benefit from the training, majority stated increase in income as the main benefit, followed by movement to a new sector and getting certification.

Top 2 challenges that respondents reported having faced after attending trainings were: the skill levels expected by the employers didn't match with those provided by training programme and employers not offering these kind of trainings in house.

26.5 Incremental demand and estimated manpower supply

Key drivers of incremental demand in the district are expected to be Crop and Animal Production, Manufacture of Fabricated Metal Products, Machinery and Equipment, BFSI, Healthcare, Transportation and Education and Administrative Activities.

Table 430: Incremental Demand estimates (2019-2028); in persons for Pune district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	54335	56464
Forestry & Logging	191	198
Fishing & Aquaculture	135	140
Sub Total	**54660**	**56802**
Registered Manufacturing		
Food processing	2379	2503
Textiles	5545	8901
Apparel	1020	1323
Wood work	105	116
Chemicals and Pharmaceuticals	8637	9669
Rubber And Plastics	847	875
Iron and Steel	1619	1695
Metal products (except machinery and equipment)	146131	142679
Machinery and Equipment	500553	639196
Automotive	12405	13323
Automotive (transport equipment)	9861	12827
Construction	**16523**	**17344**
Service Sector		
Wholesale and Retail Trade	4728	6006
Transportation	63688	76783
Logistics	7991	9634
IT/ITES	13345	16089
Hospitality	3600	3841
BFSI	25606	33310
Real Estate	5121	6662
Professional, Scientific & Technical Activities	13378	17403
Public administration and administrative services	150190	195377
Education	35722	46469
Healthcare	47784	62161
Other Services	148048	192590
Sub Total	**519201**	**666324**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing. The registered manufacturing subsectors above, account for 93% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment.

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified that are expected to generate job opportunities in the district

- Electronics Sector, with focus on appliances as a sub sector.
- Warehousing sector, under Logistics Sector.
- Sericulture Sector with job roles related to Cocoon processing. Recommended Job profiles– machinery operator and marketing of products.

- Construction Sector has a high demand in the district though it might not have been reflected in the aspirational survey.
- Tourism & Hospitality Sector, with job roles related to 'Guides'.
- Automotive Sector, job roles of Painter and two wheeler and three wheeler repairer are in demand
- Job Roles of Welder, Fabricator under Machinery and Equipment.
- Event Organizer was recommended to be added as a job role under Administration services.
- Level 5 onwards job roles such as Programmer under IT&ITeS.
- Green Jobs related to solid waste management to cater to the needs of the city is an upcoming area.
- Elaboration on 'Other Services' such as Beauty and Wellness and Media and Entertainment.

Estimation of Manpower Supply

Pune district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 46.4 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 431: Manpower Supply for Pune district

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Pune	1,29,63,302	47,05,389	46,44,506

Table 432: Projected workforce by education levels for Pune district

Education level	Projected work force
Illiterate	7,11,601
Literate but below matric/secondary	15,01,463
Matric/secondary but below graduate	11,91,891
Technical degree or diploma equal to degree or post-graduate degree	2,66,520
Technical diploma or certificate not equal to degree	1,09,700
Graduate and above other than technical degree	5,76,855
Literate others	2,86,478

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~1,25,790 annually.

Table 433: Size of target population in the district

Particular	Numbers
Enrolment in VIII	164,776
Enrolment in X	145,056
Enrolment in XII	52,066
Dropout at VIII	**17,334**
Passing out of VIII*	147,442
Students not transitioned to IX	**24,269**
Dropout at X	**16,377**
Passing out of X*	128,679

Particular	Numbers
Students not transitioned to XI	**21,181**
Passing out at XII**	94,064
Students not transitioned to Higher Education	63,964
Total Target population	**125,790**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 434: Vocational Education annual capacity for Pune district

Particular	Annual Capacity in Numbers
Short Term Skilling	53,910
ITI (Government & Private)	18,996

26.6 Recommendations

The district has potential for incremental demand generation in Agriculture and Allied Activities, Metal Products, including Machinery and Equipment, Transportation, Banking and Financial Services, Healthcare, Education, and Public Administration. Among these, all activities are high or medium on economic growth, except agriculture and public administration.

Agriculture, although low on economic growth is highly aspirational in the district and is closely aligned with Food Processing, a high economic growth and aspirational activity in the district.

Additionally, Chemicals and Pharmaceuticals, Food Processing, Retail Trade, Auto and Auto Ancillaries are high growth and aspirational activities in the district.

The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below

Table 435: Sector specific economic growth, employment potential and aspirations for Pune district

Sector	Economic Growth	Employment Potential	Aspiration
Agriculture & Allied	Red	Green	Amber
Food processing	Green	Red	Green
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Amber
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Green	Red
Machinery and Equipment	Green	Green	Red

Sector	Economic Growth	Employment Potential	Aspiration
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Green
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Amber
Hospitality	Amber	Red	Red
BFSI	Amber	Amber	Green
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration and administrative services	Amber	Green	Amber
Education	Green	Amber	Red
Healthcare	Green	Amber	Amber
Other Services	Green	Red	Red

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the training provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the above analysis of the district and keeping in view the primary insights from field visits, the following sectors are proposed to be taken on priority by MSSDS:

Table 436: Priority sectors for MSSDS for Pune district

Sl. No.	Sector	High or Medium Economic Growth	High or Medium Employment Potential	High or medium Aspiration
1	Agriculture and Allied		✓	✓
2	Metal products (including machinery and equipment)	✓	✓	
3	Automotive (including transport equipment)	✓		✓
4	Transportation	✓	✓	
5	IT / ITeS	✓		✓
6	BFSI	✓	✓	✓
7	Healthcare	✓	✓	✓
8	Food Processing	✓		✓
9	Chemicals and Pharmaceuticals	✓		✓
10	Retail	✓		✓
11	Public Administration and Administrative Services	✓	✓	✓
12	Education	✓	✓	

Apart from the above priority sectors, MSSDS can also explore the potential of following sectors in the district

- Wholesale and Retail Trade

These sectors although low on incremental employment potential, have a growth or aspirational value in the district.

Top Job roles identified on the basis of incremental employment generation (as shown above sector-wise) are shown below in table 437. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers.

Table 437: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Machinery and equipment	- Fitter- Fabrication - Equipment Operator - CNC Operator- Turning - Forger - Fitter – electrical and electronic assembly - Welder - Fabricator
IT / ITeS	- Domestic data entry operator - CRM domestic voice - Domestic IT helpdesk attendant - Collections executive - Domestic biometric data operator - Advanced level programmer (JAVA, .NET etc.)
Automotive (including transport equipment)	- Vehicle Assembly Fitter/Technician - Automotive Service Technician - Maintenance Technician Mechanical - Auto Component Assembly Fitter - Automotive Engine Repair Technician - Sales Executive-Showroom
Transportation	- Reach Truck Operator - Crane Operator - Shipment Classification Agent - Clearance Support Agent - Consignment Booking Assistant
BFSI	- Accounts Executive (Accounts Payable & Receivable) - Business Correspondent & Business Facilitator - ATM Operator - Debt Recovery Agent - Insurance Agent
Healthcare	- General Duty Attendant - Home Health Aide - Diet Assistant - Emergency Medical Technician- Basic - Pharmacy Assistant

High demand sectors	Identified Job Roles
Retail	• Cashier • Retail Sales Associate • Store Ops Assistant • Seller Activation Executive • Retail Trainee Associate
Food Processing	• Dairy Processing Equipment Operator • Fish & Sea food processing Technician • Fruits and Vegetables Selection In-Charge • Pulse Processing Technician • Soya beverage making technician
Metal Products	• Assistant Manual Metal Arc Welder • Lab Technician- Metal Tester • Gas Metal Arc Welder • Sheet Metal Worker- Hand Tools • Casting Operator
Public Administration and Administrative Services	• Unarmed Security Guard • Ticketing Consultant • Travel Consultant • Visa Assistance Consultant
Chemicals and Pharmaceuticals	• Dyestuff and chemical preparation operator • Seasoning and chemical treatment assistant • Pharmacy assistant
Tourism and Hospitality	• Bell Boy • Food & Beverage Service-Steward • Tour Guide • Meet & Greet officer • Food Server

27. Raigad

27.1 About the district

Raigad district is located towards the western side of the Maharashtra state with the district headquarters in Alibaug City. The district is divided into 15 sub-districts and 1,860 inhabited villages.

Raigad has a total land area of 7,152 sq.km. and constitutes 2.3% of the total state area. The district lies in the Konkan region of Maharashtra having Sahyadri ranges in the eastern side and Arabian Sea on the western side. It is bordered by Mumbai Harbour on the north-west, Thane on the north, Pune on the east, Ratnagiri on the south, and Arabian Sea on the west. The district has good connectivity with railways and roads that connect it to the bigger cities such as Mumbai, Pune, Thane and Kolhapur, making markets accessible and helping trade and businesses.

Raigad is high on natural resources featuring hills, valleys, sandy beaches and dense forests and Teakwood, Bamboo and Medicinal plants are the main produces of the forest. Elephanta caves, Karnala Fort and Alibaug beach are popular destinations among tourists.

Table 438: Comparison of Raigad District with Maharashtra

Indicator	Raigad	Maharashtra
Area in sq.km.	7,152	3,07,713
Percentage share in state geographical area, %	2.3	100
No. of Sub-districts	15	353
No. of inhabited villages	1,860	40,959
No. of households	6,08,026	2,44,21,519
Forest area as a % of total geographical area	31.99	16.94

Source: Census 2011

27.2 Demography

According to latest census data, the district has a population of nearly 26.3 lakh persons which is ~2.35% of the state. Of the total population, 63.17% are residing in the rural areas whereas 33.17% are residing in the urban areas of the district. The density of population according to 2011 census is 368 persons/Sq. Km.

The district's literacy rate is at 83.14%, which is higher than the state average of 82.91%. Raigad has sex ratio (no. of females per 1000 males) of 959, which is higher than the state average of 925. While 60% of the population in the district are in the working age group (i.e. 15-59 years), about 41% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 439: Demographic Indicators of Raigad district

Indicator	Raigad	Maharashtra
Population, No.	26,34,200	11,23,74,333
Decadal growth rate of population, %	19.3	16
Urban Population as a percentage of total population, %	36.83	45.2
SC Population, %	5.12	10.2
ST Population, %	11.58	8.8
Sex ratio, No. of females per 1000 males	959	925
Population density, per sq.km.	368	365
Literacy rate, %	83.14	83
Working age population* as a percentage of total population, %	60	59
Work participation rate^, %	41	44
HDI Index	0.71	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 10.7 lakh persons. Of this, nearly 39.82% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 22.47% of workers are working in secondary sector and 37.74% workers are working in tertiary sector. As shown in figure below, Raigad's

unemployment (per 1000) in rural areas is significantly higher than the state average, whereas in urban areas it is significantly lower than the state average. Additionally, if we compare male and female unemployment (per 1000) of Raigad to the state, both male and female unemployment rate is significantly higher than the state average.

Figure 178: Share of workforce & Employment Rate for Raigad District
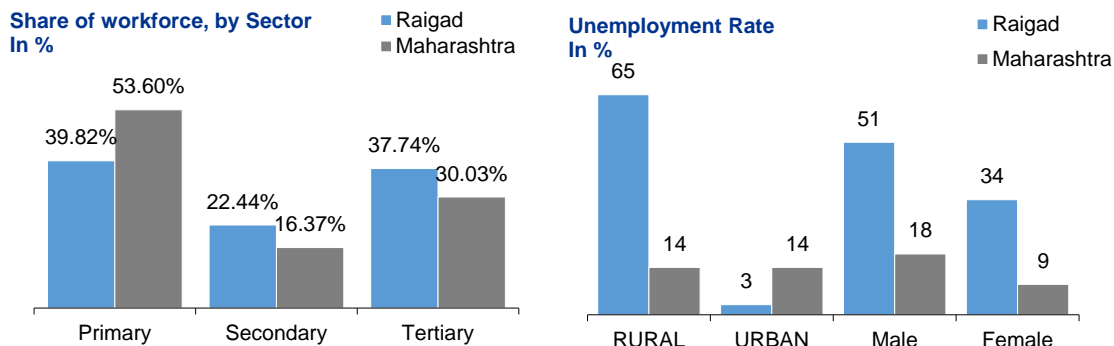
Share of workforce, by Sector In % ■ Raigad ■ Maharashtra

- Primary: Raigad 39.82%, Maharashtra 53.60%
- Secondary: Raigad 22.44%, Maharashtra 16.37%
- Tertiary: Raigad 37.74%, Maharashtra 30.03%

Source: Census 2011

Unemployment Rate In % ■ Raigad ■ Maharashtra

- RURAL: Raigad 65, Maharashtra 14
- URBAN: Raigad 3, Maharashtra 14
- Male: Raigad 51, Maharashtra 18
- Female: Raigad 34, Maharashtra 9

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 179: Type of employment numbers per 1000
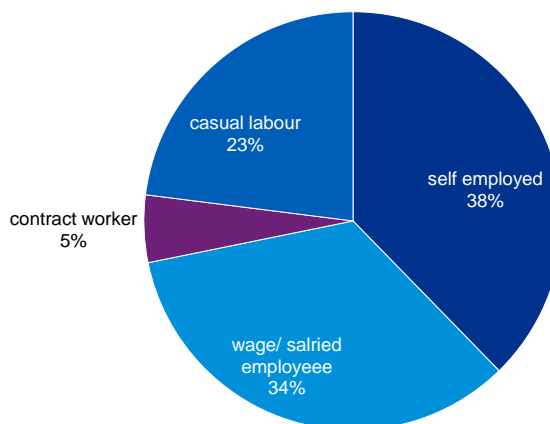
As per figure 180, maximum persons (38%) are self-employed in the district, this is significantly lower than the state average. Second in ranking is the percentage of the salaried employees, which is significantly higher than the state average, followed by casual labors, which is similar to the state average.

- casual labour 23%
- contract worker 5%
- self employed 38%
- wage/ salried employeee 34%

Source: Ministry of Labour & Employment

Education Profile of the District:

Traditional Education:

Raigad district has a total of 4,378 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of 5.27 lakh students. The student teacher ratio is 19:1.

The district also has 104 general and technical colleges with the enrolment of 54,000 students.

Table 440: Educational Profile of Raigad District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,761	3,76,288
Secondary Schools (IX to XII)	617	1,50,776
General Colleges & Technical Education	120	~54,000[48]

Source: AISHE, U-DISE

Vocational Education:

Raigad district has a total of 19 government and private ITIs with 2,953 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Retail, Construction, Information & Communication Technology, Banking & Accounting, Logistics, Auto & Auto components, Electronics, Tourism & Hospitality and Plumbing.

Table 441: Total no. of ITI and there training number in Raigad district

Particular	Number
ITIs (Government & Private)	19
Trainee Count	2,953

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 3,104 students are trained annually in the district under the scheme. Top Sectors include Information and Communication Technology, Garment making, Banking and accounting, and Beauty culture and hair dressing. Table below illustrates sector-wise annual training numbers in the district.

Table 442: Sector wise short- term skilling trained numbers in PMKUVA for Raigad district

Sectors	Trained
Information and Communication Technology	1,330
Garment Making	210
Construction	333
Fashion Design	30
Beauty Culture and Hair Dressing	354
Fabrication	83
Automotive Repair	150
Electrical	27
Business and Commerce	30
Banking and Accounting	267
Travel and Tourism	60
Remaining Sectors	230
Total	**3,104**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are offered through Rural Self Employment Training Institute (RSETI) in areas such as Cutting and Tailoring, Dress Making, Bag Making etc. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) related to Agriculture and Allied Activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd that includes training programs for Welding, Electrician, Mobile Repairing, Computer Repairing, Two-Wheeler and Four-Wheeler Repairing etc.

---

[48]Enrolment figures at State run general and technical education colleges only

Majority of private training centers in the district offer various courses for enhancing skills of the persons.

27.3 Economy

As of 2016-17, Raigad district had the 10th highest Gross District Domestic Product (GDDP) (at current prices) in the state at Rs. 42510 crores. The per capita GDP of the district is Rs. 1,84,215.

The district economy contributing towards GDDP is secondary and service based, with service sector contributing nearly 50% towards the GDDP, secondary sector is at 46% and primary sector is at 4%.

As per the figure indicated below, major contributors to the GDDP of the district are Trade, Hotel & Restaurant, Banking & Insurance, Real state, Ownership of dwellings and Transportation and storage.
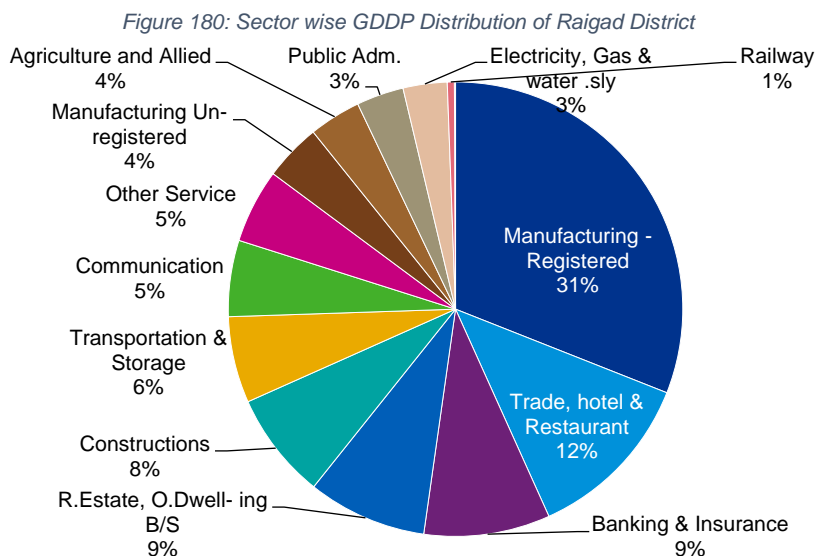
Figure 180: Sector wise GDDP Distribution of Raigad District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

Raigad is not an agricultural rich district. The forest cover is large and cultivable barren land is less in the district. The district has a forest cover of nearly 32%, which is very high compared to the State average of 17%. Teakwood, bamboo and medicinal plants are important forest resources that contribute to the economy.

As shown above in the figure, tertiary Sector is a significant contributor towards the GDDP of the district. Of all the services Trade, Hotel & Restaurant is the highest at 12%, followed by Banking and Insurance at 9%. Real estate, Ownership of dwellings and business services, transportation and storage, communication, other services and public administration are at 9%, 6%, 5%, 5% and 3% respectively.

Raigad district has around 193 large scale industries and 3885 Micro Small and Medium Enterprises (MSME). Prominent industries in the district for registered manufacturing sector are Manufacture of Chemical and Chemical Products, Manufacture of Basic Metals, Manufacture of Pharmaceuticals, Medicinal Chemical & Botanical Products and Manufacture of Food Products and Beverages.

Manufacture of Chemical and Chemical Products is the most important industry under registered manufacturing in the district. It includes manufacture of basic chemicals, fertilizer & nitrogen compounds, plastics & synthetic rubber in primary forms, manufacture of pesticides & other agrochemical products, paints, varnishes, printing ink and manufacture of soap detergents, cleaning and polishing preparations, perfumes and toilet preparations. It employs nearly 54,000 persons, which constitutes to 33% of the employment in registered manufacturing sector. Major players in the industry include Rhodia Speciality Chemicals India Limited, Alkyl Amines Chemical Ltd and Alta Laboratories Ltd.

The district also has **Manufacture of Basic Metals** industries as a prominent sector. It includes Manufacture of Basic Iron and Steel, Manufacture of Basic Precious and Non-Ferrous Metals and Casting of Metals. It employs nearly 21,500 persons in the district, constituting 13% of employment in the registered manufacturing sector. Major players in the industry include Alukbond India Pvt Ltd, Amar Tubes Pvt. Ltd. and Bhushan Steel & Strips Ltd.

Manufacture of Pharmaceuticals, Medicinal Chemical & Botanical Products is also an important industry in the district. It includes Manufacture of Medicinal Substances in Manufacture of Pharmaceuticals, Manufacture of Allopathic Pharmaceutical Preparations and Manufacture of Ayurvedic and Homoeopathic Medicinal preparations. It employs nearly 19,600 persons in the district, constituting 12% employment in the registered manufacturing sector in Raigad. Major players in the industry include Bliss GVS Pharma, Hindustan Laboratories and Marksans Pharma Limited.

Another important industry under registered manufacturing in Raigad is **Manufacture of Food Products and Beverages.** It includes Processing and Preserving of Fish, Crustaceans & Molluscs, Manufacture of Bakery Products, Processing of Edible Nuts & Iodized Salts, Processing and Preserving of Vegetables and Fruits, Processing and Preserving of Meat, Manufacture of Soft Drinks and Manufacture of Malt Liquors & Malt. It employs nearly 14,500 persons in the district, constituting 8% of the employment in registered manufacturing sector. Major players in the industry include Arabian Export Ltd, Kellog India Limited, Parle International and Pepsico India Holdings Pvt Ltd.

Other important manufacturing industries include Manufacture of Other Non-Metallic Mineral Products, Manufacture of Fabricated Metal Products, Manufacture of Machinery & Equipment, Manufacture of Rubber and Rubber Products, Manufacture of Coke and Refined Petroleum and Manufacture of Textiles.

Table 443: Employment in registered manufacturing sector in the district as of 2017-18 for Raigad district

Sector	Employment
Manufacture of chemical and chemical products	54,844
Manufacture of basic metals	21,581
Manufacture of pharmaceuticals, medicinal chemical & botanical products	19,650
Manufacture of food products and beverages	14,549
Manufacture of other non-metallic mineral products	9,248
Manufacture of fabricated metal products	6,830
Manufacture of machinery & equipment	5,197
Manufacture of rubber and rubber products	5,132
Manufacture of coke and refined petroleum	3,844
Manufacture of textiles	3,473
Wholesale and retail trade and repair of motor vehicles and motorcycles	3,015
Manufacture of electrical equipment	2,674
Other manufacturing	2,506
Repair and installation of machinery and equipment	2,063
Manufacture of wearing apparel	1,234
Manufacture of motor vehicles, trailers and semi-trailers	1,215
Manufacture of paper and paper products	972
Manufacture of computer, electronic and optical products	810
Printing and reproduction of recorded media	715
Manufacture of furniture	417
Manufacture of other transport equipment	393
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	294
Electricity, gas, steam and air conditioning supply	266
Manufacture of leather and related products	21

Source: Annual Survey of Industries 2017-18

Investments in the districts:

Raigad district being one of the industrial districts in the state has attracted a lot of investment in various sectors. Railway transport infrastructure services, Steel and Shipping transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 444: Sector wise investments in Raigad District

Sector Name	Proposed Investment (in INR Million)	No of projects
Railway transport infrastructure services	9,78,160.8	22
Steel	3,96,479.5	21
Shipping transport infrastructure services	3,67,586.7	39
Housing construction	3,61,345.8	153
Organic chemicals	2,81,646.5	55
Road transport infrastructure services	2,65,482.4	39
Natural gas trading & distribution	2,63,020	9
Air transport infrastructure services	1,64,500	1
Polymers	1,58,191.6	22
Conventional electricity	1,46,131.1	15
Others	5,77,799.7	341
Total	**39,60,344**	**717**

Source: CMIE

27.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 445: Distribution of Respondents for Raigad district

Profile	Details	
Urban vs. Rural	Urban	51%
	Rural	49%
Gender Profile	Male	68%
	Female	32%
Age Group	15-25 years	59%
	26-35 years	30%
	36-45 years	9%
	46-55 years	2%
	56-59 years	0%
Educational Level	Upto Xth	44%
	Upto XIIth	42%
	Any Graduation	14%
Occupational Profile	Worker	55%
	Non-Worker	45%

Figure 181: Past/Current participation in training, %

- Currently attending 7%
- Have attended 29%
- Have not attended in the past 64%
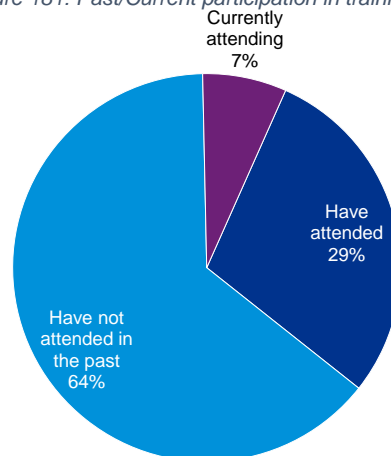
In addition to the above, most respondents (64%) responded that they had not attended any technical/ non-technical job related training in the past and 29% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings were attended at (~50 %) Private training institutes and (49%) government training institutes.

Figure 182: Type of training provider, in %
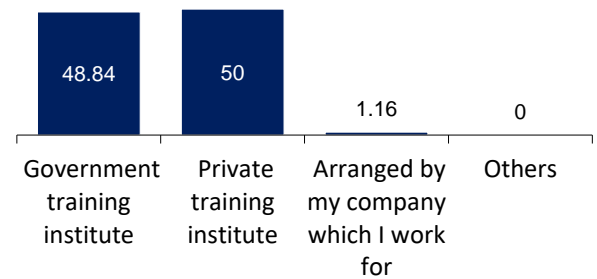
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure below, in the district, 50% of the respondents aspire to be wage-employed and 50% reported a preference for being self-employed. Amongst the respondents there is a higher preference to undertake further education/ learn skill for those aspiring to be wage employed as compared to those aspiring to be self-employed. Additionally, there is preference for acquiring vocational trainings or get a graduation degree amongst both wage and self-employed respondents.

Figure 183: Key Findings related to educational attainment of the labour force for Raigad district
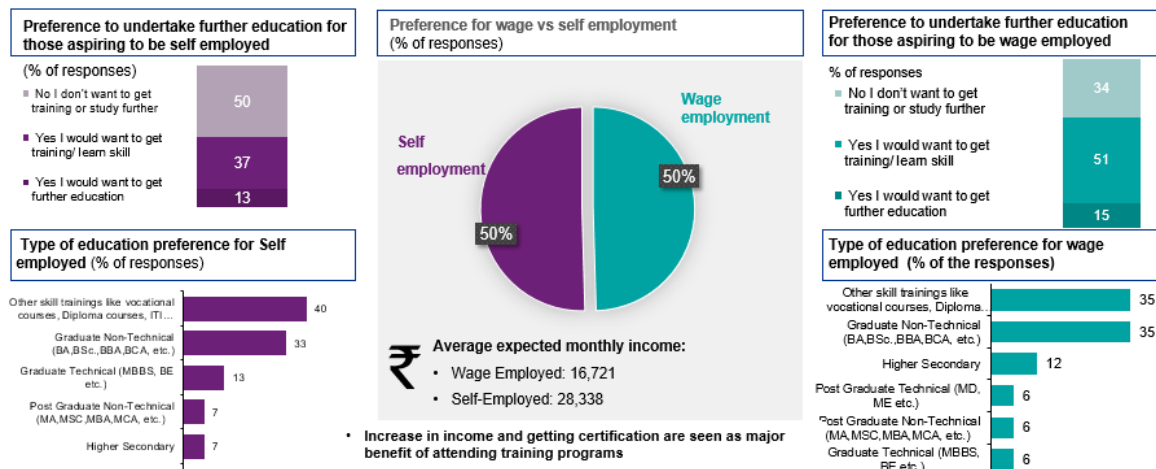
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 446: Aspirational sub-sectors for labour force in Raigad district

For wage employment	For self-employment
Agriculture & Allied	Retail
Other Manufacturing	Skill Based Business (Plumbing, Mechanic Etc.)
BFSI	Agriculture & Allied
Auto & Auto Ancillaries	Opening a restaurant/ Tea stall
IT & ITeS	Opening a beauty parlour/spa/salons

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, Skill Based Business (plumbing, mechanic etc.), Agriculture & Allied, Restaurant/Tea Stall and Beauty ParlourSpa/Salons.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Agriculture & Allied, Other Manufacturing, Banking & Insurance, Auto & Auto Ancillaries and IT & ITeS sub-sectors. Many respondents also selected 'other', which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 16,721 and Rs. 28,338 respectively.

Additionally, 96% of the respondents expressed that they would like to work within Maharashtra. Further, 78% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

68% of those who attended a training programme stated they actually benefit from attending the training, and majority stated increase in income and getting certification as the main advantgaes. Whereas, among those who did not benefit from the training, majority stated that skill levels expected by the employers were not matched even after attending such programs.

27.5 Incremental demand and estimation of manpower supply

Manufacture of Machinery & Equipment, Manufacture of Fabricated Metal Products, Transportation, Crop & Animal Production, Finance and Insurance Activities and Healthcare sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of machinery and equipment, fabricated metal products, chemical and chemical products and textiles.

Table 447: Incremental Demand estimates (2019-2028); in persons for Raigad district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	17,314	17,992
Forestry & Logging	61	63
Fishing & Aquaculture	43	45
Sub Total	**17,418**	**18,100**
Registered Manufacturing		
Machinery and Equipment	27,088	34,591
Metal products (except machinery and equipment)	13,869	13,541
Chemicals and Pharmaceuticals	9,104	10,192
Textiles	2,311	3,710
Iron and Steel	1,034	1,083
Food processing	763	803
Apparel	387	503
Rubber and plastics	168	173
Automotive (transport equipment)	125	162

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Construction	**3,603**	**3,782**
Services		
Wholesale and Retail Trade	1,060	1,347
Transportation	16,927	20,408
Logistics	2,124	2,561
IT/ITES	3,547	4,276
Hospitality	890	950
BFSI	4,315	5,613
Real Estate	863	1,123
Professional, Scientific & Technical Activities	2,254	2,933
Public Administration and administrative services	29,149	37,919
Education	8,686	11,299
Healthcare	11,619	15,114
Other Services	44,917	58,431
Sub Total	**126,352**	**1,61,973**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified that are expected to generate job opportunities in the district:

- Food Processing sector specifically mango, cashew and fisheries
- Chemical and Pharmaceuticals sector as in important sub-sector within the district
- Tourism & Hospitality sector
- Port Operations due to JNPT in the district. Transportation, warehousing and Logistics are also relevant in the district
- BFSI sector with job roles like Insurance Agent, Banking correspondent, ATM operator, Cash collection etc.
- Under manufacturing sector glass manufacturing, machinery & equipment and construction

Estimation of Manpower Supply

According to KPMG estimates, Raigad district has a significant opportunity in terms of a favourable demographic dividend - with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 9.29 lakhs workforce participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 448: Manpower Supply for Raigad District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Raigad	18,86,206	10,16,626	9,29,243

The workforce is further split across the educational attainment within the district as shown below in Table 449.

Table 449 Educational Attainment of projected workforce for Raigad district

Educational Level	Projected Workforce
Illiterate	1,73,335
Literate but below matric/secondary	3,75,098
Matric/secondary but below graduate	2,07,269
Technical degree or diploma equal to degree or post-graduate degree	28,157
Technical diploma or certificate not equal to degree	12,684
Graduate and above other than technical degree	82,749
Literate others	49,951

The total target population in the district for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~38,689 annually.

Table 450: Size of target population in the district

Particular	Numbers
Enrolment in VIII	47,003
Enrolment in X	41,451
Enrolment in XII	15,746
Dropout at VIII	**6,862**
Passing out of VIII*	40,141
Students not transitioned to IX	**6,607**
Dropout at X	**8,112**
Passing out of X*	33,339
Students not transitioned to XI	**5,488**
Passing out at XII**	27,180
Students not transitioned to Higher Education	18,483
Total Target population	**38,689**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Particular	Annual Capacity in Numbers
Short Term Skilling	10,500
ITI (Government & Private)	5,644

27.6 Recommendations

Raigad, being one of the strategically located districts in the state with most of the land near the coastal areas is predominantly driven by secondary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 451: Sector specific economic growth, employment potential and aspirations for Raigad district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Amber
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Amber	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Green	Red
Machinery and Equipment	Green	Green	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Green	Red
Logistics	Amber	Red	Amber
IT/ITES	Green	Red	Amber
Hospitality	Amber	Red	Amber
BFSI	Amber	Red	Green
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public administration and administrative services	Amber	Green	Red
Education	Green	Amber	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Red

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:

- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Agriculture, Manufacture of chemical & chemical products, manufacture of machinery & equipment, Transportation, Finance & Insurance activities, Public Administration, Education & Healthcare.
- **High Aspiration Sectors**: Agriculture and Finance & Insurance activities.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 452: Priority sectors for MSSDS for Raigad district

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture and allied		✓	✓
2	Food processing	✓		✓
3	Transportation	✓	✓	
4	BFSI	✓		✓
5	Healthcare	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Chemicals and Pharmaceuticals
- Metal Products (Including Machinery and Equipment)
- Iron & Steel
- Logistics
- IT/ITeS
- Hospitality
- Public Administration And Administrative Services
- Education
- Other services

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in near future to meet the demands of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 453. The basis of selecting the job roles is the training numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers.

Table 453: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

Sector Name	Top Job Roles
Agriculture and allied	• Goat Farmer • Shrimp Farmer • Marine Capture Fisherman cum Primary Processor • Crab Farmer • Aquatic Animal Health Lab Assistant • Warehouse Worker
Food processing	• Supervisor: Fruits and vegetable processing • Baking technician • Multi skill technician (food processing) • Dairy products processor • Industrial production worker – food processing • Fish and sea food processing technician
Transportation	• Reach Truck Operator • Crane operator • Shipment Classification Agent • Clearance Support Agent • Consignment Booking Assistant • Warehouse Quality Checker
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent • Equity Dealer
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant

28. Ratnagiri

28.1 About the district

Ratnagiri district is located in the eastern region of the Maharashtra state with the district headquarters in Ratnagiri City. The district is included in Konkan division. Ratnagiri is divided into 9 sub-districts and 1531 inhabited villages.

Ratnagiri constitutes 3% of the total state area with a land area of ~8,208 sq.km. It is bordered by the Arabian Sea to the west, Sindhudurg district to the south, Raigad district to the north and the Sahyadri Hills to the East. Beyond the Sahyadri hills, Satara, Sangli and Kolhapur districts are located to the east. With a coastal belt extending to about 167 kms, Ratnagiri district is one of the most important maritime districts of the Maharashtra State. The district enjoys comparatively good system of transportation facilities through bus routes and railway mainly. However, being a maritime district, it also enjoys good communication facility by sea. Of all the districts in Konkan Division, Ratnagiri district seems to be favorably placed with regard to the availability of some of the important minerals, and Manganese and Iron Ores are found in the southern part of Ratnagiri district.

There are only 6 uninhabited villages in the district and power supply facility is available for all inhabited villages. The "White Beach" and "Ganesh Temple" are very famous tourist centers in Ratnagiri district and foreign exchange earner 'Alphonso' mango is grown throughout the district.

Table 454: Comparison of Ratnagiri District with Maharashtra

Indicator	Ratnagiri	Maharashtra
Area in sq.km.	8,208	3,07,713
Percentage share in state geographical area, %	3	100
No. of Sub-districts	09	353
No. of inhabited villages	1531	40,959
No. of households	393379	24,421,519
Forest area as a % of total geographical area	51.12	16.94

Source: Census 2011

28.2 Demography

According to 2011 census data, the district has a population of over 16.15 lakh persons, which is ~1.4% of the state. It ranked 23rd in population among all the districts of the state. Ratnagiri is one of the least urbanized districts in the state, having about 16% population in urban areas whereas about 45% of the state's population lives in urban areas. With population density as low as 197 persons/Sq. Km, which is significantly lower than the state, the district is one of the low-intensity regions in the state.

Table 455 lists down multiple demographic indicators of the district. Ratnagiri district fares well in human development indicators like sex ratio and literacy rate. The district has the highest sex ratio (number of female per 1000 males) of 1122 in the state. About three-fifth of the district's population falls in the working age group (i.e. 15-59 years) while about 44% of its population is actually working i.e. % of total workers (main and marginal workers) to the total population. The workforce participation rate in the district is equivalent to that of the state. As large as ~56% of the district's population are non-workers.

Table 455: Demographic Indicators of Ratnagiri district

Indicator	Ratnagiri	Maharashtra
Population, No.	16,15,069	11,23,74,333
Decadal growth rate of population, %	-4.62	16
Urban Population as a percentage of total population, %	16	45.2
SC Population, %	4	10.2
ST Population, %	1	8.8
Sex ratio, No. of females per 1000 males	1122	925
Population density, per sq.km.	197	365
Literacy rate, %	82.18	83

Indicator	Ratnagiri	Maharashtra
Working age population* as a percentage of total population, %	60	59
Work participation rate^, %	44	44
HDI Index	0.73	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 7.13 lakh persons. Figure 185 suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by tertiary and secondary sector. 66% of the workforce is engaged in the primary sector whereas 11% of the total workforce is engaged in the secondary sector in the district. As shown in the Figure 184 below, the rate of unemployment (per 1000) in the district is significantly higher than the state average across all the categories except urban unemployment where it is slightly higher. The rate of unemployment (per 1000) among males of the district is more than thrice of the state average rate of unemployment which presents a stark difference. A similar observation can be made with respect to rate of unemployment (per 1000) in rural areas of the district.

Figure 184: Share of workforce & Employment Rate for Ratnagiri District
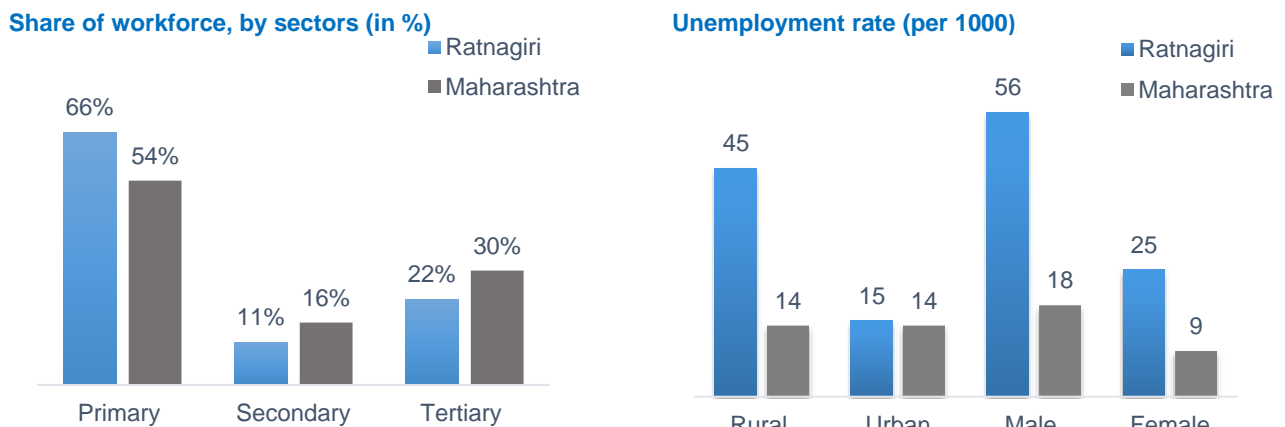
Share of workforce, by sectors (in %)

Source: Census 2011

Unemployment rate (per 1000)

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in Figure 186, about three-fifth of the working population in Ratnagiri is self-employed. 15% of the workforce is engaged in the district as casual labor, which is significantly higher than the state average of 3%. Proportion of salaried employment in the district is a little higher than the state average.
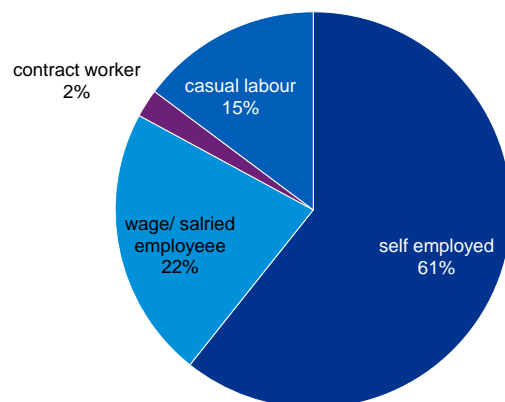
Figure 185: Type of employment in the district

Source: Ministry of Labour & Employment

Education Profile of the District:

Traditional Education:

Ratnagiri district has a total of 3,751 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of over 2.7 lakh students. The Pupil-Teacher ratio of the district is 14.

The district also has 61 general and technical colleges with an enrolment of about 28,000 students.

Table 456: Educational Profile of Ratnagiri District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	3,309	1,80,179
Secondary Schools (IX to XII)	442	97,622
General Colleges & Technical Education	61	28,38349

Source: AISHE, U-DISE

Vocational Education

Ratnagiri district has a total of 16 ITIs Government and Private with 2222 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication Technology, Auto and Auto Components, Beauty and Wellness, Tourism and Hospitality.

Table 457: Total no. of ITI and there training number in Ratnagiri district

Particular	Number
ITIs (Government & Private)	16
Trainee Count	2,222

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 1,670 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Information & Communication Technology, Garment Making, Beauty Culture, Banking & Accounting, Medical & Nursing, etc.

Table 458: Sector wise short- term skilling trained numbers in PMKUVA for Ratnagiri district

Sectors	Trained
Information and Communication Technology	961
Garment Making	186
Beauty Culture and Hair Dressing	139
Banking and Accounting	85
Medical and Nursing	66
Chemical	53
Remaining Sectors	53
Retail	30
Electrical	30
Fabrication	25
Construction	22
Electronics	20
Total	**1,670**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as Garment Making, Dairy Farming, Retail and Textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities.

49Enrolment figures at State run general and technical education colleges only

Also, District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

It is to be noted that more than two-fifth of the surveyed respondents in the district were found to be receiving their training from government training providers.

28.3 Economy

As of 2016-17, Gross District Value Added (at current prices) of Ratnagiri district was at Rs. 26,071 crores. With the per capita GDVA (at current prices) for 2016-17 recorded at Rs. 1,53,899, the district was ranked 8th in the state.

In Ratnagiri, the service sector contributes about 55% of the district economy despite employing only around ~22% of the district's workforce. The Agriculture and Allied Activities contributes 8% and the industry sector contributes 37% of the GDDP.

The economy of the district is mainly depending on cultivation and the major crops grown in the district include fruits and cereals. Kharif crops are the main crops whereas Rabi crops are much lesser in proportions. The middle of the district, having a plateau surface between the foothills and 15 kms away from coastline, cereal crops such as Rice and Ragi are cultivated. In the western part of the district, which is the coastal zone, coconut, mango, arecunuts, etc. are grown. Ratnagiri is famous for alphanso mango crop.

In the service sector, Trade and Hospitality, Constructions, and Banking and Insurance services are the major sub-sectors, which account for the largest contribution to the GDDP of Ratnagiri as can be seen in figure below.
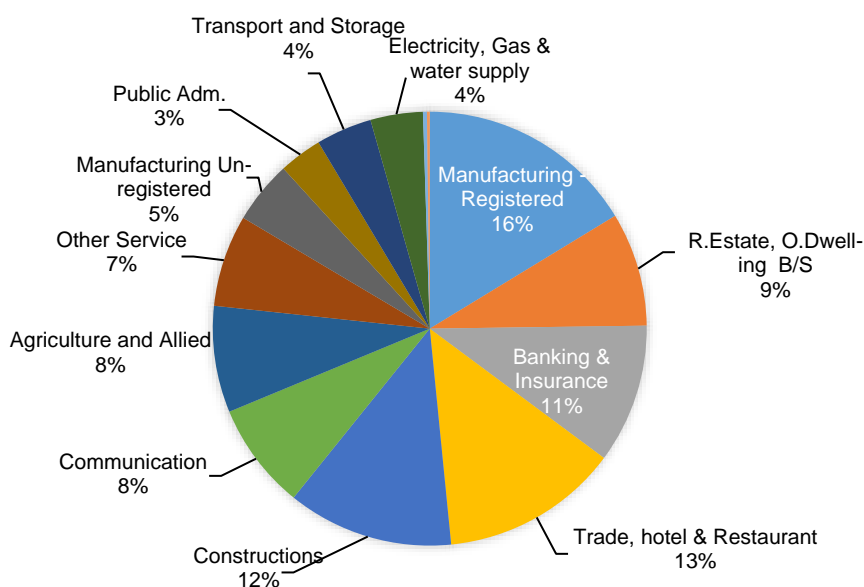
Figure 186: Sector wise GDDP Distribution of Ratnagiri District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

Marine Fishery is the most important agricultural economic activity of the district. The important fishery centres in the district are Harnai, Dabhol, Jaigad, Ratnagiri and Jaitapur.

Major registered manufacturing industries of the district are: Chemical and Chemical Products, Pharmaceuticals and Botanical Products, Other Transport Equipment and Food Products & Beverages.

Manufacture of Chemicals and Chemical Products, Pharmaceuticals, Medicinal Chemical and Botanical Products is the major industry in the district, which accounts for about 47% of the employment in registered manufacturing. It employs 12,242 persons of which 87% are employed in manufacture of chemical and chemical products. In chemical and chemical products, 65% (7,000 persons) of the workforce is employed in the manufacture of pesticides and other agrochemical products alone. Other industry in chemicals and chemical products that offers employment is Manufacture of Basic Chemicals.

Manufacture of other Transport Equipment is the second largest registered manufacturing industry in the district employing about 4,156 persons in the district of which 75% is engaged in Building of Ships and Floating Structures.

Food Products Manufacturing is also a major industry in the district employing about 4,100 people. Ratnagiri is a maritime district and majority of the persons in this industry are involved in processing of marine products. Of the total employment in this industry, around 61% are engaged in processing and preserving of fish, crustaceans and molluscs and other products.

Other less prominent manufacturing industries in the district include fabricated metal products, except machinery and equipment and manufacture of rubber and plastic products.

Table 459: Employment in major registered manufacturing sub-sectors in the district 2017-18

Sector	Employment
Manufacture of chemicals and chemical products, pharmaceuticals, medicinal chemical and botanical products	12,242
Manufacture of other transport equipment	4,156
Manufacture of food products and beverages	4,091
Manufacture of fabricated metal products, except machinery and equipment	1,830
Manufacture of rubber and plastics products	1,733
Manufacture of paper and paper products	556
Manufacture of motor vehicles, trailers and semi-trailers	429
Manufacture of other non-metallic mineral products	316
Manufacture of machinery and equipment n.e.c.	177

Source: Annual Survey of Industries, 2017-18

Investments in the districts:

Conventional Electricity, Natural gas trading & distribution and Road transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 460: Sector wise investments in Ratnagiri District

Sector Name	Proposed Investment (in INR Million)	No of projects
Conventional electricity	13,41,646	6
Natural gas trading & distribution	1,92,160	10
Road transport infrastructure services	1,53,186.8	13
Air transport infrastructure services	1,40,000	2
Shipping transport infrastructure services	57,702.5	10

Sector Name	Proposed Investment (in INR Million)	No of projects
Railway transport infrastructure services	31,960	1
Irrigation	27,754.6	5
Polymers	8,800	3
Renewable electricity	6,242	4
Electricity transmission	5,330.3	3
Others	14,854.2	102
Total	**19,79,636**	**159**

28.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 461: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	62%
	Rural	38%
Gender Profile	Male	67%
	Female	33%
Age Group	15-25 years	45%
	26-35 years	24%
	36-45 years	16%
	46-55 years	13%
	56-59 years	2%
Educational Level	Upto Xth	43%
	Upto XIIth	42%
	Any Graduation	15%
Occupational Profile	Worker	67%
	Non-Worker	33%

Figure 187: Past/Current participation in training, %

- Have attended in the past
- Currently attending
- Haven't attended in the past
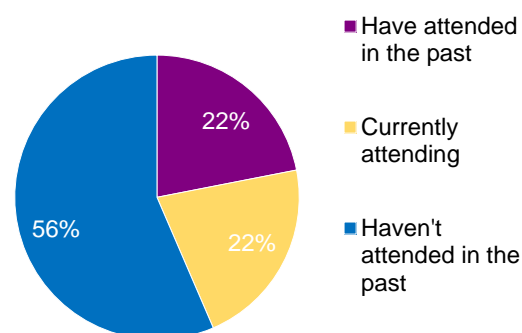
About 56% of the respondents in Ratnagiri stated that they had not attended any technical/ non-technical job related training in the past while 22% reported having attended a training programme in the past.

About ~54% of the respondents reported having attended the training at private training institutes while 45% stated government training institute as the training provider. A small proportion of respondents also stated their employer as the training provider.

Figure 188: Type of training provider, in %
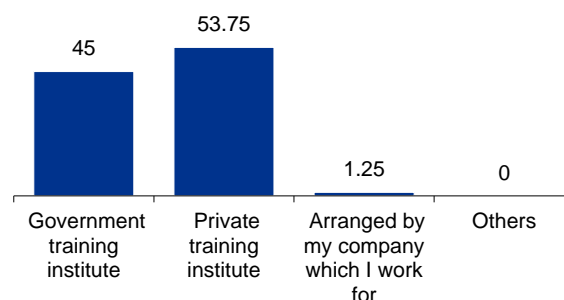
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure below, 37% of the respondents in Ratnagiri aspire to be self-employed and 63% reported a preference for being wage-employed. Contrary to the trend seen in other districts, there is a higher preference to undertake further education/ training amongst the respondents who aspire to be self-employed as compared to wage-employment aspirants. There is preference for acquiring non-technical education amongst wage-employment aspirants and vocational education amongst self-employment aspirants.

Figure 189: Key Findings related to educational attainment of the labour force

Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 462: Aspirational sub-sectors for labor force in Ratnagiri

For wage employment	For self-employment
BFSI	Food processing
Healthcare	Automobiles and auto ancillaries
Governance and Administration	Retail
Chemicals and Fertilizers	Agriculture and allied

For those aspiring to be self-employed, there was a preference towards opening a retail or wholesale shop (grocery, stationery, medical shop, pan shop, clothes). The second most stated type of business was setting up a Manufacturing Unit (fabrication, auto parts, textile, food items, etc.).

For those aspiring to be wage-employed, there was a preference towards getting jobs in Agriculture and Allied Activities, Banking and Insurance, and Automobiles sectors. Many respondents also selected the category 'others' which includes Teaching, Housekeeping, Electricals, working in a shop for wage-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 19,170 and Rs. 26,808 respectively.

Additionally, 96% the respondents would like to work within Maharashtra. As many as 59% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra at a lower wage and expressed a lower inclination towards migrating to other regions outside the state for better economic opportunities.

Perceived benefits of acquiring training:

About half of the respondents (51%) who attended a training programme stated that they actually benefited from attending the training. The primary benefits which were highlighted by the respondents include increase in income and acquisition of a new skill or up gradation in the existing skill set. Other stated benefits include getting certification and smooth movement to a new sector after attending the training. The primary challenge reported by majority of the respondents after attending the training was that the skill levels expected by the employers were not matched even after attending such programs. It is found that among the respondents who reported not having attended any training programme, as many as 53% of them stated having no awareness on any employment oriented training programs that help gain expertise/ enhance job skills.

28.5 Incremental demand and estimation of manpower supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and Allied Activities. Crop and Animal Production, Transportation, Finance and Insurance services, Human Health & Social Work activities, and the sector of Manufacture of fabricated metal products, except machinery and equipment are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sector of manufacture of fabricated metal products, except machinery and equipment, even though a high proportion of the current workforce is also engaged in the sub-sector of manufacture of chemicals and chemical products.

Table 463: Incremental Demand estimates (2019-2028); in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	19,291	20,047
Forestry & Logging	68	70
Fishing & Aquaculture	48	50
Sub Total	**19,407**	**20,167**
Registered Manufacturing		
Metal products (except machinery and equipment)	3,716	3,628
Chemicals and Pharmaceuticals	1,496	1,675
Automotive (transport equipment)	1,317	1,713
Machinery and Equipment	923	1,178
Food processing	216	227
Construction	**1,485**	**1,543**
Services		
Wholesale and Retail Trade	522	663
Transportation	5,455	6,577
Logistics	684	825
IT/ITES	1,143	1,378
Hospitality	394	421
BFSI	1,417	1,843
Real Estate	283	369

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Professional, Scientific & Technical Activities	740	963
Public administration and administrative services	7,393	9,618
Education	5,499	7,154
Healthcare	7,356	9,569
Others	16,964	22,067
Sub Total	**47,851**	**61,446**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for 98% of employment in registered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1. **Tourism & Hospitality:** Hospitality sector is set to boom in the district in near future. The district falls on the route of Mumbai Goa cruise.

2. **Manufacturing of machinery and equipment:** A coach factory is being proposed to be setup in the district. This will result in employment generation in the sector for the locals.

Estimation of Manpower Supply

Ratnagiri district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be about 5.67 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 464: Manpower supply for Ratnagiri district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Ratnagiri	8,35,247	5,90,429	5,67,334

Table 465: Projected workforce by education levels

Education level	Projected work force
Illiterate	1,06,643
Literate but below matric/secondary	3,11,195
Matric/secondary but below graduate	1,01,861
Technical degree or diploma equal to degree or post-graduate degree	9,706
Technical diploma or certificate not equal to degree	4,858
Graduate and above other than technical degree	24,086
Literate others	8,983

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~25060 annually.

Table 466: Size of target population in the district

Particular	Numbers
Enrolment in VIII	25,743
Enrolment in X	27,565
Enrolment in XII	9,933
Dropout at VIII	**3,447**
Passing out of VIII*	22,296
Students not transitioned to IX	**3,670**
Dropout at X	**5,910**
Passing out of X*	21,655
Students not transitioned to XI	**3,564**
Passing out at XII**	17,523
Students not transitioned to Higher Education	11,916
Total Target population	**25,060**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Particular	Annual Capacity in Numbers
Short Term Skilling	4,560
ITI (Government & Private)	4,940

28.6 Recommendations

The economic growth of Ratnagiri district is predominantly driven by the secondary and tertiary sectors. Manufacturing along with services forms the core of the employment generation activities in the district. Agriculture, Fishery & Aquaculture, Transportation, Finance and Insurance services and Education have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 467: Sector specific economic growth, employment potential and aspirations

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production	Red	Green	Yellow
Forestry & Logging	Red	Red	Yellow
Fishing & Aquaculture	Yellow	Red	Yellow
Food processing	Green	Red	Red
Tobacco	Green	Red	Red
Textiles	Yellow	Red	Red
Apparel	Yellow	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red

Sectors	Economic Growth	Employment Potential	Aspirational
Paper and Paper products	Green	Red	Green
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Green
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Amber	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Green
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public administration and administrative services	Amber	Green	Amber
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Red

Source: KPMG in India Analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:

- **High economic growth sectors**: Manufacturing of food products and beverages, manufacturing of chemical and chemical products, manufacturing of machinery and equipment, Manufacture of motor vehicles, trailers and semi-trailers, manufacture of other transport equipment, Information & communication, real estate activities, Professional, Scientific & Technical Activities, Administrative and support service activities, education, Human health & social work activities, Arts, entertainment & Recreation and Other Service Activities
- **High incremental employment potential sectors**: Agriculture – crop and animal production, Transportation, Finance & Insurance activities, public administration & defence, compulsory social security, education and human health & social work activities.
- **High Aspiration Sectors**: Manufacturing (others) and Finance & Insurance activities

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 468: Priority sectors for MSSDS

Sl. No.	Sector	High / Medium Growth	High / Medium Employment Potential	High / Medium aspiration
1	Agriculture – crop & animal production		✓	✓
2	Fishing and aquaculture	✓		✓
3	Metal products (except machinery and equipment)	✓	✓	
4	Transportation	✓	✓	
5	BFSI	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Automotive
- Public Administration And Administrative Services
- Healthcare
- Other services

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation are shown below in table 469. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers.

Table 469: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Agriculture and allied	- Dairy farmer - Small poultry farmer - Aquaculture worker - Inland capture fisherman plus primary processor
Metal products (except machinery and equipment)	- Fitter – Instrumentation Machinist - Pipeline fitter and maintenance - Forger
Transportation	- Transport consolidator - Courier delivery executive - Cargo surveyor - Ground operation associate
BFSI	- Accounts Executive - Business Correspondent - ATM Operator

High demand sectors	Identified Job Roles
	• Insurance Agent • Goods and Services Tax (GST)
Automotive	• Vehicle Assembly Fitter • Automotive Service Technician • Maintenance Technician • Auto Component Assembly Fitter •
Travel and Tourism	• Housekeeping Attendant • Billing Executive • Tour Vehicle Driver • Cook
Healthcare	• General Duty Attendant • Home Health Aide • Medical Records &health Information Technician • Pharmacy Assistant
Food processing	• Assistant Lab Technician-Food and Agricultural Commodities • Cold Storage Technician • Fish and Sea Food Processing Technician • Industrial Production Worker–Food Processing • Packing Machine Worker–Food Processing •
Handicrafts and Carpets	• Coir article maker • Coconut Shell finished products related job roles
Logistics	• Warehouse Picker • Kitting and Labelling • Inventory Clerk • Goods Packaging Machine Operator • Documentation Assistant
Construction	• Helper Fabrication • Grinder-Construction • Assistant Mason • False ceiling and dry wall installer

29. Sangli

29.1 About the district

Sangli district is located in the southern region of the Maharashtra state with the district headquarters in Sangli City. The district is included in Pune division and is divided into 5 sub-districts and 675 inhabited villages.

Sangli constitutes 1.57% of the total state area with a land area of 4,827 sq.km. It is bordered by Satara and Solapur districts to the north, Ratnagiri district to the west, Kolhapur and Belgaum (Karnataka) districts to the south and Bijapur district (Karnataka) to the east. The district is well-bounded by good roads.

Land in the district is suitable for agriculture and Sangli is the largest turmeric producing district in the State. Turmeric is exported to foreign countries like U.S.A. France, Great Britain etc. Being one of the most fertile districts in Maharashtra, people often refers to Sangli District as the Heaven of Farmers.

Table 470: Comparison of Sangli District with Maharashtra

Indicator	Sangli	Maharashtra
Area in sq.km.	4,827	3,07,713
Percentage share in state geographical area, %	1.57	100
No. of Sub-districts	5	353
No. of inhabited villages	675	40,959
No. of households	2,27,041	24,421,519
Forest area as a % of total geographical area	7.96	16.94

Source: Census 2011

29.2 Demography

According to 2011 census data, the district has a population of over 28.2 lakh persons which is ~2.5% of the state. Sangli is one of the least urbanized districts in the state having about one-fourth of its population in urban areas whereas more than two-fifth of the state population lives in urban areas. With a population density of 329 persons/Sq. Km, which is lower than the state average, the district is one of the many medium-intensity regions of the state.

Table 471 lists down multiple demographic indicators of the district. Sangli is one of the highly developed districts in Maharashtra with literacy rate and sex ratio higher than the state average and HDI index almost equivalent to the state average. Approximately three-fifth of the district's population falls in the working age group (i.e. 15-59 years) while around 43% are actually working i.e. % of total workers (main and marginal workers) to the total population. The remaining 57% of the population are non-workers which means that the district is bearing the burden of unproductive population very heavily.

Table 471: Demographic Indicators of Sangli district

Indicator	Sangli	Maharashtra
Population, No.	28,22,143	11,23,74,333
Decadal growth rate of population, %	9.18	16
Urban Population as a percentage of total population, %	25.51	45.2
SC Population, %	12.51	10.2
ST Population, %	0.63	8.8
Sex ratio, No. of females per 1000 males	966	925
Population density, per sq.km.	329	365
Literacy rate, %	86.24	83
Working age population* as a percentage of total population, %	63	59
Work participation rate^, %	43	44
HDI Index	0.742	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 12.47 lakh persons. Figure 190 suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by tertiary and secondary sector. As shown in the figure 180 below, the rate of unemployment (per 1000) in the district is lower than the state average across all the categories. The rate of female unemployment (per 1000) in Sangli is less than half of the state average which indicates a better gender demographic in the district as compared to other districts in Maharashtra.

Figure 190: Share of workforce & Employment Rate for Sangli District
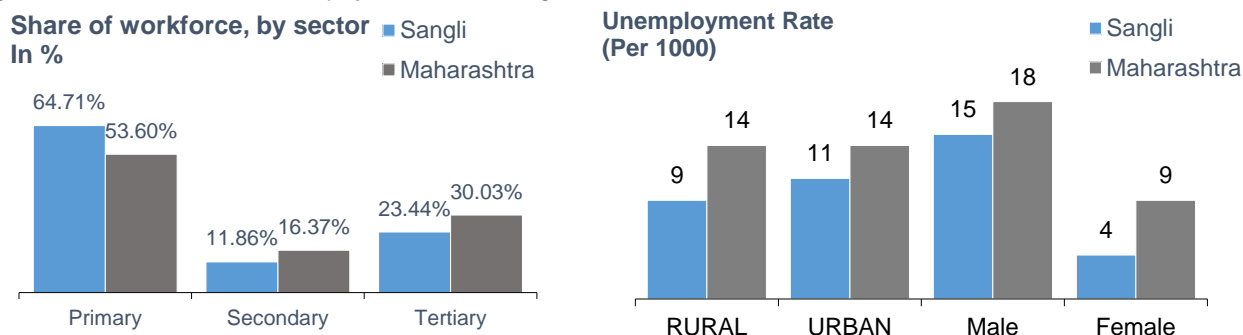
Share of workforce, by sector In %
■ Sangli ■ Maharashtra

Unemployment Rate (Per 1000)
■ Sangli ■ Maharashtra

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in figure 192, more than half of the working population is self - employed in Sangli. A higher percentage of people are working as casual labor in the district as compared to the state average. A lesser workforce is engaged in salaried employment in the district as compared to casual labor in the district.

Figure 191 Type of employment in Sangli district
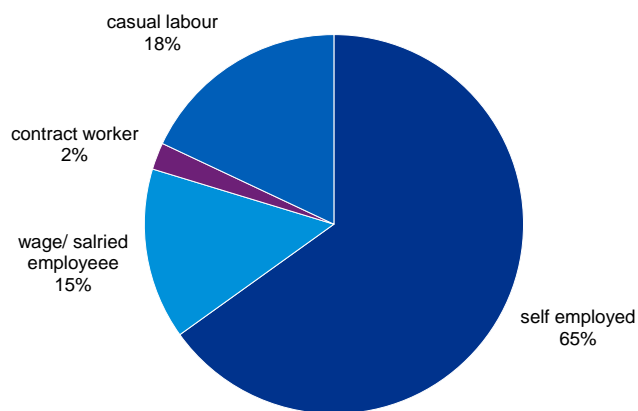
Source: Ministry of Labour & Employment

*Education Profile of the District***:**

Traditional Education:

Sangli district has a total of 3,587 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of 4.5 lakh students. The Pupil-Teacher ratio of the district is 20. The district also has 109 general and technical colleges with an enrolment of more than 56,000 students in state-run general and technical colleges.

Table 472: Educational Profile of Sangli District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	2,869	3,56,717
Secondary Schools (IX to XII)	718	93,144
General Colleges & Technical Education	109	56,000[50]

Source: AISHE, U-DISE

Vocational Education

Sangli district has a total of 25 ITIs Government and Private with 3131 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information & Communication Technology, Garment Making, Healthcare, Beauty Culture and Hair Dressing, Retail. Whereas, state level scheme (i.e. PMKUVA) offers training in Accounting and Electronic sectors within the district.

Table 473: Total no. of ITI and there training number in Sangli district

Particular	Number
ITIs (Government & Private)	25
Trainee Count	3,131

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 5,776 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Information & Communication Technology, Garment Making, Automotive repair, Electrical and Counselling skill.

Table 474: Sector wise short- term skilling trained numbers in PMKUVA for Sangli district

Sectors	Trained
Information and communication technology	3,389
Garment making	1,850
Automotive repair	288
Electrical	219
Counselling skill	30
Total	**5,776**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. Also, District Industries Centre (DIC) provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

Majority of the surveyed respondents received their training from government training institutes followed by private training providers.

29.3 Economy

As of 2016-17, the Gross District Value Added (at current prices) of Sangli district was at Rs. 43,462 crores. The district with a per capita GDVA (at current prices) of Rs. 1,45,969 made it to the top ten districts of the state in 2016-17.

---

[50]Enrolment figures at State run general and technical education colleges only

In Sangli, the service sector contributes to 57% of the district economy despite employing only around 16% of the district's workforce. The agriculture and allied activities contribute to 17% and the industry sector contributes to 25% of the GDDP.

A deeper look into each of these sectors reveals that the major sub-sector in the services sector is Banking and Insurance with a contribution of 20% to the GDDP. Other significant sub-sectors include Retail and Hospitality, Real Estate Services, Ownership of dwellings and business services and Communication, as can be seen in figure below. The primary crops cultivated in the district include Sugarcane, Turmeric, Grapes and Cereals.
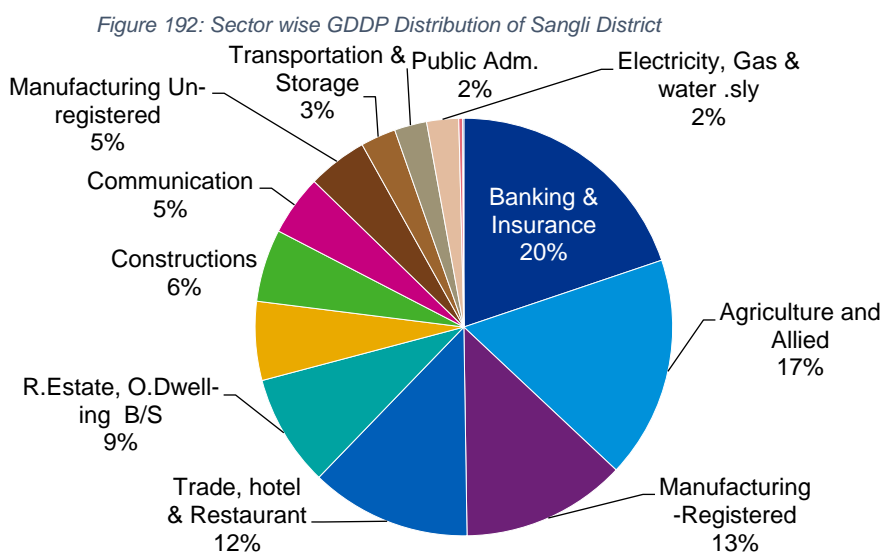
Figure 192: Sector wise GDDP Distribution of Sangli District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

Industry accounts for about 25% of the district's GDDP, with registered manufacturing being the single largest contributor, accounting for 13% of the district's economy followed by constructions with 6% share.

4 major manufacturing industries of the district are: Food Products and Beverages, Textiles, Basic Metals, Machinery and Equipment.

Manufacturing of Food Products and Beverages is the largest registered manufacturing industry in the district employing over 14,500 people, which constitutes about 49% of the total workforce employed in registered manufacturing sector. In this industry, 68% of employment is concentrated in manufacture of sugar with some employment scattered across other industries such as manufacture of dairy products, starches and starch products and prepared animal feed. Rajarambapu Cooperative Sugar factory is a major establishment located in Sangli. The beverage manufacturing industry engaged a small proportion of workforce in the district and employs just over 1% of 14,500. People are mainly engaged in distilling, rectifying and blending of spirits and ethyl alcohol production from fermented materials.

The second largest registered manufacturing industry is **textiles** with majority of people employed in the initial stage of the value chain of the textile industry. It is interesting to note that as many as 78% of the people employed in textiles are working in preparation and spinning of fibres.

Manufacture of basic metals is another important industry of the district. It employs 2,577 people of which 61% are engaged in casting of iron and steel.

The district also has a major **industry in manufacturing of machinery and equipment**. 2,289 people are engaged in this industry of which about 54% are engaged in manufacturing of pumps, compressors, taps and valves alone. Kirloskar Brothers Ltd. is a major industry player located in the district.

Table 475: Employment in registered manufacturing sector in the district 2017-18 for Sangli district

Sector	Employment
Manufacture of food products and beverages	14,557
Manufacture of textiles	3,281
Manufacture of basic metals	2,577
Manufacture of machinery and equipment n.e.c.	2,289
Manufacture of wearing apparel	1,786
Manufacture of motor vehicles, trailers and semi-trailers	777
Manufacture of fabricated metal products, except machinery and equipment	723
Manufacture of chemicals and chemical products, , pharmaceuticals, medicinal chemical and botanical products	701
Manufacture of paper and paper products	446
Manufacture of tobacco products	399
Manufacture of rubber and plastics products	373
Manufacture of other non-metallic mineral products	344
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	170
Manufacture of leather and related products	160
Manufacture of coke and refined petroleum products	82
Manufacture of other transport equipment	55
Publishing, printing and reproduction of recorded media	44

Source: Annual Survey of Industries, 2017-18

Investments in the districts:

Irrigation, Railway transport infrastructure services, Renewable electricity, Road transport infrastructure services and Sugar are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 476: Sector wise investments in Sangli District

Sector Name	Proposed Investment (in INR Million)	No of projects
Irrigation	62,390	2
Railway transport infrastructure services	53,492.2	5
Renewable electricity	32,088	18
Road transport infrastructure services	21,924.9	5
Sugar	13,416.8	13
Transport logistics services	5,082	4
Natural gas trading & distribution	4,940	2
Beer & alcohol	4,826.1	10
Cloth	4,560	2
Computer software	3,500	2
Others	6,896.8	33
Total	**2,13,116.8**	**96**

29.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 477: Distribution of Respondents of Sangli district

Profile	Details	
Urban vs. Rural	Urban	58%
	Rural	42%
Gender Profile	Male	75%
	Female	25%
Age Group	15-25 years	42%
	26-35 years	37%
	36-45 years	14%
	46-55 years	6%
	56-59 years	1%
Educational Level	Upto Xth	48%
	Upto XIIth	35%
	Any Graduation	17%
Occupational Profile	Worker	61%
	Non-Worker	39%

Figure 193: Past/Current participation in training (in %)
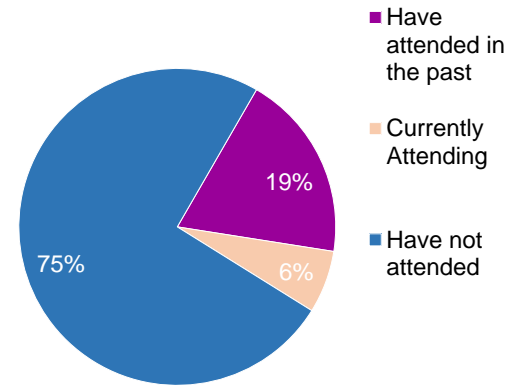
About 75% of the respondents in Sangli stated that they had not attended any technical/ non-technical job related training in the past while 19% reported having attended a training programme in the past.

It is to be noted that about three-fifth of the respondents received their training from a government training institute. The district also has private training providers to enhance the skills of the people and about 38% of the respondents received their training from private training providers. A small proportion of respondents also mentioned receiving trainings organized by their employers.
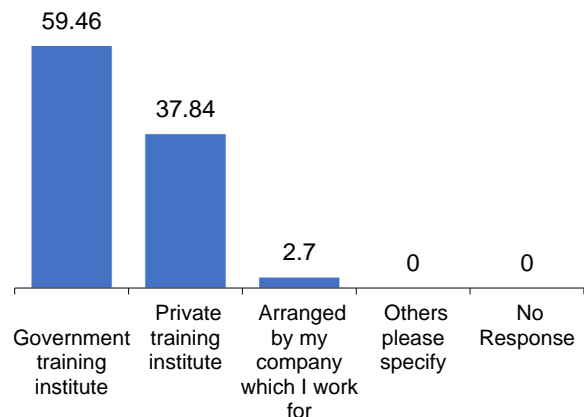
Figure 194: Type of training provider (in %)

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure 196, 54% of the respondents in Sangli aspire to be self-employed and 46% reported a preference for being wage-employed. Amongst the respondents who aspire to be wage-employed, there is a higher preference to undertake further education/training as compared to self-employment aspirants. Additionally, there is preference for acquiring non-technical education amongst those who aspire to be wage-employed. All respondents who aspire to be self-employed stated non-technical education as their education preference.

Figure 195: Key Findings related to educational attainment of the labour force
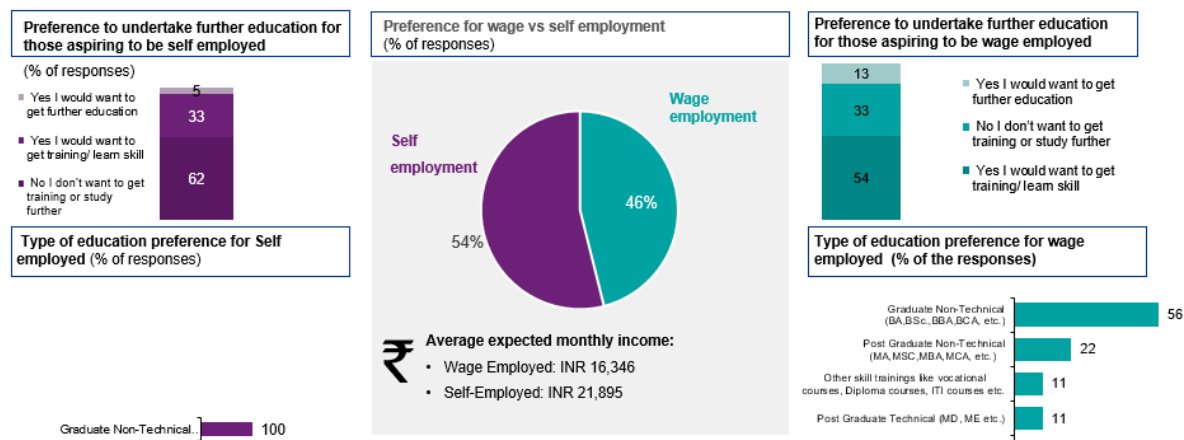
Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 478: Aspirational sub-sectors for labour force in Sangli district

For wage employment	For self-employment
Agriculture & Allied activities	Agriculture & Allied activities
Governance & Administration	Other Manufacturing
Other Manufacturing	Food Processing
Finance, Banking & Insurance	

For those aspiring to be self-employed, there was a preference towards opening a retail or wholesale shop (grocery, stationery, medical shop, pan shop, clothes).

The 'others' category in wage-employment includes cooking, electricals, manual wage labor, housekeeping and education and training.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 16,346 and Rs. 21,895 respectively.

Additionally, 97% the respondents would like to work within Maharashtra. A proportion of as high as 82% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra at a lower wage and expressed a lower inclination towards migrating to other regions outside the state for better economic opportunities.

Perceived benefits of acquiring training:

As large as 75% of the respondents who attended a training programme stated that they actually benefited from attending the training. The primary benefit which was highlighted by the respondents was increase in income. About one-fourth of the respondents who attended the training programme also stated that the training has enabled them to move to a new sector which has proved beneficial for them. The primary challenge stated by about one-third of the respondents after attending the training was that the skills imparted by the trainings were not in synchronization with the demands of the employers. An equal

proportion of the respondents stated that the skills learnt during the training are not being provided by their employers in-house which makes it difficult for them to upgrade or sustain their skillset. It is found that among 72% of the respondents who reported not having attended any training programme, there is no awareness on any employment oriented training programs that help gain expertise/ enhance job skills.

29.5 Incremental demand and estimation of manpower supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities and registered manufacturing sector. Crop and animal production, Manufacture of machinery and equipment, Finance and Insurance services, Transportation, and Human health & social work activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sector of machinery and equipment even though a high proportion of the current workforce is also engaged in manufacture of food products and beverages

Table 479: Incremental Demand estimates (2019-2028); in persons for Sangli district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	32,284	33,549
Forestry & Logging	113	118
Fishing & Aquaculture	80	83
Sub Total 1	**32,477**	**33,750**
Registered Manufacturing		
Machinery and Equipment	11,931	15,235
Textiles	2,183	3,505
Metal products (except machinery and equipment)	1,468	1,433
Food processing	769	809
Apparel	561	728
Iron and Steel	123	129
Construction	**1,989**	**2,088**
Services		
Wholesale and Retail Trade	976	1,239
Transportation	7,552	9,105
Logistics	948	1,142
IT/ITES	1,582	1,908
Hospitality	482	514
BFSI	3,954	5,144
Real Estate	791	1,029
Professional, Scientific & Technical Activities	2,066	2,687
Public administration and administrative services	13,190	17,159
Education	8,735	11,363
Healthcare	11,685	15,201

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Other Services	34,786	45,252
Sub Total	**86,747**	**1,11,743**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Construction is an important economic activity of the district.
- Food processing sector further bifurcated into turmeric, pomegranate, grapes and by products from bamboo. Cold storage is in high demand
- Organic farming, dairy and goat rearing under the Agriculture and Allied activities.
- Leather and Textiles has a huge industry in the district.
- Under Beauty and Wellness, certified courses for yoga instructor and acupressure, spa, professional food dietician (self-employment).
- Rubber and plastic - Plastic Molder to be added as a job role.
- Making of musical instruments has high potential in the district

Estimation of Manpower Supply

Sangli district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 12.82 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 480: Manpower supply for Sangli district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Sangli	17,96,709	12,95,620	12,82,938

Table 481: Projected workforce by education levels

Education level	Projected work force
Illiterate	2,65,103
Literate but below matric/secondary	5,10,925
Matric/secondary but below graduate	3,18,715
Technical degree or diploma equal to degree or post-graduate degree	28,920
Technical diploma or certificate not equal to degree	14,254
Graduate and above other than technical degree	98,780
Literate others	46,242

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~41,509 annually.

Table 482: Size of target population in the district

Particular	Numbers
Enrolment in VIII	47,293
Enrolment in X	45,518
Enrolment in XII	16,119
Dropout at VIII	**5,235**
Passing out of VIII*	42,058
Students not transitioned to IX	**6,923**
Dropout at X	**7,287**
Passing out of X*	38,231
Students not transitioned to XI	**6,293**
Passing out at XII**	30,892
Students not transitioned to Higher Education	21,006
Total Target population	**41,509**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 483: Vocational Education annual capacity for Sangli district

Particular	Annual Capacity in Numbers
Short Term Skilling	10,470
ITI (Government & Private)	6,036

29.6 Recommendations

The economic growth of Sangli district is predominantly driven by the secondary and tertiary sectors. Manufacturing along with services forms the core of the employment generation activities in the district. Agriculture, manufacturing of machinery and equipment, transportation and Finance and Insurance services have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 484: Sector specific economic growth, employment potential and aspirations

Sectors	Economic Growth	Employment Potential	Aspirational
Agriculture - Crop & Animal production	Red	Green (light)	Green
Food processing	Green (light)	Red	Amber
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Amber
Paper and Paper products	Green (light)	Red	Amber
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green (light)	Red	Red

Sectors	Economic Growth	Employment Potential	Aspirational
Rubber and Plastics	Amber	Red	Amber
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Green	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Amber
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration and administrative services	Amber	Green	Green
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Red

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:
- **High economic growth sectors**: Manufacturing of food products and beverages, manufacturing of chemical and chemical products, manufacturing of machinery and equipment, Manufacture of motor vehicles, trailers and semi-trailers, manufacture of other transport equipment, Information & communication, real estate activities, Professional, Scientific & Technical Activities, Administrative and support service activities, education, Human health & social work activities, Arts, entertainment & Recreation and Other Service Activities
- **High incremental employment potential sectors**: Agriculture – crop and animal production, Manufacture of machinery and equipment, Transportation, Finance and Insurance activities, Public Administration & defence, compulsory social security, Education and Human health & social work activities.
- **High Aspiration Sectors**: Agriculture – crop and animal production, Fishing and aquaculture, administrative and support service activities and Public Administration & defence, compulsory social security

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the

labour force in sectors which are either high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 485: Priority sectors for MSSDS

Sl. No.	Sector	High / Medium Growth	High / Medium Employment Potential	High / Medium aspiration
1	Agriculture – crop & animal production		✓	✓
2	Healthcare	✓	✓	✓
3	Food processing	✓		✓
4	Machinery and equipment	✓	✓	
5	Automotive	✓		✓
6	Transportation	✓	✓	
7	BFSI	✓		✓
8	Public Administration and Administrative services	✓	✓	✓
9	Other manufacturing (Paper and paper products, Rubber and Plastics)	✓		✓
10	Retail	✓		✓
11	Education	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Other services

These sectors, though low on the aspirational level of the labour force, have a good potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation as shown above sector-wise are shown below in table 486. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers.

Table 486: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Agriculture and allied	- Bamboo and Bamboo by products Grower - Dairy Farmer - Goat Farmer - Gardener - Quality Seed Grower - Organic Farming - Cold storage operator

High demand sectors	Identified Job Roles
Food processing	• Dairy Processing Equipment Operator • Fish & Sea food processing Technician • Fruits and Vegetables Selection In-Charge • Pulse Processing Technician • Soya beverage making technician • Multi Skill Technician - Turmeric, pomegranate, grapes grower
Machinery and equipment	• CNC Operator – Turning • Fitter – fabrication • Equipment operator • Forger • Fitter – electrical and electronic assembly
Automotive	• Auto body technician • Automotive electrician • Forging operator • Welding technician • Surface treatment technician
Transportation	• Reach Truck Operator • Crane Operator • Shipment Classification Agent • Clearance Support Agent • Consignment Booking Assistant
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent
Rubber and Plastic	• Emulsion Maker • Latex Harvest Technician Tapex • Laboratory Assistant / Chemist • Creel Room Operator • Plastics Mould Manufacturing Assistant
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant • Dental Assistant
Leather	• Cutter - Footwear • Pattern Cutter (Footwear)
Textiles	• Fitter- Spinning Preparatory • Knitting Machine Operator • Loom Fitter • Sewing Machine Operator • Assistant Ginning Fitter

30. Satara

30.1 About the district

Satata district, gets its name from the seven forts (Sat-Tara) near the city and is located in western Maharashtra. The district is divided into 11 sub districts and 1,719 inhabited villages.

Satara has a total land area of 10, 480 sq. km. and constitutes 3.4% of the total state area. It is a part of Pune region and is bordered by districts - Sangli, Ratnagiri, Pune, Solapur and Raigad. The district is connected to other major cities by road and railways, and can be reached by air via Pune airport which is 123 kms from Satara city.

Satara is located at the foot of the famous Ajinkyatara fort, and is a common tourist destination for Sajjangad Fort, Kaas Plateau – Called "Valley of flowers of Maharashtra", which is also a World Heritage Site, Baramotichi Vihir Step Well and Thoseghar Waterfall.

Table 487: Comparison of Satara District with Maharashtra

Indicator	Satara	Maharashtra
Area in sq. km.	10,480	3,07,713
Percentage share in State geographical area, %	3.4%	100%
No. of Sub-districts	11	353
No. of inhabited villages	1,719	41,095
No. of households	6,39,999	19,56,736
Forest area as a % of total geographical area	0.32%	16.94

Source: Census 2011

30.2 Demography

The population of Satara is 30,03,741 as per census 2011, with almost 50% male and female ratio. There is a low level of urbanisation, as only about 19% of the population resides in urban areas. The district has a literacy rate of 83%, close to the state average of 82% and sex ratio of 988 females per 1000 males, higher than the state average of 925. Also, the sex ratio is higher in rural areas than urban area at 995 vs 959. While 65% of the district's population is in the working age group (15-59 years), 45% is actually working. The HDI of the district at 0.742 is higher than that of India and is a good representation of the state HDI as well.

Table 488: Demographic Indicators of Satara district

Indicator	Satara	Maharashtra
Population, No.	30,03,741	11,23,72,972
Decadal growth rate of population, %	6.93%	16%
Urban Population as a percentage of total population, %	18.9%	45.2%
SC Population, %	2.43%	10.2%
ST Population, %	0.48%	8.8%
Sex ratio, No. of females per 1000 males	988	925
Population density, per sq.km.	287	365
Literacy rate, %	82.87%	83%
Working age population* as a percentage of total population, %	62%	59%
Work participation rate^, %	44.6%	44%
HDI Index	0.742	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district, with a total workforce of 13.5 lakh persons is predominantly agrarian with 66.4% of its workforce dependent on primary sector. 11.5% of the district population is engaged in secondary sector and rest (22.2%) in the tertiary sector. As indicated in the figure 197, Satara has a lower rate of unemployment compared to the state average in all aspects.

Figure 196: Share of workforce & Employment Rate of Satara district
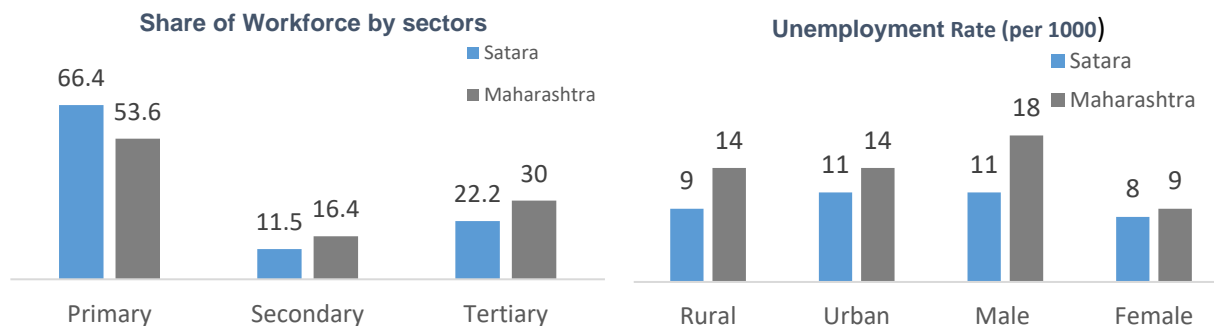
Share of Workforce by sectors

■ Satara
■ Maharashtra

Unemployment Rate (per 1000)

■ Satara
■ Maharashtra

Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 197: Type of employment in Satara district

Type of Employment Numbers, per 1000
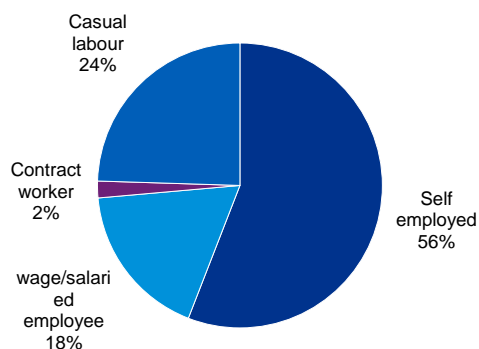
As can be seen in figure 198, 56% of the respondents are reported to be self-employed in the district, which is the 11th highest in the state, followed by 24 % of the workforce reported to be casual workers, 18% of the workforce reported to be salaried/wage employed, and 2% of the workforce are engaged as contract workers.

Source: Ministry of Labor & Employment

Education Profile of the district:

Traditional Education:

The district has 4593 schools of which 3807 are primary. Total enrolment in schools was 5,30,876. Though a significant decrease can be seen in the enrolment numbers of students between primary and secondary schools in Table 350, however, in primary consultations, it was shared that the dropout rate is low in the district because education has been given importance, and the district is economically developed. The decrease in the enrolment is mainly because of migration. The student-teacher ratio in the district is 18. The district also has 147 colleges for general and technical education.

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	3,807	3,53,824
Secondary (9-12th)	786	1,77,052
Colleges (General and Technical)	147	85,000

[1]*Enrolment figures at State run general and technical education colleges only*
Source: AISHE, U-DISE

Vocational Education

Satara district has a total of 18 ITIs Government and Private with 3372 students currently enrolled. As was shared during the interactions with ITI's, there are two schemes – Craftsman training scheme (one/two year, both engineering and non-engineering courses) and Apprenticeship Training skill, which is active in the ITIs. There is a 7% - 8% drop out rate, mainly because either the students change courses after enrolling for non – popular trade or due to the system of attendance and industrial patterns (3 hours theory and 5 hours practical). Top sectors in which the trainings are offered in Satara as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Banking and Accounting, Agriculture, Entrepreneurial skills, Information and communication technology and Gems and Jewelry. Also, under the state scheme, majority of the trainings are focused on Accounts Assistant Using Tally, Electrician Domestic Spoken English and Communication Skill.

Table 490: Total no. of ITI and there training number in Satara district

Particular	Number
ITIs (Government & Private)	18
Trainee Count	3,372

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 6,130 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Information & Communication Technology, Fashion Design, Electrical, Banking & Accounting, Garment Making, Production & Manufacturing etc.

Table 491: Sector wise short- term skilling trained numbers in PMKUVA for Satara district

Sectors	Trained
Information and Communication Technology	2,767
Fashion Design	510
Electrical	508
Banking and Accounting	450
Garment Making	400
Production and Manufacturing	372
Electronics	243
Construction	178
Automotive Repair	172
Beauty Culture and Hair Dressing	150
Soft Skills	149
Medical and Nursing	60
Remaining Sectors	60
Fabrication	51
Hospitality	30
Toy Making	30
Total	**6,130**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as masala making, vermi compost making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

It was also shared that the popular training trades in the district include - electrician, fitter, diesel and motor mechanic. The trainings with least enrolment rates are foundry, carpentry, and cosmetology (for women). There is a demand from industry for - CNC operator, machinist, fitter, welder, electrician, however, the interest levels of students are low in these sectors. Also, training is available for industrial painting, however, the demand is low, though there is a high job potential. The trades which are running, but, are about to be stopped are of stenography and fashion technology.

Trainings are offered by private training centers in the district across various courses for enhancing the skills of the people.

30.3 Economy

At 42,644 crore district GDP of Satara (at current prices) was 13th largest in Maharashtra in 2016-17. Per capita GDDP of Satara was Rs. 59,864, lower than the state average of Rs. 1,35,122.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 58% towards the GDDP, followed by secondary sector contributing 27.5% and primary sector contributing 15%. The economy of the district is led by Banking and Insurance services, Agriculture and Allied activities, Trade, Hotels and Restaurants, and Registered Manufacturing.

Figure 198: Sector wise GDDP Distribution of Satara District
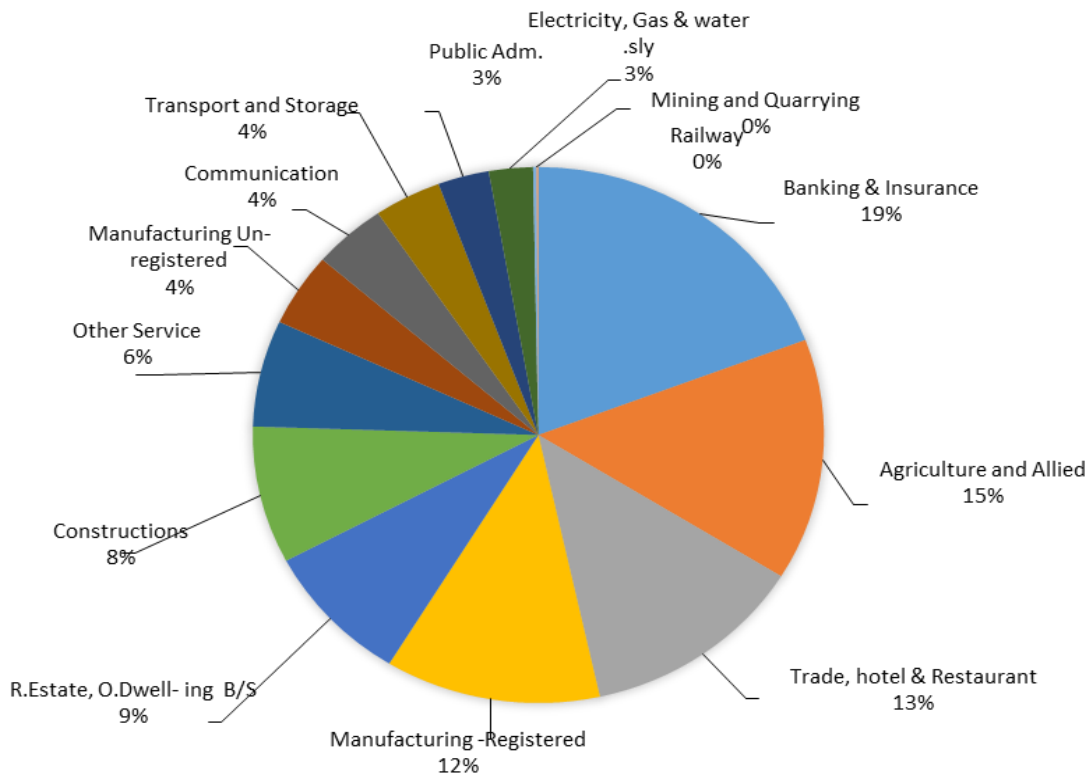
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

Agriculture and allied activities contribute 15% of the district's GDDP, and the major crops grown in the district are Jowar, Paddy, Groundnut, Soyabeen, Wheat, Maize. The district also has significant horticulture production as the rich combination of soil composition, liberal irrigation combined with favourable climactic condition make it suitable for horticulture production. Mango, strawberry, sapota, pomegranate and guava are major fruit crops of the district.

Industry accounts for around 27.5% of the district GDDP. The sector is led by registered manufacturing with a 12% share and construction with 8% share.

The district has over 3177 large and, micro, small and medium industrial units, with over 80% of the employment in registered manufacturing in the district concentrated in top 5 sub sectors viz – manufacture of motor vehicles and trailers, textiles, food products and beverages, machinery and non-electrical equipment, and metals. Other major industrial activities include manufacture of fabricated metal products and electrical equipment. Also, it has been shared that Fabrication cluster is upcoming, as the detailed project report for the same has been approved.

Manufacture of motor vehicles, trailers and semi-trailers is the major industry of the district, with sub-sector - Manufacture of parts and accessories for motor vehicles alone employing 29328 people that is approximately 99% of the people engaged within the sector. The second sub sector that provides livelihood opportunities to people across various rungs of the heterogeneous society is Trailers and Semi-Trailers. Cooper Corporation Pvt Ltd is a prominent employer in this sector, running operations across multiple locations.

Manufacture of textiles is the second major industry in the district with sub sectors such as Manufacture of cordage, rope, twine and netting employing 21,589 people, which is approximately 95% of the total people employed in this sector. The major employer is Garware Wall Ropes Ltd, operating across multiple locations in Satara. Other leading sub sectors in this division include Preparation and spinning of textile fibres and Weaving of textiles.

Manufacture of machinery and equipment is the third prominent industry with Manufacture of other general-purpose machinery employing over 5000 people, which is 32% of the people engaged in this sector. Besides, the other eading sub sectors are Manufacture of other special-purpose machinery, Manufacture of engines and turbines, except aircraft, vehicle and cycle engines, Manufacture of machinery for food, beverage and tobacco processing and Manufacture of machinery for textile, apparel and leather production

Other note able manufacturing industries include Manufacture of food products and beverages, Manufacture of basic metals and Manufacture of fabricated metal products, except machinery and equipment in Satara.

Table 492: Employment in registered manufacturing sector in Satara district 2017-18

Sector	Employment
Manufacture of motor vehicles, trailers and semi-trailers	29,396
Manufacture of textiles	22,576
Manufacture of machinery and equipment n.e.c.	15,500
Manufacture of food products and beverages	14,748
Manufacture of basic metals	7,801
Manufacture of fabricated metal products, except machinery and equipment	3,910

Source: Annual Survey of Industries, 2017-18

Service sector is a major contributor of the district economy, contributing 58% of the district GDP. This sector is led by Banking and Insurance Services (19%) and Trade, Hotels and Restaurants (13%), Real Estate (9%) and Communications (6%).

Investments in the districts:

Irrigation, Road transport infrastructure services, Railway transport infrastructure services, Renewable electricity, Conventional electricity etc. are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 493: Sector wise investments in Satara District

Sector Name	Proposed Investment (in INR Million)	No of projects
Irrigation	124,577	9
Road transport infrastructure services	84,154	17
Railway transport infrastructure services	51,014	4
Renewable electricity	47,805	30
Conventional electricity	34,600	3
Electricity transmission	14,000	6
Sugar	13,390	10
Steel	11,860	3
Other domestic appliances	11,850	3
Other electronics	9,300	3
Others	35,831	100
Total	**4,38,381**	**188**

30.4 Labor force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 494: Distribution of Respondents for Satara district

Profile	Details	
Urban vs. Rural	Urban	60%
	Rural	40%
Gender Profile	Male	69%
	Female	31%
Age Group	15-25 years	41%
	26-35 years	29%
	36-45 years	18%
	46-55 years	12%
	56-59 years	0%
Educational Level	Up to Xth	52%
	Up to XIIth	27%
	Any Graduation	21%
Occupational Profile	Worker	71%
	Non Worker	29%

Figure 199: Past/Current participation in training (in %)

- 25%
- 4%
- 71%

■ I have undergone some technical/ non-technical job related training in past

■ I am currently undergoing technical/ non-technical job related training

■ I haven't attended any technical/ non-technical job related training in the Past
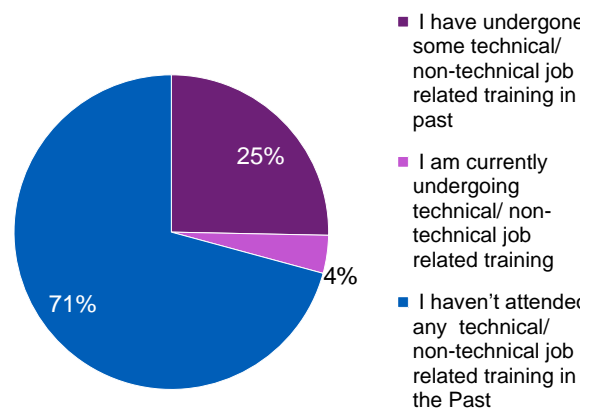
As can be seen in figure above, significant number of respondents (71%) shared that they had not undergone any technical/ non-technical job related training in the past. 25% reported that they have taken some training in the past and 4% mentioned that they are currently undergoing training. Out of those who did not attend the trainings, 62 % shared that they were not aware of them, and the others expressed lack of time, quality of training institutes and lack of interest as the main reasons for not attending the training.

Of those who underwent vocational training in the past, almost an equal number of trainings were provided by government institutes (49%) and private training institutes (50%). The trainees shared that newspaper advertisement has been the main source of information about the trainings.

Figure 200: Type of training provider (in %)
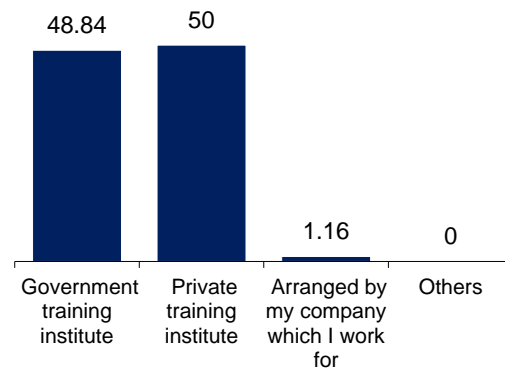
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure below, in Satara district, majority (62%) of the respondents aspire to be wage-employed while 38% reported a preference for being self-employed. The preference can be seen despite the large difference in the expected monthly income, which is higher in self-employment than wage employment. Amongst the respondents, 53% of self-employment aspirants have expressed an inclination towards undertaking further education and training as compared to 42% in wage employment.

Figure 201: Key Findings related to educational attainment of the labor force
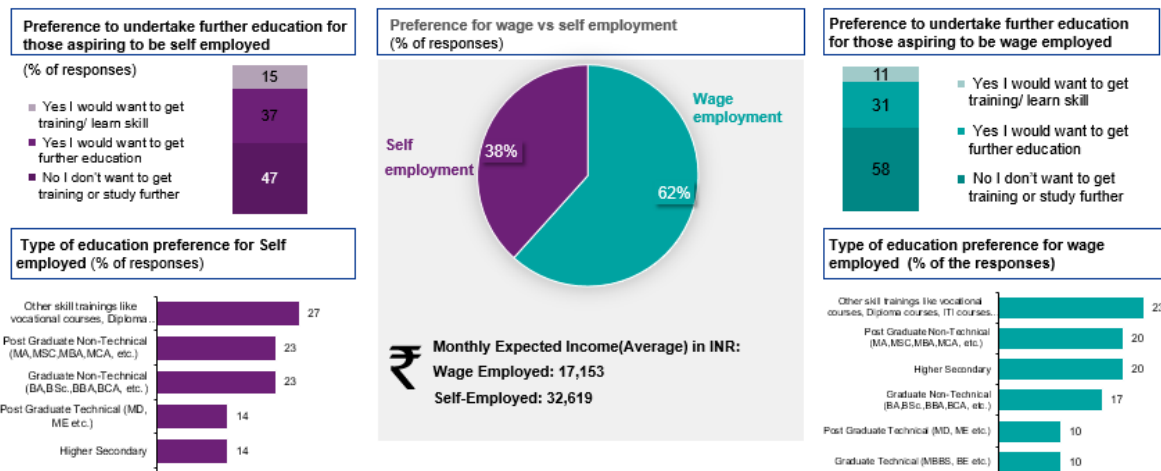
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 495: Aspirational sub-sectors for labor force

For wage employment	For self-employment
Agriculture & Allied	Agriculture & Allied
Food processing	Food processing
Automobiles and auto ancillaries	Automobiles and auto ancillaries
Engineering and capital goods	IT & ITES
	Engineering and capital goods

Amongst the aspirants looking to be self-employed specifically, they expressed an interest in opening a retail or a wholesale shop for grocery/stationery/medical shop/pan shop/clothes, setting up manufacturing unit fabrication, auto parts, textile, food items etc. or setting up a service company for IT/Accounting/BPO/Travel agency etc.

92% of the respondents have expressed that they would prefer to work within their state, Maharashtra and 40% of the respondents shared that they are willing to work outside their state if they are being paid relatively higher than their wages in Maharashtra.

Perceived benefits of acquiring training:

Out of those who attended the training, 84% felt that the training has reaped benefit such as gaining new skills and upgrading current skill set, followed by increase in income and an opportunity to move into a new sector. However, the respondents also faced challenges after attending the training, such as, a gap was felt in the skill levels expected by the employers and those imparted in the trainings, lack of support from the employers during the training program and limited recruitment by employers of the trained students.

30.5 Incremental demand and estimated manpower supply

Crop & Animal production, Finance & Insurance Activities, Transportation and Human health & social work activities are expected to be major sectors creating incremental demand in coming 10 years. The incremental registered manufacturing sector demand is concentrated in Manufacture of machinery and equipment n.e.c., Manufacture of textiles, Manufacture of fabricated metal products, except machinery and equipment and Manufacture of motor vehicles, trailers and semi-trailers. However, a decline in demand is expected in Manufacture of other non-metallic mineral products.

Table 496: Incremental Demand estimates (2019-2028); in persons for Satara district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	36,892	38338
Forestry & Logging	130	135
Fishing & Aquaculture	91	95
Sub Total	**37,113**	**38567**

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Registered Manufacturing		
Machinery and Equipment	80,790	1,03,167
Textiles	15,022	24,114
Apparel	79	102
Metal products (except machinery and equipment)	7,940	7,752
Automotive	2,207	2,370
Food processing	779	819
Chemicals and Pharmaceuticals	430	482
Iron and Steel	374	391
Rubber and Plastics	99	102
Construction	**2,634**	**2,764**
Services		
Wholesale and Retail Trade	917	1,165
Transportation	9,467	11,414
Logistics	1,188	1,432
IT/ITES	1,984	2,392
Hospitality	643	686
BFSI	4,540	5,906
Real Estate	908	1,181
Professional, Scientific & Technical Activities	2,372	3,085
Public administration and administrative services	14,066	18,298
Education	9,359	12,175
Healthcare	12,519	16,286
Other Services	34,534	44,924
Sub Total	**92,496**	**1,18,943**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing
The registered manufacturing subsectors above, account for 92% of employment in registered manufacturing, remaining is concentrated in manufacture of electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Preference towards Tourism as a sector under 'Self-Employment;' and Government Jobs under 'Wage Employment' was expressed.
- Bifurcation on geographical division – West Satara and East Satara to recognize the difference in upcoming jobs based on drought prone nature of the district.
- Sericulture, Tourism and Hospitality, BFSI and Construction sectors are priority sectors of the district.
- Textiles is a low performing sector in the district as compared to Apparel
- Bee Keeping is a local art and a relevant economic activity of the district.

Estimation of Manpower Supply

According to KPMG estimates, Satara district has a significant opportunity in terms of a favourable demographic dividend- with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 13.22 lakhs labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 497: Manpower Supply for Satara District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Satara	18,44,725	13,35,683	13,22,524

The workforce is further split across the educational attainment within the district as shown below in the table 498.

Table 498 Educational Attainment of projected workforce for Satara district

Educational Level	Projected Workforce
Illiterate	2,48,555
Literate but below matric/secondary	5,45,282
Matric/secondary but below graduate	3,29,364
Technical degree or diploma equal to degree or post-graduate degree	26,936
Technical diploma or certificate not equal to degree	12,972
Graduate and above other than technical degree	98,073
Literate others	61,342

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~43,072 annually.

Table 499: Size of target population in the district

Particular	Numbers
Enrolment in VIII	47,742
Enrolment in X	46,728
Enrolment in XII	17,427
Dropout at VIII	**4,812**
Passing out of VIII*	42,930
Students not transitioned to IX	**7,066**
Dropout at X	**6,878**
Passing out of X*	39,850
Students not transitioned to XI	**6,559**
Passing out at XII**	33,188
Students not transitioned to Higher Education	22,568
Total Target population	**43,072**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 500: Vocational Education annual capacity for Satara district

Particular	Annual Capacity in Numbers
Short Term Skilling	12,240
ITI (Government & Private)	6,616

30.6 Recommendations

Satara, being one of the heavily rural dominated district, predominated by primary sector, yet driven by secondary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 501: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Food processing	Green	Red	Dark Green
Textiles	Yellow	Green	Red
Apparel	Yellow	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Yellow	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Yellow	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Yellow	Yellow	Yellow
Machinery and Equipment	Green	Green	Yellow
Automotive	Green	Red	Yellow
Automotive (transport equipment)	Green	Red	Yellow
Construction	Red	Red	Red
Wholesale and Retail Trade	Yellow	Red	Red
Transportation	Yellow	Yellow	Red
Logistics	Yellow	Red	Red
IT/ITES	Green	Red	Yellow
Hospitality	Yellow	Red	Red
BFSI	Yellow	Red	Red
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public administration and administrative services	Yellow	Green	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Education	🟩	🟨	🟥
Healthcare	🟩	🟩	🟥
Other Services	🟩	🟩	🟥

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:

- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Agriculture-Crop & Animal production, Textiles, Manufacture of machinery and equipment n.e.c., Public Administration & defense, compulsory social security and Education
- **High Aspiration Sectors: Agriculture** – Agriculture - Crop & Animal production and Manufacture of fabricated metal products, except machinery and equipment, Manufacture of machinery and equipment n.e.c.

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 502: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment	High/ Medium aspiration
1	Agriculture & Allied		✓	✓
2	Transportation	✓	✓	
3	Textiles	✓	✓	
4	Food Processing	✓		✓
5	Metal products including Machinery and equipment	✓	✓	✓
6	Automotive	✓		✓
7	Healthcare	✓	✓	
8	IT&ITeS	✓	✓	
9	Public Administration and Administrative Activities	✓		✓
10	Education	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Other services (includes media and entertainment)

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 503. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers

Table 503: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force for Satara district

Sector Name	Top Job Roles
Agriculture and allied	- Bamboo Grower - Dairy Farmer - Goat Farmer - Gardener - Quality Seed Grower - Seri culturist - Bee Keeper
Transportation	- Reach Truck Operator - Crane Operator - Shipment Classification Agent - Clearance Support Agent - Consignment Booking Assistant
Textiles	- Fitter- Spinning Preparatory - Knitting Machine Operator - Loom Fitter - Sewing Machine Operator - Assistant Ginning Fitter
Food processing	- Dairy Processing Equipment Operator - Fish & Sea food processing Technician - Fruits and Vegetables Selection In-Charge - Pulse Processing Technician
Machinery and equipment	- CNC Operator – Turning - Fitter – fabrication - Equipment operator - Forger - Fitter – electrical and electronic
Automobile	- Auto body technician - Automotive electrician - Forging operator - Welding technician - Surface treatment technician
Metal Products	- Assistant Manual Metal Arc Welder - Lab Technician- Metal Tester - Gas Metal Arc Welder - Sheet Metal Worker- Hand Tools - Casting Operator

Sector Name	Top Job Roles
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant • Dental Assistant
Tourism and Hospitality	• Bell Boy • Food & Beverage Service-Steward • Tour Guide • Meet & Greet officer • Food Server • Delivery Boy
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent

31. Sindhudurg

31.1 About the district

Sindhudurg district is located towards the south western side of the Maharashtra state with the district headquarters in Oros City. The district is divided into 8 sub-districts and 740 inhabited villages.

Sindhudurg has a total land area of 5,207 sq.km. and constitutes 1.69% of the total state area. The district lies in the southern side of Konkan region. It is bordered by Ratnagiri on the north, State of Goa on the south, Arabian sea on the west and Kolhapur on the east.

The district has good connectivity with railways and roads, which connects it to the bigger cities such as Mumbai, Goa, Pune, Kolhapur and Aurangabad making Sindgudurg a popular tourist destination.

The district is blessed with natural beauty with picturesque spots and beaches. Maharashtra Tourism Development Corporation has identified the district as Tourist destination and Sawantwadi Palace, Amboli Hill Station, Sindhudurg Fort and Malvan & Vengurla beaches are popular destinations among tourists. However, the district is still far from being equipped with tourism infrastructure. The district has large area of forest cover in which Teakwood and Bamboo are the largest produces. The district also has availability of minerals like Iron ore, Bauxite, Slilica Sand, China Clay, Fire clay, Feldspar and Graphite.

Table 504: Comparison of Sindhudurg District with Maharashtra

Indicator	Sindhudurg	Maharashtra
Area in sq.km.	5,207	3,07,713
Percentage share in state geographical area, %	1.69	100
No. of Sub-districts	8	353
No. of inhabited villages	740	40,959
No. of households	1,92,666	24,421,519
Forest area as a % of total geographical area	39	16.94

Source: Census 2011

31.2 Demography

According to latest census data, the district has a population of nearly 8.49 lakh persons, which is ~0.76% of the state. Of the total population, 87% are residing in the rural areas whereas 13% are residing in the urban areas of the district. The density of population according to 2011 census is 163 persons/Sq. Km.

The district's literacy rate is at 85.56%, which is higher than the state average of 82.91%. Sindhudurg has sex ratio (no. of females per 1000 males) of 1036, which is significantly higher the state average of 925. While 53% of the population in the district are in the working age group (i.e. 15-59 years), about 34.23% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 505: Demographic Indicators of Sindhudurg district

Indicator	Sindhudurg	Maharashtra
Population, No.	8,49,651	11,23,74,333
Decadal growth rate of population, %	-2.21	16
Urban Population as a percentage of total population, %	13	45.2
SC Population, %	6.54	10.2
ST Population, %	0.82	8.8
Sex ratio, No. of females per 1000 males	1036	925
Population density, per sq.km.	163	365
Literacy rate, %	85.56	83
Working age population* as a percentage of total population, %	59	59
Work participation rate^, %	47	44
HDI Index	0.75	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 3.46 lakh persons. Of this, nearly 63.25% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 11.49% of workers are working in secondary sector and 25.26% workers are working in tertiary sector. As shown below, Sindhudurg's unemployment (per 1000) in rural and urban areas is significantly higher compared to the state average. Additionally, if we compare male and female unemployment (per 1000) of Sindhudurg to the state, both male and female unemployment rate is significantly higher than the state average.

Figure 202: Share of workforce & Employment Rate for Sindhudurg District
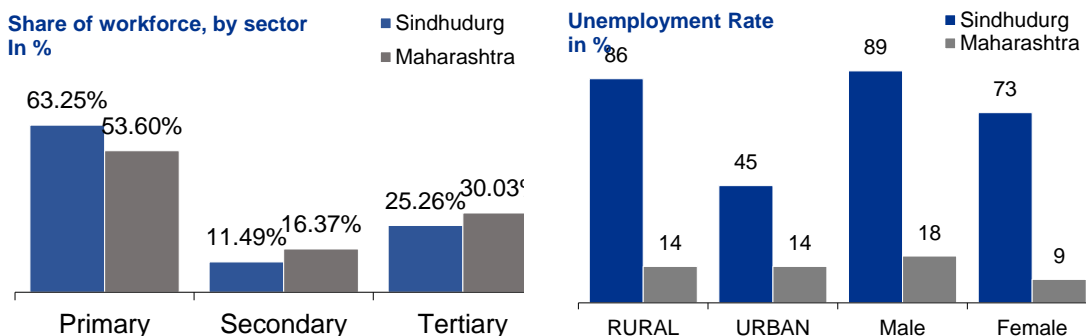
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 203: Type of employment numbers per 1000
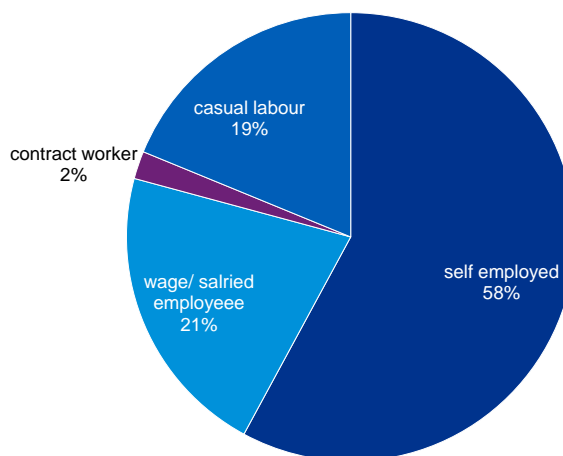
As per figure 204, maximum persons are self-employed (58%) in the district which is slightly higher than the state average followed by salaried employees (21%) which is similar to the state average and casual workers (19%) which is slightly lower to the state average.

Source: Ministry of Labour & Employment

*Education Profile of the district***:**

Traditional Education

Sindhudurg district has a total of 1,995 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of 1.31 lakh students. The student teacher ratio is 12:1. The district also has 62 general and technical colleges with the enrolment of 15,120 students.

Table 506: Educational Profile of Sindhudurg District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1748	82,752
Secondary Schools (IX to XII)	247	48,657
General Colleges & Technical Education	37	15,120[51]

Source: AISHE, U-DISE

Vocational Education

Sindhudurg district has a total of 9 ITIs Government and Private with 909 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Construction, Tourism & Hospitality, Electronics, Apparel and Automotive repair.

Table 507: Total no. of ITI and there training number in Sindhudurg district

Particular	Number
ITIs (Government & Private)	9
Trainee Count	909

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 1,338 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Electronics, Automotive Repair, Information & Communication Technology, Banking and Accounting and Hospitality sectors. As per the data 1,338 students are trained annually in the district under the scheme.

Table 508: Sector wise short- term skilling trained numbers in PMKUVA for Sindhudurg district

Sectors	Trained
Electronics	269
Automotive Repair	260
Information and Communication Technology	240
Banking and Accounting	240
Hospitality	90
Medical and Nursing	89
Courier and Logistics	60
Fashion Design	60
Insurance	30
Total	**1,338**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI). Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

31.3 Economy

As of 2016-17, Sindhudurg district had the 31st highest Gross District Domestic Product (GDDP) (at current prices) in the state at Rs. 10,538 crores. The per capita GDP of the district is Rs. 1,56,120.

---

[51]Enrolment figures at State run general and technical education colleges only

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 63% towards the GDDP. Secondary sector is at 22% and primary sector is at 15%.

As per the figure indicated below, major contributors to the GDDP of the district are Banking and Insurance, Agriculture and Allied activities, Trade, Hotel and Restaurants, Constructions and Other services.

Figure 204: Sector wise GDDP Distribution of Sindhudurg District
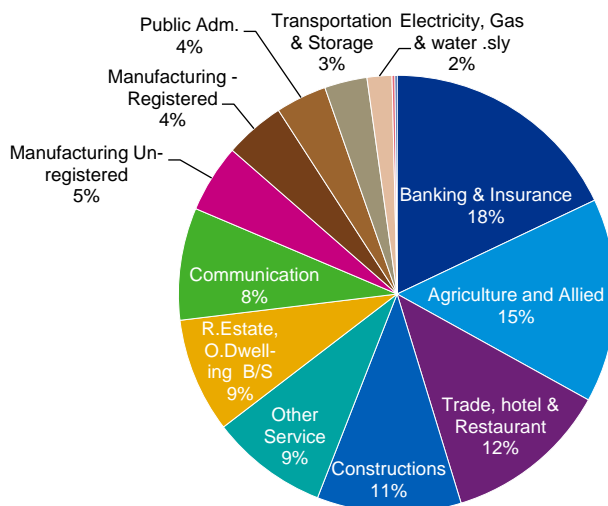
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

Agriculture and allied activities contribute to 15% of the GDDP in the district. The district received decent rainfall, which makes most of the land fertile except the areas surrounding sea that make the soil salty. The key crops grown in the district are Coconut, Kokam, Mango, Cashew and Rice.

Sindhudurg district has 2 registered large and medium enterprises employing approximately 3,780 persons. These include companies such as Tata metallic and Uttam Steel and Power. The district also has nearly 1442 Micro, Small and Medium Enterprises (MSME), which are majorly unorganized. Major manufacturing industries include food products, manufacture of machinery & equipment, manufacture of fabricated metal products and manufacture of other non-metallic mineral products.

Manufacture of food products and beverages is an important industry in the district**.** It includes processing and preserving of fruits and vegetables, manufacture of vegetable and animal oil and fats, manufacture of dairy products, manufacture of grain mill products, starches and starch products, manufacture of bakery products, manufacture of sugar, distilling, rectifying and blending spirits and manufacture of soft drinks. It employs nearly 1205 persons in the district, constituting 53% of the employment in registered manufacturing sector.

Manufacture of machinery & equipment is also an important industry in the district. It includes manufacture of other pumps, compressors, taps & valves, manufacture of lifting and handling equipment, manufacture of agricultural & forestry machinery and manufacture of other general-purpose machinery. It employs nearly 455 persons in the district, constituting 19% of the employment in registered manufacturing sector.

Manufacture of fabricated metal products is also an important industry in the district. It includes manufacture of cutlery, hand tools and general hardware. It employs nearly 250 persons in the district, constituting11% employment in the registered manufacturing sector.

Manufacture of other non-metallic mineral products is one of the major industries in the registered manufacturing sector. It includes manufacture of clay building materials, manufacture of articles of concrete,

cement and plaster and cutting, shaping & finishing of stone. It employs nearly 200 persons in the district which constitutes 9% employment in the registered manufacturing sector.

Other important manufacturing industries include manufacture of wholesale, retail trade and repair of motor vehicles & motorcycles, manufacture of basic metals, manufacture of pharmaceuticals, medicinal chemicals & botanical products and manufacture of paper & paper products.

Table 509: Employment in registered manufacturing sector in the district as of 2017-18

Sector	Employment
Manufacture of food products & beverages	1,205
Manufacture of machinery and equipment n.e.c.	453
Manufacture of fabricated metal products, except machinery and equipment	250
Manufacture of other non-metallic mineral products	203
Wholesale and retail trade and repair of motor vehicles and motorcycles	66
Manufacture of basic metals	41
Manufacture of pharmaceuticals, medicinal chemical and botanical products	20
Manufacture of paper and paper products	14
Manufacture of chemicals and chemical products	12
Manufacture of electrical equipment	2

Source: Annual Survey of Industries 2017-18

As shown above in figure 205 Tertiary Sector is the largest contributor towards the GDDP of the district. Of all the services Banking & Insurance is the highest at 18%, followed by Trade, hotel & restaurant at 12%. Other services, real estate, ownership of dwellings and business services, communication and public administration are at 9%, 9%, 8% and 4% respectively.

Investments in the districts:

Road transport infrastructure services, Irrigation, Shipping transport infrastructure services, Railway transport infrastructure services and other recreational & allied services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 510: Sector wise investments in Sindhudurg District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	59,832	8
Irrigation	45,748	6
Shipping transport infrastructure services	40,855	6
Railway transport infrastructure services	34,581	4
Other recreational & allied services	16,060	2
Air transport infrastructure services	5,200	1
Pig iron	4,635	3
Hotels & restaurants	2,450	2
Renewable electricity	1,130	3
Tourism	820	1
Others	727	32
Total	**212,039**	**68**

31.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 511: Distribution of Respondents of Sindhudurg district

Profile	Details	
Urban vs. Rural	Urban	62%
	Rural	38%
Gender Profile	Male	83%
	Female	17%
Age Group	15-25 years	58%
	26-35 years	20%
	36-45 years	14%
	46-55 years	8%
	56-59 years	0%
Educational Level	Upto Xth	34%
	Upto XIIth	49%
	Any Graduation	17%
Occupational Profile	Worker	63%
	Non-Worker	37%

Figure 205: Past/Current participation in training (in %)
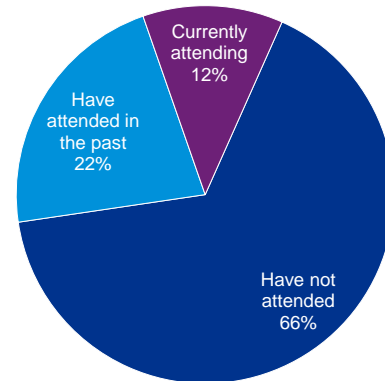
In addition to the above in figure, majority respondents (66%) responded that they hadn't attended any technical/ non-technical job related training in the past. 22% reported that they have undergone some training in the past and 12% stated they are currently undergoing some kind of training.

Of those who underwent vocational training in the past, the trainings (~49 %) were attended at Private training institutes and ~50% were attended at government training institutes.

Figure 206: Type of training provider, in %
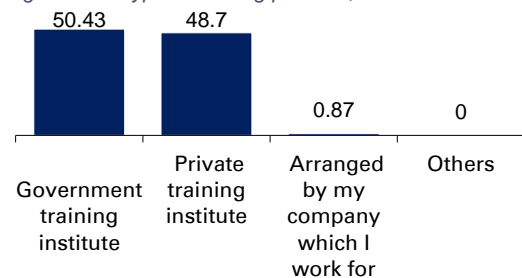
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure below, in the district, 48% of the respondents aspire to be wage-employed and 52% reported a preference for being self-employed. Amongst the respondents there is a higher preference to undertake further education/ learn skill for those aspiring to be wage employed as compared to those aspiring to be self-employed. Additionally, there is preference for acquiring a graduation on-technical degree or post-graduation degree amongst both self-employed and wage employed respondents.

Figure 207: Key Findings related to educational attainment of the labour force in Sindhudurg district

Preference to undertake further education for those aspiring to be self employed

(% of responses)

- No I don't want to get training or study further: 53
- Yes I would want to get training/ learn skill: 10
- Yes I would want to get further education: 38

Type of education preference for Self employed (% of responses)

- Graduate Non-Technical..: 35
- Post Graduate Non-Technical..: 22
- Other skill trainings like vocational..: 21
- Graduate Technical (MBBS, BE etc.): 16
- Higher Secondary: 3
- Others: 2
- Post Graduate Technical (MD, ME etc.): 2

Preference for wage vs self employment (% of responses)

- Wage employment: 48%
- Self employment: 52%

₹ **Average expected monthly income:**
- Wage Employed: INR 24,451
- Self-Employed: INR 31,313

Preference to undertake further education for those aspiring to be wage employed

- No I don't want to get training or study further: 49
- Yes I would want to get further education: 37
- Yes I would want to get training/ learn skill: 14

Type of education preference for wage employed (% of the responses)

- Graduate Non-Technical (BA,BSc.,BBA,BCA, etc.): 53
- Graduate Technical (MBBS, BE etc.): 20
- Other skill trainings like vocational courses, Diploma courses, ITI courses etc.: 12
- Post Graduate Non-Technical (MA,MSC,MBA,MCA, etc.): 12
- Post Graduate Technical (MD, ME etc.): 3

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 512: Aspirational sub-sectors for labour force in Sindhudurg

For wage employment	For self-employment
Food Processing	Making & Selling Food Products & Handicrafts
BFSI	Setting up Hospital/Clinic
Governance & Administration	Jewelry Business
IT & ITeS	Opening Restaurant/Tea Stall
Auto & Auto Ancillaries	Education/Training

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a making & selling of food products & handicrafts, setting up hospital/clinic, jewellery business, opening restaurant/tea stall and education & training related business .

For those aspiring to be wage-employed, there was a preference towards getting jobs in Food processing, BFSI, Governance & Administration, IT/ITeS and Auto & Auto ancillaries sub-sectors. Many respondents also selected 'other' which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 24,451 and Rs. 31,313 respectively. Additionally, 92% of the respondents would like to work within Maharashtra. However, 62% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

42% of those who attended a training programme stated that they actually benefit from attending the training, majority stated increase in income and gain new skills as the main advantages. Whereas, among those who didn't benefit from the training, majority stated that the employers are not able to provide such kind of trainings in-house.

31.5 Incremental demand and estimation of manpower supply

Education, Agriculture - Crop & Animal Production, Finance & Insurance activities, Transportation, Healthcare and Construction sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is low as compared to other districts, however it is concentrated in high growth sub sectors of manufacture of machinery & equipment and manufacture of fabricated metal products.

Table 513: Incremental Demand estimates (2019-2028); in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	8,876	9,224
Forestry & Logging	31	32
Fishing & Aquaculture	22	23
Sub Total	**8,929**	**9,279**
Registered manufacturing		
Machinery and Equipment	2,361	3,015
Metal products (except machinery and equipment)	508	496
Construction	**1,022**	**1,073**
Services		
Wholesale and Retail Trade	266	338
Transportation	2,665	3,213
Logistics	334	403
IT/ITES	558	673
Hospitality	278	297
BFSI	997	1,297
Real Estate	199	259
Professional, Scientific & Technical Activities	521	678
Public administration and administrative services	4,494	5,846
Education	2,916	3,794
Healthcare	3,901	5,075
Other services	9,395	12,222
Sub Total	**26,527**	**34,096**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

• Goat farming, dairy farming and fisheries are important sub-sectors under the Agriculture and Allied Activities

- The district officials mentioned that various Self-Help Groups (SHGs) are present in the district who are involved in Coir Making which can be leveraged in order to meet the demand in the district.
- Iron & Steel sector is also important within the district as there is POSCO steel industry set-up in the district
- Tourism & Hospitality sector was mentioned as an important and emerging sector within the district as it has been declared as Tourism district by State Tourism Department.
- Warehousing & Cold Storage was also highlighted as an important sector in the district

Estimation of Manpower Supply

According to KPMG estimates, Sindhudurg district has a significant opportunity in terms of a favourable demographic dividend - with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 2.93 lakhs work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 514: Manpower Supply for Sindhudurg District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Sindhudurg	4,69,742	3,16,642	2,93,081

The workforce is further split across the educational attainment within the district as shown below in table 515.

Table 515 Educational Attainment of projected workforce for Sindhudurg district

Educational Level	Projected Workforce
Illiterate	37,271
Literate but below matric/secondary	1,42,329
Matric/secondary but below graduate	74,583
Technical degree or diploma equal to degree or post-graduate degree	4,585
Technical diploma or certificate not equal to degree	2,050
Graduate and above other than technical degree	17,025
Literate others	15,238

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~11,575 annually.

Table 516: Size of target population in the district

Particular	Numbers
Enrolment in VIII	12,064
Enrolment in X	12,754
Enrolment in XII	5,479
Dropout at VIII	**908**
Passing out of VIII*	11,156
Students not transitioned to IX	**1,836**
Dropout at X	**1,385**
Passing out of X*	11,369
Students not transitioned to XI	**1,871**

Particular	Numbers
Passing out at XII**	9,533
Students not transitioned to Higher Education	6,482
Total Target population	**11,575**

Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
*** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force*
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 517: Vocational Education annual capacity for Sindhurdurg district

Particular	Annual Capacity in Numbers
Short Term Skilling	2,790
ITI (Government & Private)	1,592

31.6 Recommendations

Sindhudurg, one of the coastal districts in the state is predominantly driven by primary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 518: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Yellow	Red	Green
Food processing	Green	Red	Green
Tobacco	Green	Red	Red
Textiles	Yellow	Red	Red
Apparel	Yellow	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Yellow	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Yellow	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Yellow
Metal products (except machinery and equipment)	Yellow	Red	Yellow
Machinery and Equipment	Green	Green	Red
Automotive	Green	Red	Red
Automotive (transport equipment)	Green	Red	Red
Construction	Red	Red	Red
Wholesale and Retail Trade	Yellow	Red	Red
Transportation	Yellow	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Amber
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public administration and administrative services	Amber	Green	Red
Education	Green	Green	Amber
Healthcare	Green	Green	Red
Other Services	Green	Green	Red

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:

- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Agriculture-Crop & Animal production, Transportation, Finance & Insurance activities, Public Administration, Education and Healthcare.
- **High Aspiration Sectors**: Agriculture & Allied and Food Processing

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors that are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 519: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture and allied		✓	✓
2	Food Processing	✓		✓
3	Machinery and equipment	✓	✓	
4	Healthcare	✓	✓	
5	Other Services (Tourism)	✓	✓	
6	BFSI	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Metal products (except machinery and equipment)
- Transportation
- Public Administration and administrative services
- IT/ITeS
- Education
- Other services (except tourism)

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 520. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers

Table 520: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

Sector Name	Top Job Roles
Agriculture and allied	• Goat Farmer • Dairy Farmer • Micro Irrigation Technician • Quality Seed Grower • Small Poultry Farmer • Fisheries Extension Associate • Warehouse Worker
Food Processing	• Fish & Sea food processing Technician • Fruit pulp processing technician • Packaging Machine worker- Food Processing • Meat & Poultry Processor • Cold Storage Technician
Machinery and equipment	• Draughtsman – Mechanical • Fitter – Mechanical Assembly • Forger • Technician Instrumentation • CNC Operator • CNC Programmer
Tourism & Hospitality	• Bell Boy • Food & Beverage Service-Steward • Tour Guide • Meet & Greet officer • Food Server • Home delivery boy • Room attendant
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent • Microfinance Executive

Sector Name	Top Job Roles
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant • X-ray technician
Furniture & Fittings	• Carpenter wooden furniture • Cane Seat Weaver • Finisher- Coir related products • Molded component maker
Logistics	• Warehouse Picker • Kitting & Labelling • Inventory Clerk • Goods Packaging Machine Operator • Documentation Assistant

32. Solapur

32.1 About the district

Solapur district is located towards the south eastern side of the Maharashtra state with the district headquarters in Solapur City. The district is divided into 11 sub-districts and 1143 inhabited villages.

Solapur has a total land area of 14,485 sq.km. and constitutes 4.82% of the total state area. The district lies in the south eastern side of Kolhapur region. It is bordered by Ahmednagar and Osmanabad on the north, Gulbarga district of Karnataka on the east, Sangli and Bijapur (Karnataka) on the south and Pune and Satara on the west. The district has good connectivity with railways and roads, which connects it to the bigger cities such as Mumbai, Kolhapur, Pune and Goa making markets accessible and helping trade and businesses.

The district is high on natural resources with abundance of minerals. Limestones, building stones and charcoal are found throughout the district. Firewood from the forest area in the district is the major produce. The district has a lot of religious places, which are popular destinations among tourists.

The district is one of the major industrial clusters in the state. Most of the industries are cotton-textile based industries.

Table 521: Comparison of Solapur District with Maharashtra

Indicator	Solapur	Maharashtra
Area in sq.km.	14,485	3,07,713
Percentage share in state geographical area, %	4.82	100
No. of Sub-districts	11	353
No. of inhabited villages	1,143	40,959
No. of households	8,73,167	24,421,519
Forest area as a % of total geographical area	2.14	16.94

Source: Census 2011

32.2 Demography

According to latest census data, the district has a population of nearly 43.2 lakh persons which is ~3.84% of the state. Of the total population, 67.60% are residing in the rural areas whereas 32.40% are residing in the urban areas of the district. The density of population according to 2011 census is 290 persons/Sq. Km.

The district's literacy rate is at 77.02%, which is lower than the state average of 82.91%. Solapur has sex ratio (no. of females per 1000 males) of 935, which is higher than the state average of 925. While 63% of the population in the district are in the working age group (i.e. 15-59 years), about 44% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 522: Demographic Indicators of Solapur district

Indicator	Solapur	Maharashtra
Population, No.	43,17,756	11,23,74,333
Decadal growth rate of population, %	12.1	16
Urban Population as a percentage of total population, %	32.4	45.2
SC Population, %	15	10.2
ST Population, %	1.8	8.8
Sex ratio, No. of females per 1000 males	935	925
Population density, per sq.km.	290	365
Literacy rate, %	77.02	83
Working age population* as a percentage of total population, %	63	59
Work participation rate^, %	44	44
HDI Index	0.728	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 18.9 lakh persons. Of this, nearly 63.65% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 14.60% of workers are working in secondary sector and 21.75% workers are working in tertiary sector. As shown in the figure below, Solapur's unemployment (per 1000) in rural areas is slightly less than the state average, whereas in urban areas it is slightly higher. Additionally, if we compare male and female unemployment (per 1000) of Solapur to the state, male unemployment rate is similar to the state average, whereas, female unemployment is slightly less as compared to the state.

Figure 208: Share of workforce & Employment Rate for Solapur District
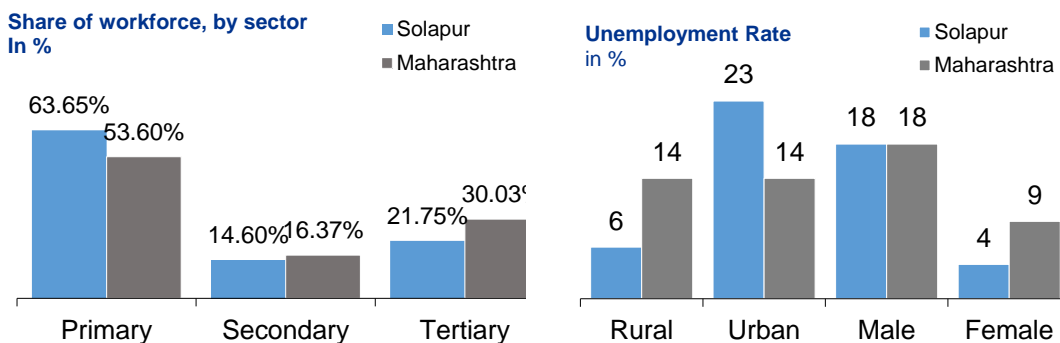
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 209: Type of employment numbers per 1000
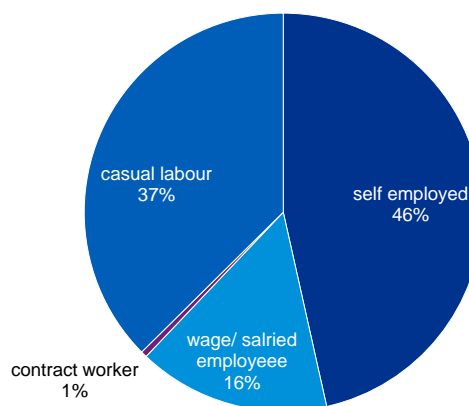
As per figure 210, maximum persons are self-employed (48%) in the district which is slightly lower to the state average followed by salaried employees (18%) which also is slightly lower to the state average. However, persons employed in casual workers(37%) is significantly higher to the state average.

Source: Ministry of Labour & Employment

*Education Profile of the district***:**

Traditional Education:

Solapur district has a total of 5729 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of 7.28 lakh students. The student teacher ratio is 21:1. The district also has 118 general and technical colleges in the district with the enrolment of 55,000 students.

Table 523: Educational Profile of Solapur District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	4,679	6,26,703
Secondary Schools (IX to XII)	1,050	2,53,129
General Colleges & Technical Education	78	55,000[52]

Source: AISHE, U-DISE

Vocational Education

Solapur district has a total of 39 ITIs Government and Private with 3,742 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information & Communication Technology, Retail, BFSI, Gems & Jewelry, Garment Making and Infrastructure development. Simultaneously, state level scheme (i.e. PMKUVA) offers training in Electronics, BFSI, Electrical, Information & Communication Technology and Garment Making sectors.

Table 524: Total no. of ITI and there training number in Solapur district

Particular	Number
ITIs (Government & Private)	39
Trainee Count	3,742

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 11,744 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Information & Communication Technology, Garment Making, Banking and Accounting, Fashion Design, Electrical, Beauty culture and hair dressing etc.

Table 525: Sector wise short- term skilling trained numbers in PMKUVA for Solapur district

Sectors	Trained
Information and communication technology	3,763
Garment making	2,590
Banking and accounting	1,687
Fashion design	1,100
Electrical	750
Beauty culture and hair dressing	481
Remaining sectors	450
Business and commerce	240
Automotive repair	180
Soft skills	176
Construction	150
Medical and nursing	147
Fabrication	30
Total	**11,744**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self Employment Training Institute (RSETI). Upskilling trainings are offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides trainings relating to

---

[52]Enrolment figures at State run general and technical education colleges only

industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

32.3 Economy

As of 2016-17, Solapur district had the 7th highest Gross District Domestic Product (GDDP) (at current prices) in the state at Rs. 52,964 crores. The per capita GDP of the district is Rs. 141292.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 59% towards the GDDP. Secondary sector is at 30% and primary sector is at 11%.

As per the figure indicated below, major contributors to the GDDP of the district are Trade, Hotel & Restaurant, followed by Manufacturing - Registered, Banking & Insurance, Agriculture & Allied and Real Estate, Ownership of dwellings and business services sectors.
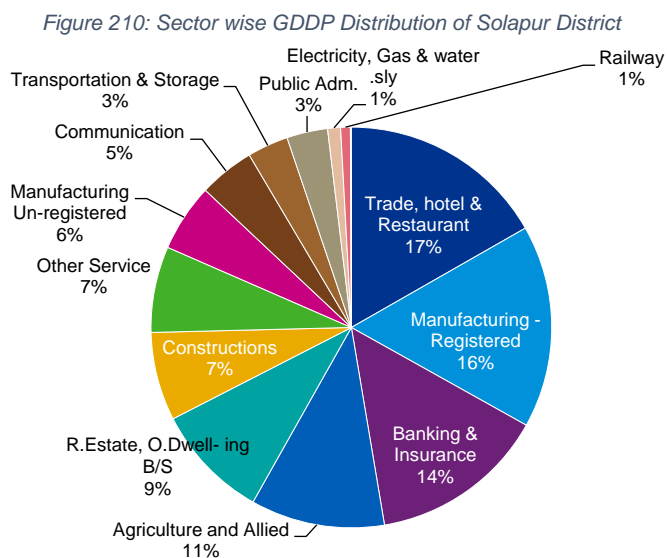
Figure 210: Sector wise GDDP Distribution of Solapur District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

Agriculture and allied activities contributes to 11% of the GDDP in the district. Major crops in the district are Sorghum, wheat, chickpea, sunflower, pigeon pea and sugarcane. Sorghum is the major crop that occupies the highest cultivable land in the area.

Solapur district has 76 registered large and medium enterprises, which employs approximately 22,000 persons. These include companies such as Kirloskar Industries, Ambay Iron Pvt. Ltd., Birla Super Cement Ltd. and Satguru Agro Industries Ltd. The district also has nearly 12118 Micro, Small and Medium Enterprises (MSME) employing nearly 75,000 persons. Major manufacturing industries include manufacture of tobacco products, food products & beverages, manufacture of textiles and manufacture of motor vehicles, trailers and semi-trailers.

Manufacture of tobacco products is the most important industry in the district under registered manufacturing. It includes stemming and re drying of tobacco, manufacture of bidi, cigarettes, cigars, zarda and pan masala. It employs nearly 19475 persons in the district which constitutes 37% of the employment under registered manufacturing sector.

Manufacture of food products and beverages is the second important industry in the district**.** It includes manufacture of dairy products, manufacture of sugar and distilling, rectifying and blending spirits. It employs nearly 15,355 persons in the district constituting 30% of the employment in registered manufacturing sector. Major players in the industry includes Khandoba Distilleries Ltd, Lokmangal Sugar Mills Ltd and Satguru Agro Industries.

Manufacture of textiles is another important industry in the district. It includes preparation & spinning of textile fibres, weaving of textiles and finishing of textiles. It employs nearly 4,224 persons in the district constituting 8% of the employment in registered manufacturing sector. Major players in the industry includes Somany Evergreen Knits ltd, Shetkari Mahila Sah. Vastranirman Soot Girni Ltd and Mahindrakar Spinners Ltd.

Manufacture of fabricated motor vehicles, trailers and semi-trailers is also an important industry in the district. It includes manufacture of parts & accessories for motor vehicles. It employs nearly 3,746 persons in the district which constitutes 7% employment in the registered manufacturing sector.

Other important manufacturing industries include manufacture of rubber & rubber plastics products, manufacture of machinery & equipment, manufacture of pharmaceuticals, medicinal chemical & botanical products, manufacture of other non-metallic mineral products and wholesale, retail trade & repair of motor vehicles and motorcycles.

Table 526: Employment in registered manufacturing sector in the Solapur district as of 2017-18

Sector	Employment
Manufacture of tobacco products	19,475
Manufacture of food products & beverages	15,355
Manufacture of textiles	4,224
Manufacture of motor vehicles, trailers and semi-trailers	3,746
Manufacture of rubber and plastics products	3,089
Manufacture of machinery and equipment n.e.c.	946
Manufacture of pharmaceuticals, medicinal chemical and botanical products	935
Manufacture of other non-metallic mineral products	638
Wholesale and retail trade and repair of motor vehicles and motorcycles	559
Manufacture of fabricated metal products, except machinery and equipment	535
Manufacture of basic metals	525
Manufacture of chemicals and chemical products	446
Manufacture of wearing apparel	213
Electricity, gas, steam and air conditioning supply	169
Printing and reproduction of recorded media	136
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	124
Publishing activities	95
Other manufacturing	95
Manufacture of paper and paper products	59
Manufacture of electrical equipment	27
Manufacture of computer, electronic and optical products	16
Repair and installation of machinery and equipment	16
Manufacture of other transport equipment	12
Manufacture of leather and related products	4

Source: Annual Survey of Industries 2017-18

As shown above in figure 211, Tertiary Sector is the largest contributor towards the GDDP of the district. Of all the services Trade, Hotel & Restaurant is the highest at 17%, followed by Banking and Insurance at 14%, real estate, ownership of dwellings and business services, other services, communication and transportation and storage are at 9%, 7%, 5% and 3% respectively.

Investments in the districts:

Road transport infrastructure services, Conventional electricity, Electricity transmission, Irrigation, railway transport infrastructure services are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 527: Sector wise investments in Solapur District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	137,549	32
Conventional electricity	102,043	3
Electricity transmission	98,059	12
Irrigation	93,882	7
Railway transport infrastructure services	80,079	10
Renewable electricity	74,649	9
Storage & distribution	35,832	8
Housing construction	18,110	8
Sugar	18,009	17
Cement	12,608	4
Others	35,978	75
Total	**706,798**	**185**

32.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 528: Distribution of Respondents of Solapur district

Profile	Details	
Urban vs. Rural	Urban	45%
	Rural	55%
Gender Profile	Male	70%
	Female	30%
Age Group	15-25 years	54%
	26-35 years	35%
	36-45 years	11%
	46-55 years	0%
	56-59 years	0%
Educational Level	Upto Xth	60%
	Upto XIIth	34%
	Any Graduation	6%
Occupational Profile	Worker	61%
	Non-Worker	39%

Figure 211: Past/Current participation in training, %

Have attended in the past 13%

Currently attending 3%

Have not attended 84%
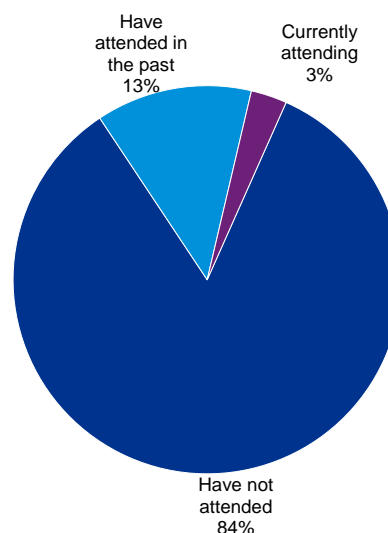
In addition to the above data, as shown in Figure 212, majority respondents (84%) shared that they had not attended any technical/ non-technical job related training in the past. 13% reported that they have undergone some training in the past and 3% stated they are currently undergoing some kind of training.
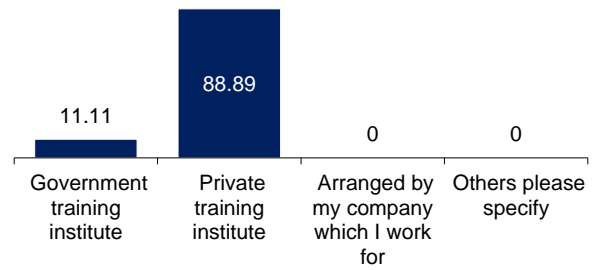
Of those who underwent vocational training in the past, the trainings (~89 %) were attended at Private training institutes and 11% attended government training institutes.

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 214, in the district, 31% of the respondents aspire to be wage-employed and 69% reported a preference for being self-employed. Amongst the respondents there is a high preference to not undertake any further education/ learn skill for those aspiring to be wage employed as well as to those aspiring to be self-employed. Additionally, for those who want further education/ learn skill there is preference for acquiring other vocational education courses amongst both self-employed and wage employed respondents.

Figure 213: Key Findings related to educational attainment of the labour force
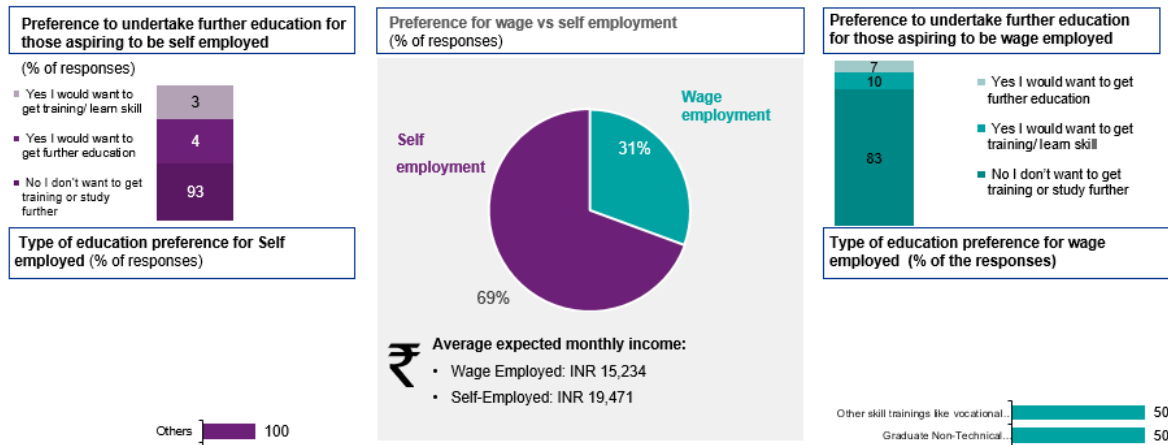
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 529: Aspirational sub-sectors for labour force in Solapur

For wage employment	For self-employment
Art & Culture	Retail
Finance, Banking and Insurance	Food Processing
Auto and Auto Components	Agriculture and Allied
Food Processing	Automobiles and auto ancilliaries

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening/setting up a retail shop, skill based business, fabrication and opening restaurant/tea stall. For those aspiring to be wage-employed, there was a preference towards getting jobs in Art & Culture, Auto & auto ancillaries, Food processing and BFSI sub-sectors. Many respondents also selected 'other' which includes manual wage workers for wage employed and own business and beauty, hair & personal health for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 15,234 and Rs. 19,471 respectively. Additionally, 97% of the respondents shared that they would like to work within Maharashtra, and, 34% of the surveyed respondents in the district would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

All of those who attended a training programme stated that they actually benefit from attending the training, and majority stated increase in income and acquiring new skills as the main advantage.

32.5 Incremental demand and estimation of manpower supply

Agriculture-Crop & Animal Production, Education, Transportation, Finance & Insurance activities, Healthcare and Construction sectors are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of manufacture of machinery & equipment, manufacture of textiles and manufacturing of fabricated metal products.

Table 530: Incremental Demand estimates (2019-2028); in persons

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	49,585	51,528
Forestry & Logging	174	181
Fishing & Aquaculture	123	128
Sub Total	**49,882**	**51,836**
Registered Manufacturing		
Machinery and Equipment	4,931	6,297
Textiles	2,811	4,512
Metal products (except machinery and equipment)	1,086	1,061
Food processing	811	853
Automotive	281	302
Chemicals and Pharmaceuticals	169	189
Manufacture of rubber and plastics products	101	104
Construction	**3,604**	**3,747**
Services		
Wholesale and Retail Trade	1,568	1,992
Transportation	12,393	14,941
Logistics	1,555	1,875
IT/ITES	2,597	3,131

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Hospitality	1,003	1,070
BFSI	4,612	6,000
Real Estate	922	1,200
Professional, Scientific & Technical Activities	2,410	3,134
Public administration and administrative services	19,467	25,324
Education	12,715	16,541
Healthcare	17,009	22,126
Other services	41,990	54,623
Sub Total	**80,231**	**1,51,955**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Textiles grafting
- Fisheries under Agriculture and allied activities
- Wall molding (Art and Culture) was highlighted by the district officials as an important economic activity.
- Under Apparels, Garment making has significant scope
- Food Processing is referred to as 'Food Keeping and Processing' for all practical purpose
- Event Organizing is a recommended job role under Tourism and Hospitality
- Medical Consultant is an upcoming job profile under the 'Healthcare' sector.
- Beedi Industry is a significant economic contributor in the district.

Estimation of Manpower Supply

According to KPMG estimates, Solapur district has a significant opportunity in terms of a favourable demographic dividend - with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 18.5 lakhs work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 531: Manpower Supply for Solapur District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Solapur	27,56,769	18,94,055	18,55,726

The workforce is further split across the educational attainment within the district as shown below in table 532.

Table 532 Educational Attainment of projected workforce for Solapur district

Educational Level	Projected Workforce
Illiterate	5,12,444
Literate but below matric/secondary	7,81,552
Matric/secondary but below graduate	3,49,147
Technical degree or diploma equal to degree or post-graduate degree	38,312
Technical diploma or certificate not equal to degree	13,886
Graduate and above other than technical degree	1,06,015
Literate others	54,370

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~65,542 annually.

Table 533: Size of target population in the district

Particular	Numbers
Enrolment in VIII	78,715
Enrolment in X	72,258
Enrolment in XII	20,917
Dropout at VIII	**11,980**
Passing out of VIII*	66,735
Students not transitioned to IX	**10,985**
Dropout at X	**16,648**
Passing out of X*	55,610
Students not transitioned to XI	**9,153**
Passing out at XII**	42,289
Students not transitioned to Higher Education	28,756
Total Target population	**65,542**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Particular	Annual Capacity in Numbers
Short Term Skilling	17,520
ITI (Government & Private)	8,796

32.6 Recommendations

Solapur, being one of the districts where a lot manufacturing industries are present is predominantly driven by secondary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 534: Sector specific economic growth, employment potential and aspirations for Solapur district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Amber
Food processing	Green	Red	Amber
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Red
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Green
Transportation	Amber	Green	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public administration and administrative services	Amber	Green	Red
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Green

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.

- **High incremental employment potential sectors**: Agriculture-Crop & Animal production, Transportation, Finance & Insurance activities, Public Administration, Education and Healthcare.
- **High Aspiration Sectors**: Wholesale & Retail trade and Arts, Entertainment & Recreation

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 535: Priority sectors for MSSDS for Solapur district

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Agriculture & allied		✓	✓
2	Food Processing	✓		✓
3	Automotive	✓		✓
4	Healthcare	✓	✓	
5	Retail	✓		✓
6	Other Service (Art & Culture)	✓	✓	✓
7	Transportation	✓	✓	
8	Public Administration and Administrative Services	✓	✓	
9	Education	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- BFSI

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in Table 536Table 536: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers

Table 536: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

Sector Name	Top Job Roles
Agriculture and allied	- Bamboo Grower - Dairy Farmer - Goat Farmer - Gardener - Quality Seed Grower

Sector Name	Top Job Roles
Storage & Warehousing	• Dairy Processing Equipment Operator • Fish & Sea food processing Technician • Fruits and Vegetables Selection In-Charge • Pulse Processing Technician
Automotive	• Auto body technician • Automotive electrician • Forging operator • Welding technician • Surface treatment technician
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant • Medical Consultant
Tourism and Hospitality	• Bell Boy • Food & Beverage Service-Steward • Tour Guide • Meet & Greet officer • Food Server
Retail	• Retail trainee associate • Retail sales associate • Cashier • Distributor salesman • Individual sales professional / self-employed retailer
Textiles	• Fitter- Spinning Preparatory • Knitting Machine Operator • Loom Fitter • Sewing Machine Operator • Assistant Ginning Fitter

33. Thane

33.1 About the district

Thane district is located on the northwestern side of the state of Maharashtra, and is an immediate neighbor of Mumbai city and a part of the Mumbai Metropolitan Region, one of the most populous urban agglomerations in the world. In 2014, the proposal to split Thane - with a population of over 12 million, nearly 10 percent of the state population - was approved by the state and Palghar was made as Maharashtra's 36th district.

The city of Thane is also called "City of Lakes" as it is surrounded by 35 lakes and has significant historic value since it was the terminus for the first ever passenger train in Asia.

Thane district is a popular destination among tourists for the Kopineshwar Temple on the banks, which is the oldest temple in the entire district of Thane.

Table 537: Comparison of Thane District with Maharashtra

Indicator	Thane[1]	Maharashtra
Area in sq. km.	9,558	3,07,713
Percentage share in State geographical area, %	3.1%	100%
No. of Sub-districts	15	353
No. of inhabited villages	1,704	40,959
No. of households	25,16,599	24,421,519
Forest area as a % of total geographical area	37.1%	16.94%

Data contains Thane + Palghar numbers from Census 2011
Source: Census 2011

33.2 Demography

Thane has a population of 18,41,488 distributed over a land area of about 147 square kilometres (57 sq mi). With 77% of the population residing in the urban areas, the district is the 16th most populated city in India according to the 2011 census. The average literacy rate of Thane city is 91.36 percent for where male and female literacy was 94.19 and 88.14 percent respectively, which is much higher than the state average of 83%. However, the sex ratio of Thane city is lower than the state sex ratio and of some other districts at 882 females per 1000 males. The HDI of the district is higher than the state HDI at 0.80, though this is a combined HDI of both Palghar and Thane.

Table 538: Demographic Indicators of Thane district

Indicator	Thane[1]	Maharashtra
Population, No.	1,10,60,148	11,23,74,333
Decadal growth rate of population, %	35.94%	16%
Urban Population as a percentage of total population, %	77%	45.2%
SC Population, %	6.60%	10.2%
ST Population, %	13.95%	8.8%
Sex ratio, No. of females per 1000 males	886	925
Population density, per sq.km.	1157	365
Literacy rate, %	84.53%	83%
Working age population* as a percentage of total population, %	67%	59%
Work participation rate^, %	41%	44%
HDI Index	0.800	0.75

Data contains Thane + Palghar numbers from Census 2011

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

According to the 2001 Census, the total working population in the district was 11,961,704 persons, which is 47.37% of the total population of the district. Out of total working force, 51.75% were engaged in

agriculture and allied activities, 6.19% in manufacturing, service and cottage industries and remaining 30.69% in other activities. Out of total working force, the female working force was 22.89% in the district. A change in the pattern can be observed over the 10 years, where we can see in figure 215, that almost 18% of the population is engaged in primary activity, followed by 32% in secondary and almost 50% in tertiary activities. Thane's unemployment (per 1000) in rural areas is higher than the state unemployment rate, however the urban unemployment is half of the state average, and male and female unemployment is 66% of the state unemployment. The prevalence of the tertiary sector and the concentration of population in the urban areas can be identified as the major contributing factor to lower unemployment rate in urban areas.

Figure 214: Share of workforce & Employment Rate for istrict
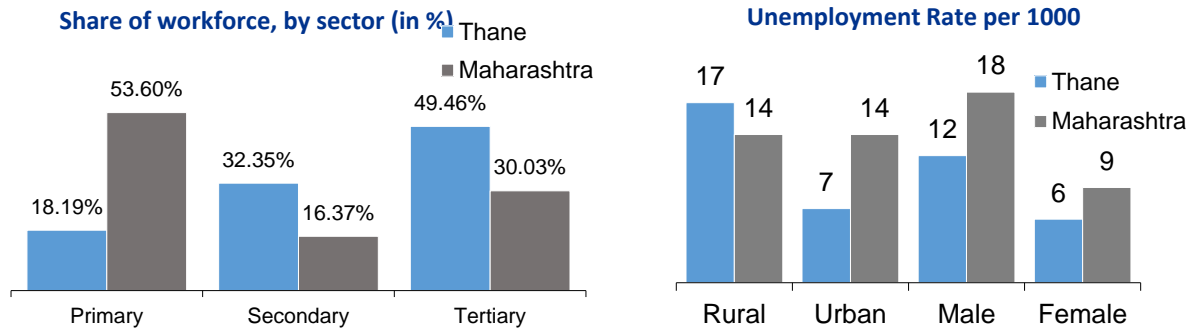
Share of workforce, by sector (in %)

Source: Census 2011

Unemployment Rate per 1000

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 215: Type of employment in the district
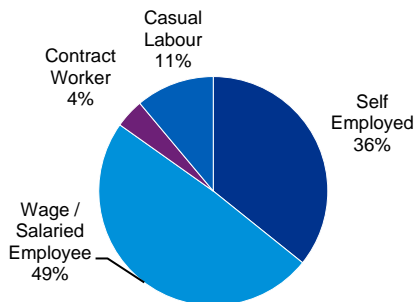
As can be seen in figure 216 a significant proportion of the workforce is reported to be wage / salaried employed (49%), which is the second highest in the state after Mumbai, followed by self-employed, casual labor and then contract labor. A variation can be noted, across districts in the division of workers across the four categories based on the dominance of the primary or tertiary sector in that particular district.

Education Profile of the district:

Traditional Education:

Thane district has a total of 6,037 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of 16,32,449 students and a student teacher ratio is 29:1. The district also has 173 general and technical colleges in the district with the enrolment of 2,55,300 students.

Table 539: Education Profile of Thane District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	4,578	12,04,388
Secondary (9-12th)	1,459	4,28,061
Colleges (General and Technical)	173	2,55,300[53]

Source: AISHE, U-DISE

Vocational Education

Thane district has a total of 29 ITIs Government and Private with 5,503 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are auto and auto components, retail, courier and logistics, banking and accounting, information and communication technology. As per state government schemes, the training being provided has been on accounting and accounts assistant using tally.

Table 540: Total no. of ITI and there training number in Thane district

Particular	Number
ITIs (Government & Private)	29
Trainee Count	5,503

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 23,029 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Beauty Culture and Hair Dressing, Information & Communication Technology, Banking & Accounting, Garment Making, Beauty Culture, Medical & Nursing, etc.

Table 541: Sector wise short- term skilling trained numbers in PMKUVA for Thane district

Sectors	Trained
Beauty Culture and Hair Dressing	5,951
Information and Communication Technology	5,423
Banking and Accounting	2,659
Garment Making	2,509
Medical and Nursing	2,441
Remaining Sectors	1,404
Fashion Design	1,219
Electrical	600
Soft Skills	295
Automotive Repair	261
Retail	240
Business and Commerce	27
Total	**23,029**

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries Centre (DIC) provides trainings relating to industries and services sector through agencies such as

---

[53]Enrolment figures at State run general and technical education colleges only

Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

33.3 Economy

As of 2016-17, Thane district had the 4th highest Gross District Domestic Product (GDDP) (at current prices) in the state at INR 2,84,685 crores. The per capita income of the district is INR. 2,36,199.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 68% towards the GDDP, secondary sector 33% and primary sector 1%.

Figure 216: Sector Wise GDDP Distribution of Thane district
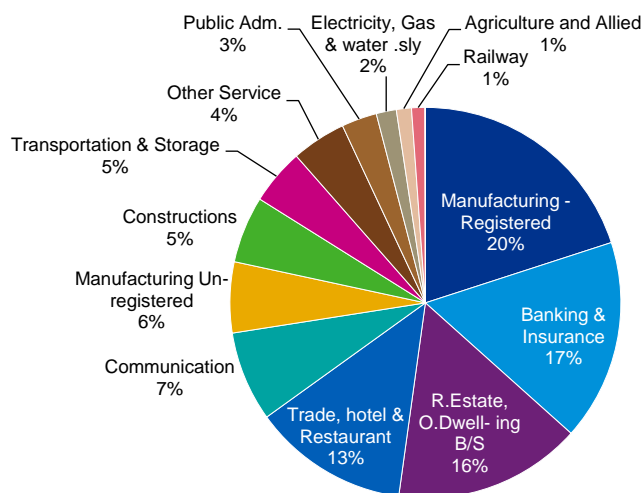
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

As shown above in figure 217, tertiary Sector, which is the largest contributor towards the GDDP encompasses of services such as by Banking and Insurance leading the sector by a contribution of 17%, followed by Real Estate, ownership of dwellings and business service at 16%, Trade, Hotel & Restaurant at 13%, and other contributing services, such as Public Administration, Communication, Transportation and Storage with 3%, 7%, and 5% contribution respectively.

Agriculture sector has a relatively lower contribution to the Thane economy as it contributes only 1% to the district economy. However, the important crop of the district is paddy, and forest produce of Timber, Fire, Wood, Bamboo, Grass and Gum. Besides, the main kharif crops of the district are rice, vari and nachani (finger millet) and pulses like Urad, moong and kulith are also grown in this district. Rice is the main crop of the district, which is grown in all the talukas of the district but mainly in Palghar, Bhiwandi, Murbad, Shahapur, Vada, Vikramgad and Dahanu. Vari and nachani are grown in the hilly areas of the eastern part of the district, namely Jawhar, Murbad, Vikramgad, Shahapur and Mokhada talukas. Wal, chavali and gram are the main rabi crops grown in this district. Dahanu taluka is famous for fruits.

Thane is the third most industrialized district in the State. There are 1548 large and medium scale and 18,480 small scale industries in the district. The major manufacturing industries of the district includes Maufacture of Textile, Manufacture of chemicals and chemical products and Manufacture of fabricated metal products, except machinery and equipment.

Manufacture of textiles is the largest industry employing over 88000 people, with sub sector – Finishing of Textiles employing 42% of the people, followed by weaving of textiles employing 25% people and manufacture of other textiles employing over 14000 people. Besides these, few other noteworthy sub sectors creating livelihood opportunities include - Manufacture of made-up textile articles, except apparel, preparation and spinning of textile fibres, manufacture of knitted and crocheted fabrics and manufacture of cordage, rope, twine and netting. The employing units in this category are around 755, with Bombay Rayon Fashion Ltd., Century Rayon (Chemical Plant) Divn. of Century employing over 3000 employees each.

Manufacture of fabricated metal products, **except machinery and equipment** is the second highest sub-sector, with Manufacture of pharmaceuticals, medicinal chemical and botanical products taking lead by employing around 55% of the people employed in the sector, followed by manufacture of other chemical products at 14%. The other sub sectors employing people include Manufacture of basic chemicals, Manufacture of fertilizers and nitrogen compounds, Manufacture of plastics and synthetic rubber in primary forms and Manufacture of paints, varnishes and similar coatings, printing ink and mastics

Table 542: Major Industries in registered manufacturing in Thane district

Major Industries in registered manufacturing	Employment
Manufacture of textiles	82,213
Manufacture of fabricated metal products, except machinery and equipment	55,306
Manufacture of pharmaceuticals, medicinal chemical and botanical products	39,815
Manufacture of electrical equipment	34,425
Manufacture of chemicals and chemical products	31,689
Manufacturing of wearing apparel	29,977
Manufacturing of basic metals	26,630

More sectors supplementing job creation opportunities in the district include manufacture of pharmaceuticals, medicinal chemical and botanical products, manufacture of electrical equipment, manufacturing of wearing apparel, manufacturing of basic metals, manufacture of basic metals, manufacture of rubber and plastics products, publishing, printing and reproduction of recorded media, and manufacture of motor vehicles, trailers and semi-trailers.

Investments in the districts:

Railway transport infrastructure services, Road transport infrastructure services, Electricity transmission, Housing construction, irrigation etc are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 543: Sector wise investments in Thane District

Sector Name	Proposed Investment (in INR Million)	No of projects
Railway transport infrastructure services	1,771,319	42
Road transport infrastructure services	447,301	101
Electricity transmission	312,774	17
Housing construction	264,103	328
Irrigation	196,135	6
Natural gas trading & distribution	191,583	3
Education	103,464	5
Storage & distribution	82,257	22

Sector Name	Proposed Investment (in INR Million)	No of projects
Commercial complexes	75,396	27
Steel	48,693	26
Others	321,575	505
Total	**3,814,599**	**1082**

33.4 Labor force Aspiration

The main findings of the youth aspirations include:

Respondent Profile

Table 544: Distribution of Respondents of Thane district

Profile	Details	
Urban vs. Rural	Urban	55%
	Rural	45%
Gender Profile	Male	66%
	Female	34%
Age Group	15-25 years	62%
	26-35 years	24%
	36-45 years	10%
	46-55 years	03%
	56-59 years	01%
Educational Level	Up to Xth	55%
	Up to XIIth	31%
	Any Graduation	14%
Occupational Profile	Worker	52%
	Non-Worker	48%
Average monthly household income for those working (INR)	11,066	

Figure 217: Past/Current participation in training (in %)

- Have attended in the past
- Currently Attending
- Have not attended

63%
30%
7%
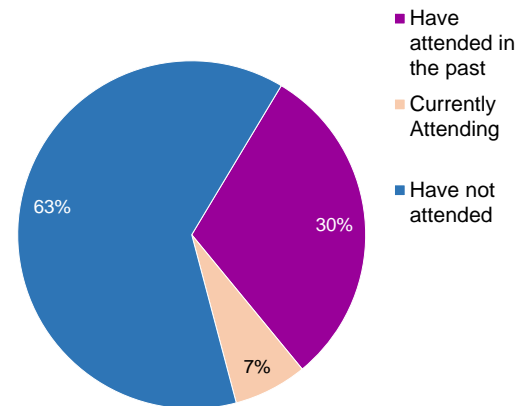
As can be seen in figure 218, most respondents (63%) shared that they have not attended any technical/ non-technical job related training in the past. 30% reported that they have undergone trainings in the past and 7% are currently attending the training. It is of significance to know that amongst those who did not attend the training, 73% were not aware about the training being organized.

Of those who underwent vocational training in the past, the maximum trainings (~75 %) were attended at Private training institutes, followed by those organized at government training institutes (~17%) and arranged by employing companies (~7%).

Figure 218: Type of training provider (in %)
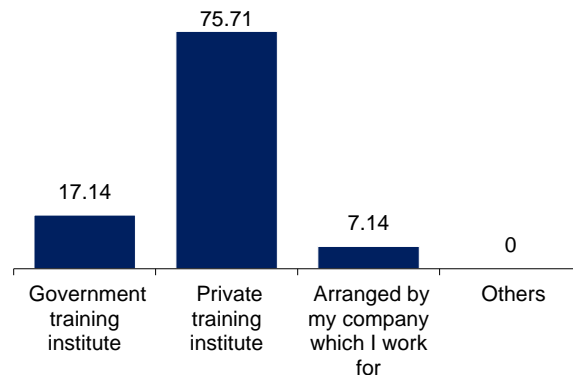
75.71
17.14
7.14
0

Government training institute
Private training institute
Arranged by my company which I work for
Others

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure 220, in the district, majority (56%) of the respondents aspire to be wage-employed and 44% reported a preference for being self-employed. This preference can be seen despite a high difference in the average expected monthly income, which is higher in self-employment (INR 31, 263) as compared to wage employment (INR 19,111). Amongst the respondents, almost an equal percentage of the self-employment and wage employment aspirants have a preference to undertake further education and training.

Figure 219: Key Findings related to educational attainment of the labor force
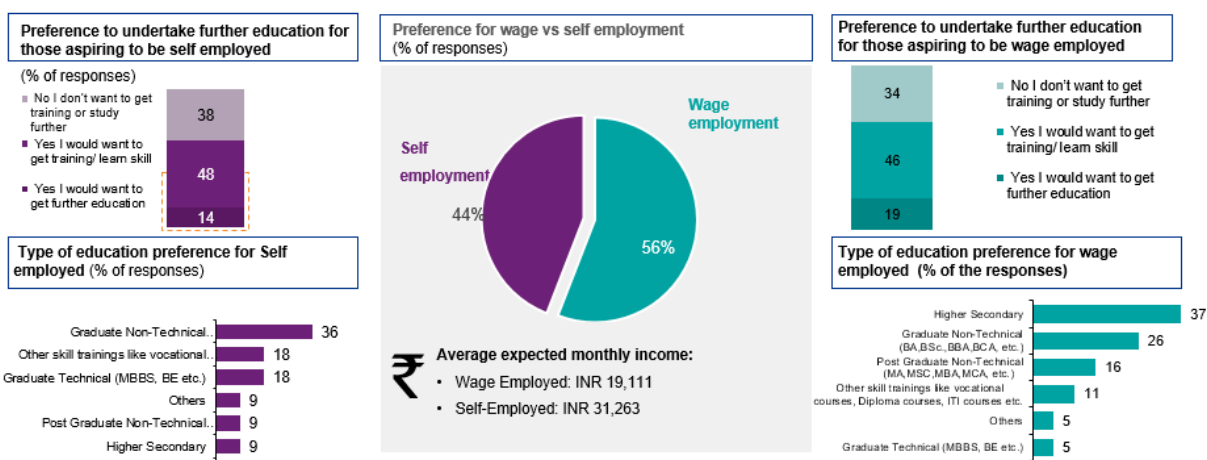
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 545: Aspirational sub-sectors for labor force

For wage employment	For self-employment
Food Processing	Retail
Art & Culture	Food Products & Handicrafts
Finance, Banking & Insurance	Skill Based Business
Other Manufacturing	Restaurant/ Tea Stall

Some respondents chose 'other' sectors which included preferences for opening a kirana store. For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: opening a retail or a wholesale shop for grocery/stationery/medical shop/pan shop or clothes or working on handicraft products from home. Additionally, 94% of the respondents shared that they would like to work within Maharashtra, but 53% said they are willing to work out of Maharashtra if they are paid higher.

Perceived benefits of acquiring training:

90% of those who attended a training program stated that they benefited from attending the training. Among those who did benefit from the training, majority stated increase in income as the main benefit and some stated possibility of moving to a new sector as another advantage. There were certain challenges that the respondents highlighted after receiving the training, such as, the employers do not provide employment

opportunities even after the job seeker has received a training, and a gap exists in the skills expected by the employers and those offered by the applicant post the training.

33.5 Incremental demand and estimated manpower supply

Transportation and financial and insurance are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in sub sectors of manufacture of machinery and equipment n.e.c, manufacture of fabricated metal products, except machinery and equipment, manufacture of textiles and manufacture of wearing apparel; dressing and dyeing of fur.

Table 546: Incremental Demand estimates (2019-2028); in persons for Thane district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture and allied		
Agriculture - Crop & Animal production	33,027	34,321
Forestry & Logging	116	121
Fishing & Aquaculture	82	85
Sub Total	**33,225**	**34,526**
Registered Manufacturing		
Machinery and Equipment	1,38,682	1,77,094
Metal products (except machinery and equipment)	1,01,860	99,454
Textiles	58,824	94,429
Apparel	10,135	13,155
Chemicals and Pharmaceuticals	8,697	9,736
Iron and Steel	1,242	1,301
Food processing	1,054	1,109
Automotive	703	755
Automotive (transport equipment)	440	573
Construction	**14,619**	**15,345**
Services		
Wholesale and Retail Trade	7,197	9,142
Transportation	85,902	1,03,565
Logistics	10,778	12,994
IT/ITES	18,000	21,700
Hospitality	4,698	5,012
BFSI	39,374	51,220
Real Estate	7,875	10,244
Professional, Scientific & Technical Activities	20,571	26,760
Public administration and administrative services	1,83,208	2,38,329
Education	39,033	50,776
Healthcare	52,213	67,922
Other services	1,91,424	2,49,017
Sub Total	**4,54,692**	**8,46,681**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011
Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Tourism with specific job roles such as Guides, Tourist Assistant
- Banking, Finance & Insurance Services were highlighted by the officials
- Other activities in high demand in the district are seed production, poultry farming and micro-irrigation.
- Cold storage and warehousing are emerging sub-sector within the district
- Construction, Facilities Management and Beauty & Wellness are important sectors in the district that will create maximum demand in the coming future.

Estimation of Manpower Supply

Thane district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be 47.08 lakh work force participating in the labor market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 547: Manpower Supply for Thane District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Thane	96,36,273	48,03,185	47,08,593

    1   *Data Contains Thane + Palghar*

The workforce is further split across the educational attainment within the district as shown below in Table 548.

Table 548 Educational Attainment of projected workforce for Thane district

Educational Level	Projected Workforce
Illiterate	8,33,730
Literate but below matric/secondary	14,72,588
Matric/secondary but below graduate	12,76,303
Technical degree or diploma equal to degree or post-graduate degree	1,59,898
Technical diploma or certificate not equal to degree	68,726
Graduate and above other than technical degree	6,12,838
Literate others	2,84,508

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~1,07,013 annually.

Table 549: Size of target population in the district

Particular	Numbers
Enrolment in VIII	140,548
Enrolment in X	117,103
Enrolment in XII	41,674
Dropout at VIII	**21,335**
Passing out of VIII*	119,213
Students not transitioned to IX	**19,622**
Dropout at X	**21,793**

Particular	Numbers
Passing out of X*	95,310
Students not transitioned to XI	**15,688**
Passing out at XII**	73,397
Students not transitioned to Higher Education	49,910
Total Target population	**107,013**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 550: Vocational Education annual capacity for Thane district

Particular	Annual Capacity in Numbers
Short Term Skilling	44,010
ITI (Government & Private)	10,128

33.6 Recommendations

Thane, one of the densely populated districts with a large population as compared to other districts of the state, is predominantly driven by secondary and tertiary sectors. It has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 551: Sector specific economic growth, employment potential and aspirations for Thane district

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	🟥	🟧	🟥
Forestry & Logging	🟥	🟥	🟥
Fishing & Aquaculture	🟧	🟥	🟥
Food processing	🟩	🟥	🟩
Tobacco	🟩	🟥	🟥
Textiles	🟧	🟩	🟥
Apparel	🟧	🟥	🟥
Leather	🟥	🟥	🟥
Wood work	🟥	🟥	🟥
Paper and Paper products	🟩	🟥	🟥
Publishing, printing and recorded media	🟧	🟥	🟥
Hydrocarbons	🟥	🟥	🟥
Chemicals and Pharmaceuticals	🟩	🟥	🟥
Rubber and Plastics	🟧	🟥	🟥
Non-metallic mineral products	🟥	🟥	🟥
Iron and Steel	🟥	🟥	🟥
Metal products (except machinery and equipment)	🟧	🟩	🟥
Machinery and Equipment	🟩	🟩	🟥

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Automotive	🟩	🟥	🟧
Automotive (transport equipment)	🟩	🟥	🟧
Construction	🟥	🟥	🟥
Wholesale and Retail Trade	🟧	🟥	🟥
Transportation	🟧	🟩	🟧
Logistics	🟧	🟥	🟥
IT/ITES	🟩	🟥	🟥
Hospitality	🟧	🟥	🟥
BFSI	🟧	🟧	🟧
Real Estate	🟩	🟥	🟥
Professional, Scientific & Technical Activities	🟩	🟥	🟥
Public administration and administrative services	🟧	🟩	🟥
Education	🟩	🟧	🟥
Healthcare	🟩	🟩	🟧
Other Services	🟩	🟩	🟥

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->2.9%- Medium; <2.9%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Manufacture of textiles, Manufacture of fabricated metal products, Manufacturing of machinery & equipment, Transportation, Finance & Insurance activities, Public Administration, Education and Healthcare.
- **High Aspiration Sectors**: Food Processing & Arts, Entertainment & Recreation

*Priority Sectors to be focused on***:**

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors, which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 552: Priority sectors for MSSDS for Thane district

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Food Processing	✓		✓
2	Machinery and equipment	✓	✓	
3	Automotive	✓		✓
4	Transportation	✓	✓	✓
5	BFSI	✓	✓	✓
6	Healthcare	✓	✓	✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Textiles
- Public administration and administrative services
- Education
- Other services (including media and entertainment)

These sectors, though low on the aspirational level of the labour force, have potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in table 533. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers

Table 553: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

Sector Name	Top Job Roles
BFSI	• Accounts Executive (Accounts Payable & Receivable) • Business Correspondent & Business Facilitator • ATM Operator • Debt Recovery Agent • Insurance Agent • SME Officer
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician- Basic • Pharmacy Assistant • Patient Care Assistant
Transportation	• Reach Truck Operator • Crane Operator • Shipment Classification Agent • Clearance Support Agent • Consignment Booking Assistant
Machinery and Equipment	• Fitter- Mechanical Assembly • Manual Metal Arc Welding • CNC Operator

Sector Name	Top Job Roles
	• Draughtsman- Mechanical • Lab Technician- Metal Tester • Foundry Assistant
Automotive	• Vehicle Assembly Fitter/ Technician • Automotive Service Technician • Maintenance Technician Mechanical • Auto Component Assembly Fitter • Automotive Engine Repair Technician
Textiles	• Fitter- Spinning Preparatory • Knitting Machine Operator • Loom Fitter
Food processing	• Assistant Lab Technician - Food and Agricultural Commodities • Cottage Cheese Maker • Dairy Processing Equipment Operator • Jam, Jelly and Ketchup Processing Technician • Fruits and Vegetables Selection In-Charge • Meat and Poultry Processor • Cold Storage technician

34. Wardha

34.1 About the district

Wardha district is located in the Vidarbha region of Maharashtra with the district headquarters in Wardha City. The district is divided into 8 sub-districts and 1,361 inhabited villages.

Wardha has a total land area of 6,310 sq.km and constitutes 2.05% of the total state area. The district lies in the central side of Vidharba region. It is bordered by Amravati on north and north-west, Nagpur on the east, Yavatmal on the south-west and Chandrapur on the south-east. The district has good connectivity with railways and roads, which connects it to the bigger cities such as Mumbai, Nagpur, Amravati, Kolkata, Chennai and Delhi. Dhule-Kolkata (National Highway 6) and Varanasi-Kanyakumari (National Highway 7) pass through the district. Mumbai - Kolkata (Central Railway) and Chennai-Delhi rail routes also passes through the district and makes Wardha an important station on these routes.

Wardha is an agricultural district : Cotton, Soyabean and Pigeon pea are principal crops of the district and pigeon pea is cultivated throughout the district along with Soyabean and Cotton. Cotton crop occupies one-third of the cultivated area and Oranges and Bananas are also grown in some areas. 16% of the total area in the district, mostly towards the North region of the district, is covered under forest.

Table 554: Comparison of Wardha District with Maharashtra

Indicator	Wardha	Maharashtra
Area in sq.km.	6,310	3,07,713
Percentage share in state geographical area, %	2.05	100
No. of Sub-districts	8	353
No. of inhabited villages	1,361	40,959
No. of households	3,08,203	24,421,519
Forest area as a % of total geographical area	16.57	16.94

Source: Census 2011

34.2 Demography

According to latest census data, the district has a population of nearly 13 lakh persons which is ~1.09% of the state. Of the total population, 74.84% are residing in the rural areas whereas 25.16% are residing in the urban areas of the district. The density of population according to 2011 census is 205 persons/Sq. Km.

The district's literacy rate is at 78.37%, which is lower than the state average of 82.91%. Wardha has sex ratio (no. of females per 1000 males) of 946, which is higher than the state average of 925. While 60% of the population in the district is in the working age group (i.e. 15-59 years), about 45% is actually working i.e. % of total workers (main and marginal workers) to the total population.

Table 555: Demographic Indicators of Wardha district

Indicator	Wardha	Maharashtra
Population, No.	13,00,774	11,23,74,333
Decadal growth rate of population, %	5.18	16
Urban Population as a percentage of total population, %	25.16	45.2
SC Population, %	12.18	10.2
ST Population, %	13.14	8.8
Sex ratio, No. of females per 1000 males	946	925
Population density, per sq.km.	205	365
Literacy rate, %	78.37	83
Working age population* as a percentage of total population, %	60	59
Work participation rate^, %	45	44
HDI Index	0.63	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 6.09 lakh persons. Of this, nearly 68.89% of workers are working in primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying), 11.41% of workers are working in secondary sector and 19.70% workers are working in tertiary sector. As shown in the below figure 221 , Wardha's unemployment (per 1000) in rural areas is significantly less than the state average, whereas in urban areas it is slightly less. Additionally, if we compare male and female unemployment (per 1000) of Wardha to the state, unemployment rate for male is slightly less than the state average, whereas for female it is significantly less.

Figure 220: Share of workforce & Employment Rate for Wardha District
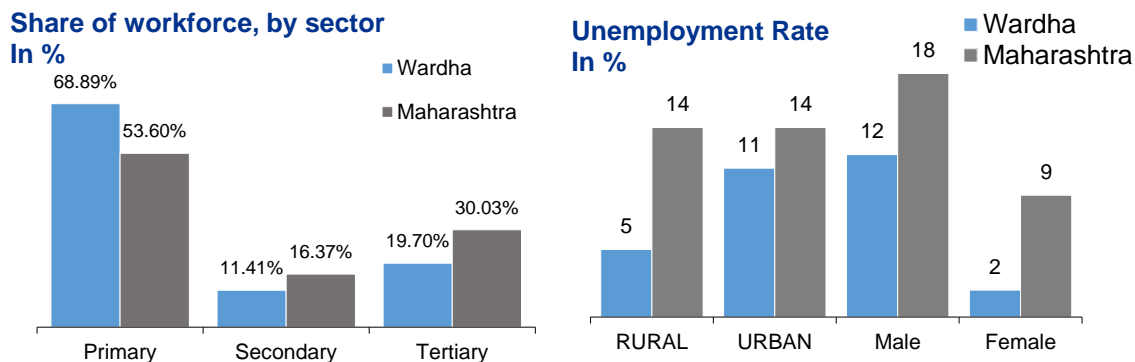
Share of workforce, by sector In %

■ Wardha
■ Maharashtra

Source: Census 2011

Unemployment Rate In %

■ Wardha
■ Maharashtra

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

Figure 221: Type of employment numbers per 1000
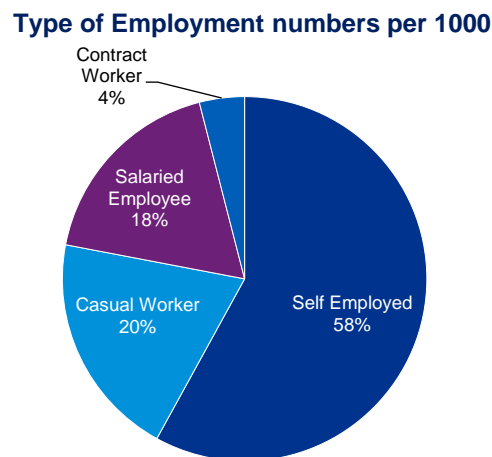
As per figure 222, maximum persons are self-employed (58%) in the district which is slightly higher than the state average followed by casual workers(20%) which is significantly higher than the state average. However, salaried employees (18%) is significantly lower than the state average.

Type of Employment numbers per 1000

Contract Worker 4%
Salaried Employee 18%
Casual Worker 20%
Self Employed 58%

Source: Ministry of Labour & Employment

Education Profile of the District:

Traditional Education:

Wardha district has a total of 1,804 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of 2.29 lakh students. The student teacher ratio is 17:1. The district also has 83 general and technical colleges in the district with the enrolment of 27,000 students.

Table 556: Educational Profile of Wardha District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1,463	1,51,726
Secondary Schools (IX to XII)	341	77,872
General Colleges & Technical Education	101	~27,000[54]

Source: AISHE, U-DISE

Vocational Education

Wardha district has a total of 23 ITIs Government and Private with 4,764 students currently enrolled. Majority of private training centers in the district offer various courses for enhancing the skills of the persons. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information & Communication Technology, Textile, Electronics, Banking & Insurance, Beauty & Wellness and Retail. Whereas, state level scheme (i.e. PMKUVA) offers training in Beauty & Wellness, Information and Communication Technology, Garment Making, Fashion Designing, Healthcare and Electrical.

Table 557: Total no. of ITI and there training number in Wardha district

Particular	Number
ITIs (Government & Private)	23
Trainee Count	4,764

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 8,062 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Information & Communication Technology, Beauty Culture, Garment Making, Banking & Accounting etc.

Table 558: Sector wise short- term skilling trained numbers in PMKUVA for Wardha district

Sectors	Trained
Information and communication technology	2,887
Beauty culture and hair dressing	1,663
Garment making	1,000
Banking and accounting	750
Remaining sectors	563
Electrical	480
Medical and nursing	330
Fashion design	329
Retail	30
Soft skills	30
Total	**8,062**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as masala making, vermi compost making, dairy farming, retail and textiles. Upskilling trainings are offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities. District Industries Centre (DIC) also provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED)

---

[54]Enrolment figures at State run general and technical education colleges only

and MITCON Consultancy and Engineering Services Ltd which includes training programs such as that of an electrician, for mobile repairing, computer repairing, two-wheeler and four wheeler repairing etc.

34.3 Economy

As of 2016-17, Wardha district had the 26th highest Gross District Domestic Product (GDDP) (at current prices) in the state at Rs. 14,814 crores. The per capita GDP of the district is Rs. 134052.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 61% towards the GDDP. Secondary sector is at 26% and primary sector is at 12%.

As per the figure indicated below, major contributors to the GDDP of the district are Trade, Hotel & Restaurant, Banking & Insurance, Agriculture and Allied activities and Constructions.

Figure 222: Sector wise GDDP Distribution of Wardha District
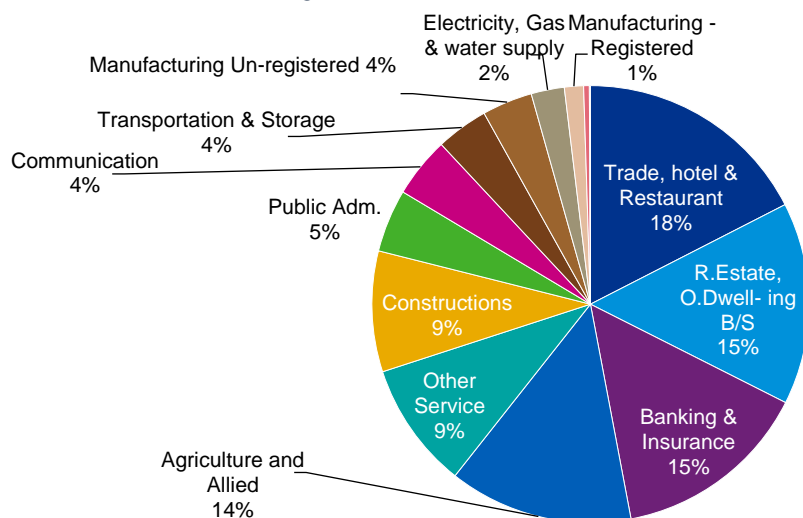
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra (2013-14)

Agriculture and allied activities contributes 12% of the GDDP in the district. Food grains occupy the largest cultivable area, out of which, Pigeon Pea and Soyabean is cultivated throughout the district. Cotton is also an important crop in the district as the soil present in the district is suitable for its cultivation. Sugarcane, Oranges and Bananas are other crops grown in the district. The forests in Arvi and Hingani talukas have Sagwan trees in plenty. Forest land cultivates few major types of grass such as Karad, Dhonad, Mushal, Makhel and Sheng. Timber and firewood also contribute towards the GDDP from forest areas.

Wardha district has 24 registered large and medium enterprises. The district also has nearly 1399 Micro, Small and Medium Enterprises (MSME). Major manufacturing industries include textiles, manufacture of basic metals, food products and manufacture of chemical and chemical products.

Manufacturing of textiles is the major industry in the district. It includes spinning, weaving and finishing of textiles and manufacture of other textiles sub sectors employing nearly 5769 persons. This constitutes nearly 43% of the employment in the registered manufacturing sector in the district. Major players like Gimatex Industries Pvt Ltd, Renuka Collections and The Rai Sahab Rekhchand Mohota Spinning & Weaving Mills Ltd are present in the district.

Manufacture of basic metals is a significant industry under registered manufacturing. It includes manufacture of basic iron and steel and employs nearly 4600 persons. This constitutes to nearly 35% of the employment in the registered manufacturing sector. Major players like Lloyds Steel Industries Ltd, Mahalaxmi TMT and Uttam Galva Metallics are present in the district.

Manufacture of food products is another important industry present in the district. It includes manufacture of vegetables & animal oils and fats, manufacture of dairy products, manufacture of grain mill products, starches & starch products and manufacture of sugar and employs nearly 1200 persons in the district. Major players like Sanskar Agro Pvt Ltd, SS Bapurao Deshmukh Sah Shakar Karkhana and Suguna Poultry Farms are present in the district.

Manufacture of chemicals and chemical products is an important industry in the district. It includes manufacture of basic chemicals, fertilizer and nitrogen compounds, plastics and synthetic rubber in primary forms. It employs nearly 760 persons in the district with major players like B.E.C Fertilizer and Industrial Oxygen Co. Ltd present in the district

Other important manufacturing industries include manufacture of fabricated metal products, manufacture of machinery & equipment, wholesale and retail trade of motor vehicles and motorcycles, manufacture of paper and paper products, manufacture of other non-metallic mineral products and manufacture of wood and word products.

Table 559: Employment in registered manufacturing sector in the district as of 2017-18

Sector	Employment
Manufacture of textiles	5,769
Manufacture of basic metals	4,687
Manufacture of food products	1,284
Manufacture of chemical and chemical products	764
Manufacture of fabricated metal products, except machinery & equipment	278
Manufacture of machinery & equipment n.e.c	103
Wholesale and Retail trade; repair and maintenance of motor vehicles and motorcycles	101
Manufacture of paper and paper products	100
Manufacture of other non-metallic mineral products	67
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	60
Manufacture of motor vehicles; trailers and semi-trailers	45

Source: Annual Survey of Industries 2017-18

As shown above in Figure 222, Tertiary Sector is the largest contributor towards the GDDP of the district. Of all the services Trade, Hotel & Restaurant is the highest at 18%, followed by banking and insurance and Real estate, Ownership of dwellings and business services at 15%. Other services, public administration, communication and transportation and storage are at 10%, 9%, 5%, 5% and 3% respectively.

Investments in the districts:

Electricity transmission, Irrigation, Railway transport infrastructure services, Road transport infrastructure services, Steel, etc. are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 560: Sector wise investments in Wardha District

Sector Name	Proposed Investment (in INR Million)	No of projects
Electricity transmission	328,154	7
Irrigation	192,842	4
Railway transport infrastructure services	86,836	9
Road transport infrastructure services	85,627	14

Sector Name	Proposed Investment (in INR Million)	No of projects
Steel	41,450	6
Other transport equipment & ancillaries	13,000	2
Pig iron	10,000	1
Other textiles	8,780	2
Cotton & blended yarn	5,014	6
Coal & lignite	4,618	3
Other	9,565	17
Total	**785,886**	**71**

34.4 Labour force Aspiration

The main findings of the youth aspirations include:

Respondent Profile

Table 561: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	54%
	Rural	46%
Gender Profile	Male	70%
	Female	30%
Age Group	15-25 years	32%
	26-35 years	46%
	36-45 years	18%
	46-55 years	4%
	56-59 years	42%
Educational Level	Upto Xth	32%
	Upto XIIth	26%
	Any Graduation	68%
Occupational Profile	Worker	32%
	Non-Worker	54%

Figure 223: Past/Current participation in training (in %)
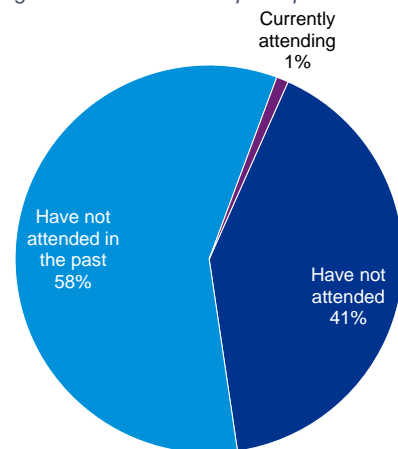
In addition to the above, in figure 224, most respondents (58%) responded that they hadn't attended any technical/ non-technical job related training in the past. 41% reported that they have undergone some training in the past.

Of those who underwent vocational training in the past, the trainings (~58 %) were attended at Private training institutes and 41% attended government training institutes.

Figure 224: Type of training provider (in %)
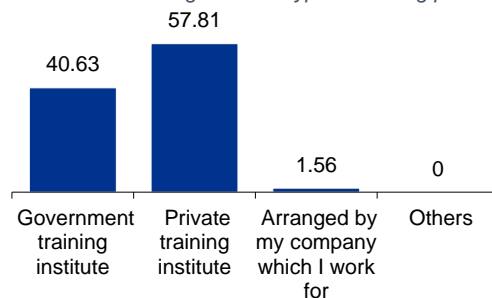
Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per the figure below, in the district, majority (54%) of the respondents aspire to be wage-employed and 46% reported a preference for being self-employed. Amongst the respondents there is an almost equal preference to undertake further education/ learn skill for those aspiring to be wage employed as well as those aspiring to be self-employed. Additionally, there is preference for acquiring vocational trainings amongst both wage and self-employed respondents.

Figure 225: Key Findings related to educational attainment of the labour force
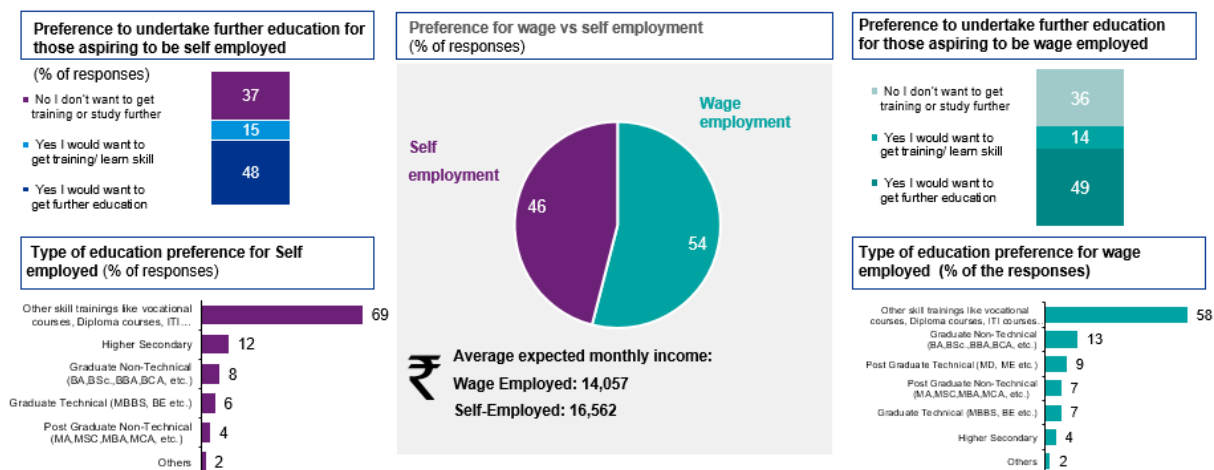
Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 562: Aspirational sub-sectors for labour force in Wardha

For wage employment	For self-employment
Art & Culture	Retail
Auto & Auto Ancillaries	Food Products & Handicrafts
Food Processing	Agriculture & Allied
Agriculture & Allied	Skill Based Business (Mechanic, Plumbing, Etc.)
Other Manufacturing	IT & ITeS

For those aspiring to be self -employed, there was a preference towards setting up the following types of businesses: Opening a retail or a wholesale shop, marketing and selling of products and handicrafts, skill based business (Plumbing, mechanic etc.), Agriculture & Allied with more interest in dairy farming, poultry farming and forestry & logging and IT & ITeS.

For those aspiring to be wage-employed, there was a preference towards getting jobs in Art & Culture, Auto & Auto Ancillaries, Food Processing, Agriculture & Allied activities and other manufacturing sub-sectors. Many respondents also selected 'other', which includes manual wage workers for wage employed and owning business or operating in beauty, hair & personal health sector for self-employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 14,057 and Rs. 16,562 respectively. Additionally, 97% of the respondents would like to work within

Maharashtra, and, 90% of the surveyed respondents in the district expressed that they would be willing to accept a lower wage if they got employment near their home.

Perceived benefits of acquiring training:

70% of those who attended a training programme stated that they actually benefit from attending the training, and majority stated increase in income as the main advantage. Whereas, among those who didn't benefit from the training, majority stated lack of similar in house trainings by the employers as the main challenge.

34.5 Incremental demand and estimation of manpower supply

Crop and animal production, finance and insurance activities, manufacture of textiles, transportation, healthcare, administrative and support service activities and other service activities are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of textiles, machinery & equipment and fabricated metal products.

Table 563: Incremental Demand estimates (2019-2028); in persons for Wardha district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	17,204	17,878
Forestry & Logging	60	63
Fishing & Aquaculture	43	44
Sub-Total	**17,307**	**17,986**
Registered Manufacturing		
Food processing	68	71
Textiles	3,839	6,162
Chemicals and Pharmaceuticals	93	105
Iron and Steel	224	235
Metal products (except machinery and equipment)	565	551
Machinery and Equipment	537	686
Construction	1,485	1,559
Services		
Wholesale and Retail Trade	429	545
Transportation	3,417	4,119
Logistics	429	517
IT/ITES	208	863
Hospitality	208	222
BFSI	1,324	1,722
Real Estate	265	344
Professional, Scientific & Technical Activities	692	900
Public Administration & Administrative services	7,587	9,870
Education	4,230	5,503

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Healthcare	5,659	7,361
Other services	10,893	14,170
Sub-Total	**35,848**	**46,137**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

1 This does not include estimates of unregistered manufacturing

2 These subsectors account for 84% of employment in registered manufacturing, remaining is concentrated in manufacture of computer, electronic and optical products and electrical equipment

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- Textiles and Garment - Demand for machine operators, sewing machine operators along with fitters, electricians etc.
- Cotton Seed Oil processing with employment potential in job roles such as machine operators, fitters, packers and loaders.
- The district also has a potential for employment in food processing, particularly turmeric processing

Estimation of Manpower Supply

According to KPMG estimates, Wardha district has a significant opportunity in terms of a favourable demographic dividend - with rising working age population and a sizeable population of the working age spectrum. By 2023, there will be 6.2 lakhs work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 564: Manpower Supply for Wardha District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected Workforce (2023)
Wardha	8,00,694	6,24,594	6,20,780

The workforce is further split across the educational attainment within the district as shown below in the table 565.

Table 565 Educational Attainment of projected workforce

Educational Level	Projected Workforce
Illiterate	92,570
Literate but below matric/secondary	3,07,409
Matric/secondary but below graduate	1,54,997
Technical degree or diploma equal to degree or post-graduate degree	11,388
Technical diploma or certificate not equal to degree	4,452
Graduate and above other than technical degree	38,203
Literate others	11,761

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~19838 annually.

Table 566: Size of target population in the district

Particular	Numbers
Enrolment in VIII	20,084
Enrolment in X	21,461
Enrolment in XII	9,253
Dropout at VIII	**1,721**
Passing out of VIII*	18,363
Students not transitioned to IX	**3,023**
Dropout at X	**3,376**
Passing out of X*	18,085
Students not transitioned to XI	**2,977**
Passing out at XII**	15,386
Students not transitioned to Higher Education	10,463
Total Target population	**19,838**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 567: Vocational Education annual capacity for Wardha district

Particular	Annual Capacity in Numbers
Short Term Skilling	7,770
ITI (Government & Private)	4,764

34.6 Recommendations

Wardha, is one of the strategically located districts, sharing borders with two regional headquarters i.e Amravati & Nagpur. It is predominantly driven by primary and tertiary sectors and has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the figure below:

Table 568: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	🟥	🟩	🟩
Forestry & Logging	🟥	🟥	🟩
Fishing & Aquaculture	🟧	🟥	🟩
Food processing	🟩	🟥	🟩
Tobacco	🟩	🟥	🟥
Textiles	🟧	🟩	🟥
Apparel	🟧	🟥	🟥
Leather	🟥	🟥	🟥

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Wood work	Low	Low	Low
Paper and Paper products	High	Low	Low
Publishing, printing and recorded media	Medium	Low	Low
Hydrocarbons	Low	Low	Low
Chemicals and Pharmaceuticals	High	Low	Medium
Rubber and Plastics	Medium	Low	Low
Non-metallic mineral products	Low	Low	Low
Iron and Steel	Low	Low	Low
Metal products (except machinery and equipment)	Medium	Low	Low
Machinery and Equipment	High	Low	Low
Automotive	High	Low	Medium
Automotive (transport equipment)	High	Low	Medium
Construction	Low	Low	Low
Wholesale and Retail Trade	Medium	Low	Low
Transportation	Medium	High	Low
Logistics	Medium	Low	Low
IT/ITES	High	Low	Medium
Hospitality	Medium	Low	Low
BFSI	Medium	Low	Low
Real Estate	High	Low	Low
Professional, Scientific & Technical Activities	High	Low	Low
Public Administration & Administrative Services	Low	High	Low
Education	High	High	Low
Healthcare	High	High	Low
Other Services	High	High	Medium

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: : Food Processing, Chemical & Pharmaceuticals, Machinery & equipment, Automotive including transport equipment, IT & ITeS, Real estate, Professional, Scientific & Technical activities, Public Administration & Administrative services, Education & Healthcare.
- **High incremental employment potential sectors**: Agriculture, Textiles, Transportation, Public Administration & Administrative services, Education & Healthcare.
- **High Aspiration Sectors**: Agriculture & Allied and Food Processing

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the

labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 569: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/Medium Employment Potential	High/Medium aspiration
1	Food processing	✓		✓
2	Healthcare	✓	✓	
3	Agriculture – crop and animal production	✓		✓
4	Textiles	✓	✓	
5	Chemicals & Pharmaceuticals	✓		✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Automotive (including transport equipment)
- Transportation
- IT & ITeS
- Education
- Other services

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise is shown below in Table 570. The basis of selecting the job roles is through the training numbers provided by various central & state level schemes as well as primary inputs received while consulting various district officials and employers

Table 570: Top Job Roles Identified for the district as per incremental demand & aspiration of the labor force

Sector Name	Top Job Roles
Agriculture	- Goat Farmer - Dairy Farmer - Micro Irrigation Technician - Greenhouse Operator - Poultry Farmer - Essential Oil Extractor
Textiles	- Fitter- Spinning Preparatory - Knitting Machine Operator - Loom Fitter - Sewing Machine Operator - Assistant Ginning Fitter - Finishing machine operator
Healthcare	- General Duty Attendant - Home Health Aide - Diet Assistant - Emergency Medical Technician- Basic - Pharmacy Assistant

Sector Name	Top Job Roles
	• Hospital Front Desk Coordinator
Construction	• Mason General • Assistant Mason • Bar Bender & Steel Fixer • Assistant Electrician • Shuttering Carpenter System • Assistant Construction Painter & Decorator
Food Processing	• Supervisor: Fruits & Vegetable Processing • Fruit Pulp Processing Technician • Pickle Making Technician • Spice Processing Technician • Soya beverage making technician • Assistant Lab Technician – Food and Agricultural Commodities

35. Washim

35.1 About the district

Washim district is located in the eastern region of the Maharashtra state with the district headquarters in Washim City. The district is included in Amravati division. Washim is divided into 6 sub-districts and 698 inhabited villages. The number of uninhabited villages in Washim is 91.

Washim constitutes 1.6% of the total state area with a land area of ~4,898 sq.km. It is bordered by Akola district to the North, Buldhana district to the South-west, Hingoli district to the South, Yavatmal district to the East and Amravati district to the North-east. The important cities are Washim, Risod, Karanja, Malegaon, Mangrul Pir, Manora and Shirpur with Washim being the largest city in the district. There are many well known hospitals, Schools, Colleges and Banks in Washim City. It is specially famous for its Balaji Temple.

Table 571: Comparison of Washim District with Maharashtra

Indicator	Washim	Maharashtra
Area in sq.km.	4,898	3,07,713
Percentage share in state geographical area, %	1.6	100
No. of Sub-districts	6	353
No. of inhabited villages	698	40,959
No. of households	2,57,892	24,421,519
Forest area as a % of total geographical area	6.4	16.94

Source: Census 2011

35.2 Demography

According to 2011 census data, the district has a population of over 11.9 lakh persons, which is ~1% of the state. Washim is one of the five least populous districts of Maharashtra. It is also one of the least urbanized districts having less than one-fifth of its population in urban areas whereas more than two-fifth of the state's population lives in urban areas. With population density as low as 244 persons/Sq. Km which is significantly lower than the state, the district is one of the low-intensity regions in the state.

Table 572 lists down multiple demographic indicators of the district. The district scores significantly low on HDI Index (0.34) as against the state HDI Index of 0.75. The sex ratio and literacy rate of the district are higher than the state average. About half of the district's population falls in the working age group (i.e. 15-59 years) while about 48% of its population is actually working i.e. % of total workers (main and marginal workers) to the total population. The workforce participation rate in the district is more than the state. As large as 52% of the district's population are non-workers.

Table 572: Demographic Indicators of Washim district

Indicator	Washim	Maharashtra
Population, No.	11,97,160	11,23,74,333
Decadal growth rate of population, %	17.34	16
Urban Population as a percentage of total population, %	17.66	45.2
SC Population, %	1.73	10.2
ST Population, %	0.77	8.8
Sex ratio, No. of females per 1000 males	930	925
Population density, per sq.km.	244	365
Literacy rate, %	83.25	83
Working age population* as a percentage of total population, %	49.66	59
Work participation rate^, %	48	44
HDI Index	0.34	0.75

*working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a workforce of 5.69 lakh persons. Figure 227 suggests that the workforce of the district is primarily engaged in the primary sector (Agriculture, Forestry, Fishing, Mining and Quarrying) followed by tertiary (12%) and secondary sector (4%). The economy of district is primarily dependent on agricultural sector with more than 80 percent persons engaged in agricultural activity. The proportion of workforce engaged in secondary sector in the district is one-fourth of the state's average. As shown in the Figure 226 below, the rate of unemployment (per 1000) in the district is significantly lower than the state average across all the categories except urban unemployment where it is higher. The rate of unemployment (per 1000) among males of the district is almost half of the state average rate of unemployment which presents a stark difference. A similar observation can be made with respect to rate of unemployment (per 1000) in rural areas of the district.

Figure 226: Share of workforce & Employment Rate for Washim District
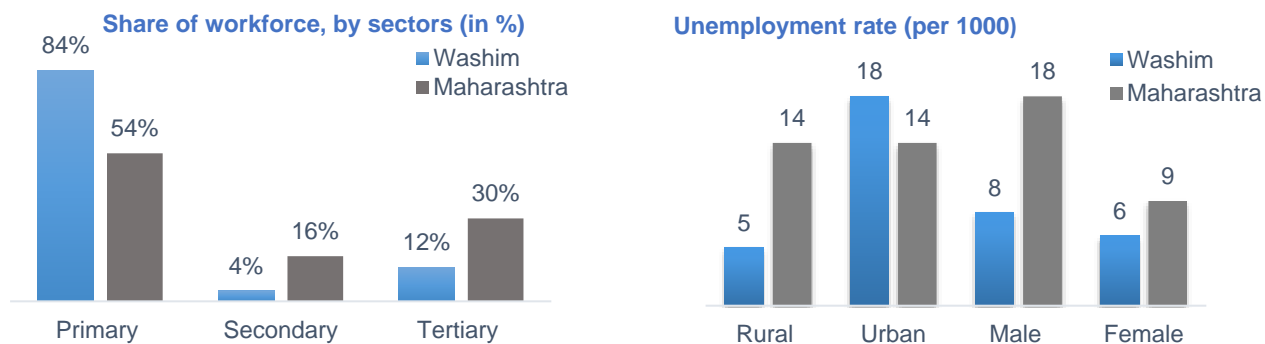
Source: Census 2011

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labour & Employment, Labour Bureau Chandigarh

As can be seen in figure 228, about three-fifth of the working population in Ratnagiri is self-employed. 33% of the workforce is engaged in the district as casual labor, which is significantly higher than the state average of 3%. Proportion of salaried employment (6%) in the district is significantly lower than the state average.
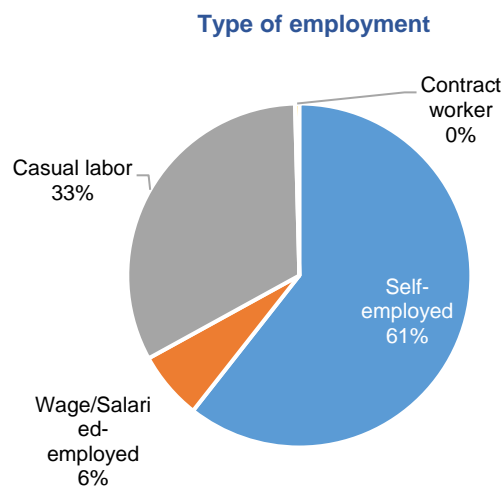
Figure 227: Type of employment in the district

Source: Ministry of Labour & Employment

Education Profile of the district:

Traditional Education:

Washim district has a total of 1,399 schools, which includes primary, upper primary, secondary and higher secondary with an enrolment of over 2.5 lakh students. The Pupil-Teacher ratio of the district is 22 and is

equivalent to the state's ratio. The district also has 38 general and technical colleges with an enrolment of about 13,181 students in state-run general and technical colleges.

Table 573: Educational Profile of Washim District

Particular	No. of Institutes	No. of Students
Primary Schools (I to VIII)	1,041	1,08,301
Secondary Schools (IX to XII)	358	1,48,326
General Colleges & Technical Education	38	13,181[55]

Source: AISHE, U-DISE

Vocational Education

Washim district has a total of 6 ITIs Government and Private with 1,164 students currently enrolled. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Beauty and Hair dressing, Electrical, Organized retail, Garment making and Agriculture. State level scheme (i.e. PMKUVA) offers training in Electricals, Beauty and Hairdressing and Accounting sector.

Table 574: Total no. of ITI and there training number in Washim district

Particular	Number
ITIs (Government & Private)	6
Trainee Count	1,164

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 3,207 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Garment Making, Beauty Culture, Information & Communication Technology, Electrical, Medical & Nursing, etc.

Table 575: Sector wise short- term skilling trained numbers in PMKUVA for Washim district

Sectors	Trained
Garment Making	718
Beauty Culture and Hair Dressing	659
Information and Communication Technology	630
Electrical	420
Medical and Nursing	210
Automotive Repair	210
Apparel	90
Industrial Electrical	60
Beauty and Wellness	60
Fashion Design	30
Automotive	30
Banking and Accounting	30
Construction	30
Remaining Sectors	30
Total	**3,207**

Source: Trained numbers as per schemes administered under MSSDS, as of 1st December 2019

Additionally, trainings for rural self- employment are being offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Upskilling trainings are offered by Agriculture Training Management Agency (ATMA) related to agriculture and allied activities.

---

[55]Enrolment figures at State run general and technical education colleges only

District Industries Centre (DIC) also provides training relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

35.3 Economy

As of 2016-17, Washim district was amongst the bottom five districts of the state in terms of Gross District Value Added (at current prices) with the figure at Rs. 10,052 crores. The district had a per capita GDVA (at current prices) of Rs. 79,985 for 2016-17.

In Washim, the service sector contributes to about 57% of the district economy despite employing only around 12% of the district's workforce. The agriculture and allied activities contribute to 30% and the industry sector contributes to 13% of the GDDP.

The economy of the district is mainly depending on agriculture. Major crops grown in the district include Soyabean, Bengal Gram, Cotton and Mango.

In the service sector, Real Estate and business services hold the highest share of the district's GDDP with 21%. Trade and Hospitality account for 12% of the GDDP of Washim as can be seen in Figure 210.

Industry accounts for just 13% of the Washim's GDDP. Registered manufacturing, unregistered manufacturing, constructions account for 5%, 3% and 5% of the district's economy respectively.
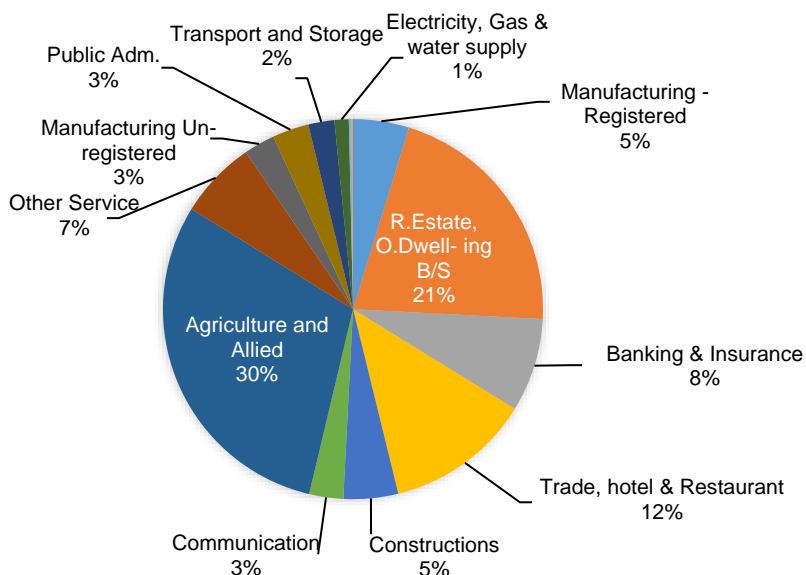
Figure 228: Sector wise GDDP Distribution of Ratnagiri District

Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

The top registered manufacturing industries of the district are: Food products, Textiles, and Coke and refined petroleum products. **Food products manufacturing** industry in the district employs over 350 people. Workforce is employed across sub-sectors such as manufacture of vegetable and animal oils and fats and manufacture of grain mill products. Textiles industry employs over 200 people primarily in **preparation and spinning of textile fibres,** which is an initial level in the value chain of textile industry.

Manufacturing of refined petroleum products also employs a small proportion of workforce in the district as can be seen in Table 411. Other small-sized registered manufacturing industries in the district include fabricated paper and paper products, non-metallic mineral products.

Table 576: Employment in major registered manufacturing sub-sectors in the district 2017-18

Sector	Employment
Manufacture of food products and beverages	358
Manufacture of coke and refined petroleum products	206
Manufacture of textiles	197
Manufacture of paper and paper products	42
Manufacture of other non-metallic mineral products	17

Source: Annual Survey of Industries, 2017-18

Investments in the districts:

Road transport infrastructure services, Storage & distribution, Renewable electricity are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 577: Sector wise investments in Washim District

Sector Name	Proposed Investment (in INR Million)	No of projects
Road transport infrastructure services	60,756	10
Storage & distribution	4,496	1
Renewable electricity	130	2
Grand Total	**65,382**	**13**

35.4 Labour force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 578: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	51%
	Rural	49%
Gender Profile	Male	81%
	Female	19%
Age Group	15-25 years	57%
	26-35 years	25%
	36-45 years	12%
	46-55 years	5%
	56-59 years	1%
Educational Level	Upto Xth	42%
	Upto XIIth	44%
	Any Graduation	14%
Occupational Profile	Worker	60%
	Non-Worker	40%

Figure 229: Past/Current participation in training, %

- Have attended in the past — 14%
- Currently attending — 3%
- Haven't attended in the past — 83%
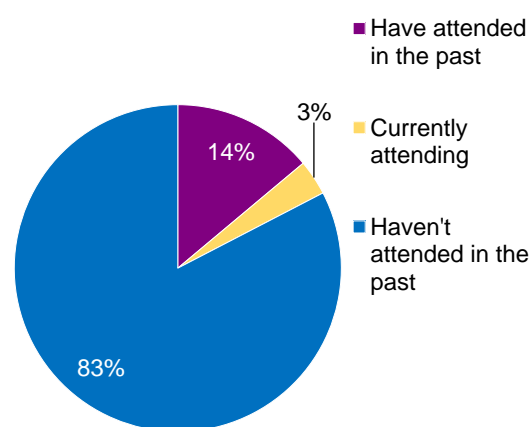
As many as 83% of the respondents in Washim stated that they had not attended any technical/non-technical job related training in the past, while, 14% reported having attended a training programme in the past.

A little less than three-fifth of the respondents reported having attended the training at private training institutes (56%) while 36% stated government training institute as the training provider. A small proportion of respondents also stated their employer as the training provider.

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

As per figure 232, 71% of the respondents in Washim aspire to be self-employed and 29% reported a preference for being wage-employed. There is a higher preference to undertake further education/training amongst wage-employment aspirants as compared to the respondents who aspire to be self-employed. While self-employment aspirants stated non-technical education and vocational skill courses as their preference, 31% of the wage-employment aspirants stated technical education as their preference.

Figure 230: Type of training provider, in %
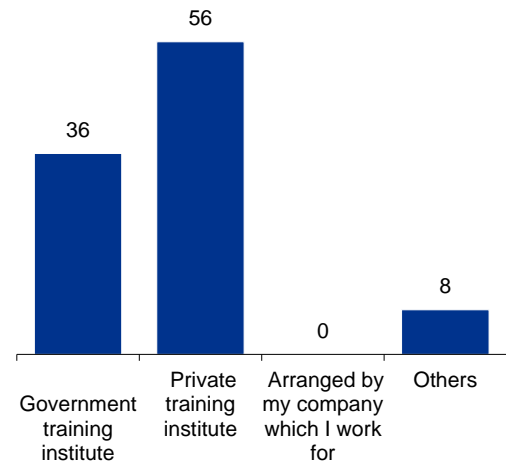
Figure 231: Key Findings related to educational attainment of the labour force
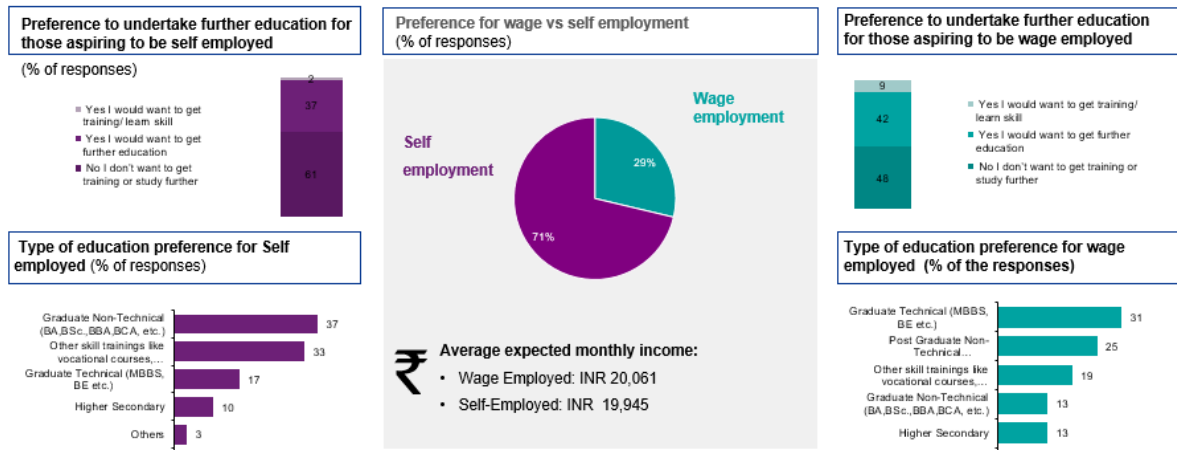
Key Findings related to employment:

All the respondents who reported to be not working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 579: Aspirational sub-sectors for labour force in Washim

For wage employment	For self-employment
Other Manufacturing	Other Manufacturing
Railways	Own business/ Kirana store
Governance & Administration	Agriculture and Allied activities
Agriculture and Allied activities	Art & Culture
Automobiles and auto ancillaries	Gems and jewellery

For those aspiring to be self-employed, there was a preference towards opening a retail or wholesale shop (grocery, stationery, medical shop, pan shop, clothes). The second most stated type of business was setting up a manufacturing unit (fabrication, auto parts, textile, food items etc).

For those aspiring to be wage-employed, there was a preference towards getting jobs in Railways, Governance and Administration, Agriculture and allied activities, and Automobiles sectors. Many respondents also selected the category 'others' which includes taking up administrative work or working in a shop for wage- employed.

Average monthly expected income for the respondents aspiring to be wage employed and self-employed Rs. 20,061 and Rs. 19,945 respectively.

Additionally, 100% the respondents stated that they would like to work within Maharashtra. As many as 90% of the surveyed respondents stated that they would be willing to accept the employment within Maharashtra even at a lower wage which indicates that the district is less likely to witness the migration of workforce to other regions outside the state for better economic opportunities.

Perceived benefits of acquiring training:

As many as 75% who attended a training programme stated that they actually benefited from attending the training. The primary benefit which was highlighted by the respondents was acquisition of a new skill or upgradation in the existing skill set after attending the training. Other stated benefits include increase in income, getting certification and smooth shift to a new sector after attending the training. The primary challenge reported by majority of the respondents after attending the training was that they didn't get employment even after attending the training. Also, it is found that among the respondents who reported not having attended any training programme, as many as 72% of them stated having no awareness on any employment-oriented training programs that help gain expertise/ enhance job skills.

35.5 Incremental demand and supply

The services sector is expected to drive incremental labour demand in the district followed by Agriculture and allied activities with the industry sector playing only a nominal role. Crop and animal production, Finance and Insurance services, Human health & social work activities, and Transportation sector are expected to be the major drivers of incremental labour demand in the district. The limited incremental registered manufacturing sector demand is concentrated in high growth sub sector of manufacture of textiles even though at present, maximum employment is offered by manufacturing of food products.

Table 580: Incremental Demand estimates (2019-2028); in persons for Washim district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	19,607	20,375
Forestry & Logging	69	72
Fishing & Aquaculture	49	51
Sub-Total	**19,724**	**20,497**
Registered Manufacturing		
Textiles	131	210
Construction	547	574

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Services		
Wholesale and Retail Trade	230	292
Transportation	1,625	1,959
Logistics	204	246
IT/ITES	341	411
Hospitality	112	120
BFSI	548	712
Real Estate	110	142
Professional, Scientific & Technical Activities	286	372
Public Administration & Administrative services	3,339	4,343
Education	2,407	3,132
Healthcare	3,220	4,189
Other services	9,760	12,697
Sub-Total	**22,181**	**28,615**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

The registered manufacturing subsectors above, account for almost 100% of the employment in registered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

- **Agriculture and allied sector:** Production of pulses and soyabean. Horticulture is also a prominent activity that is emerging in the district. Fishery, poultry and dairy are also in high demand in the district.

Estimation of Manpower Supply

Washim district has a significant opportunity in terms of a sizeable population of the working age spectrum. By 2023, there will be about 5.36 lakh labour force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 581: Manpower supply for Washim district

District	Projected Working population	Projected Labour Force (2023)	Projected Workforce (2023)
Washim	7,73,624	5,41,189	5,36,649

Table 582: Projected workforce by education levels

Education level	Projected work force
Illiterate	1,10,115
Literate but below matric/secondary	2,34,191
Matric/secondary but below graduate	1,19,038
Technical degree or diploma equal to degree or post-graduate degree	7,589
Technical diploma or certificate not equal to degree	1,866
Graduate and above other than technical degree	18,414
Literate others	45,435

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~21840 annually.

Table 583: Size of target population in the district

Particular	Numbers
Enrolment in VIII	23,813
Enrolment in X	23,508
Enrolment in XII	7,679
Dropout at VIII	**2,481**
Passing out of VIII*	21,332
Students not transitioned to IX	**3,511**
Dropout at X	**4,680**
Passing out of X*	18,828
Students not transitioned to XI	**3,099**
Passing out at XII**	15,514
Students not transitioned to Higher Education	10,549
Total Target population	**21,840**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Particular	Annual Capacity in Numbers
Short Term Skilling	4,770
ITI (Government & Private)	1,500

35.6 Recommendations

The economic growth of the district is predominantly driven by secondary and tertiary sectors. Manufacturing forms the core of the employment generation activities in the district with a growth rate of more than 10% for manufacturing of food products and beverages, chemical and chemical products, paper and paper products, machinery, motor vehicles, etc. The district also has shown growth rates of more than 10% in sectors like real estate, administrative and support service activities, education, human health, arts & recreation and other service activities.

Agriculture and finance & Insurance sectors have a good employment potential for the locals within the district. The opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 584: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Amber	Red	Green
Food processing	Green	Red	Red
Tobacco	Green	Red	Red
Textiles	Amber	Red	Red
Apparel	Amber	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red
Publishing, printing and recorded media	Amber	Red	Red
Hydrocarbons	Red	Red	Red
Chemicals and Pharmaceuticals	Green	Red	Red
Rubber and Plastics	Amber	Red	Red
Non-metallic mineral products	Red	Red	Red
Iron and Steel	Red	Red	Red
Metal products (except machinery and equipment)	Amber	Red	Red
Machinery and Equipment	Green	Red	Amber
Automotive	Green	Red	Amber
Automotive (transport equipment)	Green	Red	Amber
Construction	Red	Red	Red
Wholesale and Retail Trade	Amber	Red	Red
Transportation	Amber	Amber	Red
Logistics	Amber	Red	Red
IT/ITES	Green	Red	Red
Hospitality	Amber	Red	Red
BFSI	Amber	Red	Amber
Real Estate	Green	Red	Red
Professional, Scientific & Technical Activities	Green	Red	Red
Public Administration & Administrative Services	Amber	Green	Amber
Education	Green	Green	Red
Healthcare	Green	Green	Red
Other Services	Green	Green	Green

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low

For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low

As per the table above, the following sectors can be prioritized for skill development activities in the district:

*   **High economic growth sectors**: Food Processing, Chemical & Pharmaceuticals, Machinery & equipment, Automotive including transport equipment, IT & ITeS, Real estate, Professional, Scientific & Technical activities, Public Administration & Administrative services, Education & Healthcare.
*   **High incremental employment potential sectors**: Agriculture, Public Administration & administrative services, healthcare and education.
*   **High Aspiration Sectors**: Agriculture and allied sectors; Other services (media & entertainment)

Priority Sectors to be focused on:

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 585: Priority sectors for MSSDS

Sl. No.	Sector	High and Medium Growth	High and Medium Economic Potential	High and Medium aspiration
1	Agriculture - Crop & Animal production		✓	✓
2	Machinery & Equipment	✓		✓
3	Transportation	✓	✓	
4	BFSI	✓	✓	

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

*   Education
*   Public Administration & Administrative services
*   Healthcare
*   Automotive including transport equipment
*   Other services

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise are shown below in table 586. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 586: Top Job Roles Identified for the district as per incremental demand & aspiration of the labour force

High demand sectors	Identified Job Roles
Agriculture and allied	• Dairy farmer

High demand sectors	Identified Job Roles
	• Goat farmer • Small poultry farmer • Soyabean cultivator • Pulses Cultivator • Cashew Cultivator
Machinery and Equipment	• CNC Operator –Turning • Fitter –fabrication • Service Engineer –installation • Metal Arc Welder • Fitter –electrical and electronic assembly
Transportation	• Transport consolidator • Courier delivery executive • Cargo surveyor • Ground operation associate • Courier branch sales executive
Automotive	• Vehicle Assembly Fitter/ Technician • Automotive Service Technician • Maintenance technician Mechanical • Auto component Assembly fitter • Automotive engine repair technician
Healthcare	• General Duty Attendant • Home Health Aide • Diet Assistant • Emergency Medical Technician-Basic • Pharmacy Assistant • Lab Assistant
Food processing	• Cashewnut processing • Jaggery Processing • Cotton Oil Processing • SoyabeanOil Processing

36. Yavatmal

36.1 About the district

Yavatmal district is located in the eastern Maharashtra and shares its boundaries with Washim and Hingoli districts in the west, Amravati and Wardha district in the north, Chandrapur in the east and to the south lies Nanded and state of Andhra Pradesh.

Yavatmal has a total land area of 13,582 sq. km and constitutes 4.41% of the total area, making it the 6th largest district of the state and third highest in terms of population in Vidharbha region. The district is well connected through National Highways, State Highways and Railway Lines passing through the district and supporting trade and commerce activities for cotton, jute, charcoals etc.

The district is a popular destination among tourists for hot springs at Kapeshwar on the banks of Panganga.

Table 587: Comparison of Yavatmal District with Maharashtra

Indicator	Yavatmal	Maharashtra
Area in sq. km.	13,582	3,07,713
Percentage share in State geographical area, %	4.41	100
No. of Sub-districts	16	353
No. of inhabited villages	1853	40,959
No. of households	6,40,385	2,44,21,519
Forest area as a % of total geographical area	19.17	16.94

36.2 Demography

The population of Yavatmal is 27,72,348 as per census 2011, out of which almost 80% is concentrated in the rural areas, making it a significantly rural dominated district. The district is a good representation of the Maharashtra's human development indicator's with a literacy rate similar to that of the state(~83%) and a sex ratio of 952, higher than that of the state standing at 925. Close to 54% of the district's population is in the working age group (15-59 years), out of which 49% is actively working, indicating an engaged workforce, which can be strengthened with education/ training intervention. A striking variation can be seen in the HDI of the district which is at 0.21, almost 33% of the state HDI, and that of other districts. One reason for this could be the inequalities in the distribution of resources leading to regional disparities.

Table 588: Demographic Indicators of Amravati district

Indicator	Yavatmal	Maharashtra
Population, No.	27,72,348	11,23,74,333
Decadal growth rate of population, %	12.78	16
Urban Population as a percentage of total population, %	21.58	45.2
SC Population, %	2.47	10.2
ST Population, %	4.89	8.8
Sex ratio, No. of females per 1000 males	952	925
Population density, per sq.km.	204	365
Literacy rate, %	82.82	83
Working age population* as a percentage of total population, %	53.9	59
Work participation rate^, %	48.9	44
HDI Index	0.21	0.75

working age population is the population in the age group of 15 to 59 years. ^Work participation rate is defined as the percentage of total workers (main and marginal workers) to total population. Source: Census 2011, Census 2001, Maharashtra Human Development Report 2012

The district has a total workforce of 13.58 lakh persons, of which 80% are engaged in primary sector (agriculture and allied activities and mining). 5% of the workforce is in the secondary sector and 14% is in

the tertiary sector. As indicated in the figure below, Yavatmal on an average (rural and urban combined) has a similar rate of unemployment to the state. But, within the district, a significant difference can be seen within the rural and urban unemployed. To elaborate, there is a 200% increase in the rate of urban unemployed (22 per 1000) as compared to the rural unemployed (7 per 1000). One reason for this could be a high engagement in the primary sector activities like agriculture, taking place in the rural areas of the district, as the district's economy is primary sector heavy.

Figure 232: Share of workforce & Employment Rate
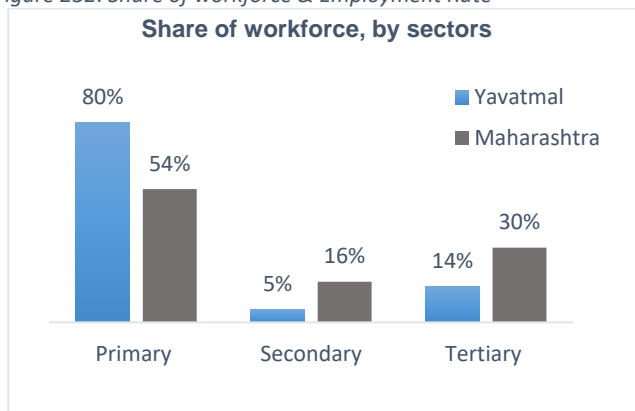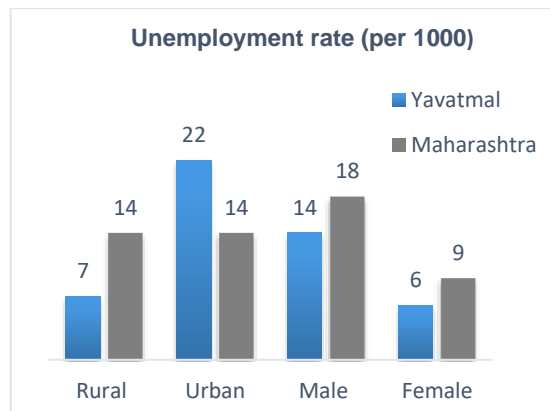
Share of workforce, by sectors

Source: Census 2011

Unemployment rate (per 1000)

Source: District Level estimates for Maharashtra(2013-14) published by Ministry of Labor & Employment, Labor Bureau Chandigarh

Figure 233: Type of employment in the district

Type of Employment Numbers per 1000
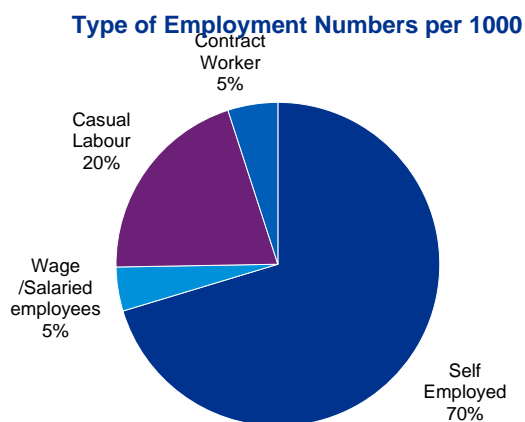
Source: Ministry of Labor & Employment

As can be seen in figure, 70% of the respondents are reported to be self-employed in the district, only 5% of the workforce is reported to be salaried/wage employed, 20 % of the workforce is reported to be casual workers and 5% of the workforce is reported to be contract workers. The % of employment in self-employment is the second highest of the state which could be owing to high dependence on agricultural and allied activities in the state.

Education Profile of the district:

Traditional Education:

The district has 1734 schools of which 1562 are primary. Total enrolment in schools was 137,780, with almost a 27% decrease in the enrolment from primary to secondary school. This decline could be due to reasons such as migration of parents to a different district, or difference in government owned secondary

schools (41%) in the district as compared to primary government schools (73%). The student-teacher ratio in the district is 21. The district has set up 88 general and technical colleges, with a total of 18 ITIs established.

Table 589: Educational Profile of District

Particulars	No. of institutes	No. of students enrolled
Primary Schools (1-8th)	1,562	79,812
Secondary (9-12th)	172	57,968
Colleges (General and Technical)	88	38,096[56]

Source: AISHE, U-DISE

Vocational Education

Yavatmal district has a total of 20 ITIs Government and Private with 3,848 students currently enrolled. Trainings are offered by private training centers in the district across various courses for enhancing the skills of the persons. Top sectors in which the trainings are offered in the district as per central government schemes (NULM, PMKVY, DDU-GKY and NSDC Fee Based) are Information and Communication, Tourism and Hospitality services, Beauty Culture and Hair Dressing, Banking and Accounting, Agriculture and Medical and Nursing. Under the state scheme, majority of the trainings are focused on Accounts Assistant Using Tally and Accounting.

Table 590: Total no. of ITI and there training number in Yavatmal district

Particular	Number
ITIs (Government & Private)	20
Trainee Count	3,848

Further, the state runs a scheme by the name of Pramod Mahajan Kaushal Uddhyokta Vikas Abhiyan (PMKUVA). As per the data 6,342 students are trained annually in the district under the scheme. Top sectors in which the trainings are offered in the district are Information & Communication Technology, Beauty Culture, Banking & Accounting, Garment Making, Medical & Nursing, etc.

Table 591: Sector wise short- term skilling trained numbers in PMKUVA for Yavatmal district

Sectors	Trained
Information and Communication Technology	1,802
Beauty Culture and Hair Dressing	968
Banking and Accounting	930
Garment Making	809
Medical and Nursing	740
Electrical	325
Remaining Sectors	290
Fashion Design	150
Soft Skills	150
Hospitality	118
Industrial Electrical	60
Total	**6,342**

Additionally, trainings are being offered by numerous institutes/agencies, such as, for rural self-employment are offered through Rural Self-Employment Training Institute (RSETI) in areas such as garment making, dairy farming, retail and textiles. Up skilling trainings are offered by Agriculture Training Management Agency (ATMA) in activities connected to agriculture and allied activities. District Industries

---

[56]Enrolment figures at State run general and technical education colleges only

Centre (DIC) provides trainings relating to industries and services sector through agencies such as Maharashtra Centre for Entrepreneurship Development (MCED) and MITCON Consultancy and Engineering Services Ltd.

36.3 Economy

Yavatmal district has the 19th highest GDP (at current prices) in the state as of 2016-17 of 28,786 crore and has seen a growth of 21% in GDP from 2015-16 to 2016-17. It also has a per capita GDDP of INR. 98,661.

The district economy contributing towards GDDP is predominantly service based, with service sector contributing nearly 58.7% towards the GDDP, followed by secondary sector 26.6% and primary sector 14.6%.

Figure 234: Sector wise GDDP Distribution of Yavatmal District
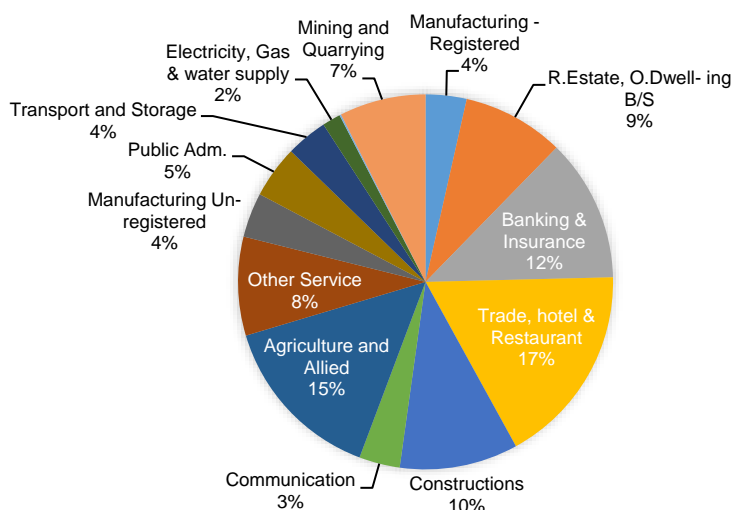
Source: District Domestic Product of Maharashtra (Base 2004-05), published by DES Maharashtra

As can be viewed from figure, Tertiary Sector, which is the largest contributor towards the GDDP encompasses of services such as Trade, Hotel & Restaurant leading the sector by a contribution of 17%, followed by banking and insurance at 12%, real estate, ownership of dwellings and business service at 9%, and other contributing services, such as public administration, communication, transportation and storage with 5%, 3% and 4% contribution respectively

Agriculture sector is of paramount relevance to the Yavatmal economy as 80% of the people are engaged in Agriculture and allied activities. The major crops grown in the district include cotton, soybean, tur, orange and onion and the 4 major crops - Cotton, Soybean, Red Gram and Jowar together account for almost 90% of the total gross cropped area. Chilly is an upcoming crop in the district, particularly in the irrigated areas. About 60.4% of the farmland is classified as Small & Marginal holdings, which is relatively lower compared with the state average of 78.6%. Further, the average landholding in Yavatmal is 2.21 ha, which is quite high as compared to the state average of 1.44 ha. Approximately 55% of the landholding is below 2 hectares per person[57].

Yavatmal has over 1400 registered industrial units, out of which 3 major manufacturing industries of the district are: Manufacture of textiles, Manufacture of food products and beverages and Manufacture of other non-metallic mineral products

---

[57] https://macp.gov.in/sites/default/files/user_doc/Yavatmal%20MSS.pdf

Manufacture of textiles is the major industry in the district, as it's sub sector - preparation and spinning of textile fibres employs all the 4432 people engaged in this industry. The main employers include Raymond Uco Denim PVT LTD (employing almost 75%), Babasaheb Naik Kapus Utpadak, and Priydarsani Co-Op Spinning Mill LTD.

Manufacture of food products and beverages is the second largest industry in the district, with manufacture of sugar employing the highest number of people, that is 680, maximum employment is generated by Vasant Sahkari Sakhar Karkhana Ltd , Pophali and Deccan Sugar Private Limited. Under this section, another significant contributor to the employment is manufacture of vegetable and animal oils and fats, followed by manufacture of grain mill products, manufacture of bakery products and manufacture of soft drinks; production of mineral waters and other bottled waters

Manufacture of other non-metallic mineral products is the third largest industry in the district, in which manufacture of cement, lime and plaster is the biggest employing sub sector, followed by cutting, shaping and finishing of stone and manufacture of articles of concrete, cement and plaster. The employees are almost equally divided amongst the employers.

Other note able manufacturing industries include manufacture of chemicals and chemical products, of basic metals, manufacture of coke, refined petroleum products and nuclear fuel, of paper and paper products, manufacture of motor vehicles, trailers and semi-trailers and manufacture of rubber and plastics products.

Table 592: Employment in registered manufacturing sector in the district 2017-18

Sector	Employment
Manufacture of textiles	4,432
Manufacture of food products and beverages	1,046
Manufacture of other non-metallic mineral products	779
Manufacture of chemicals and chemical products	132
Manufacture of basic metals	86
Manufacture of coke, refined petroleum products and nuclear fuel	76
Manufacture of paper and paper products	44
Manufacture of motor vehicles, trailers and semi-trailers	22
Manufacture of rubber and plastics products	3

Source: Annual Survey of Industries, 2017-18

Investments in the districts:

Irrigation, Cement, Road transport infrastructure services, Railway transport infrastructure services, Renewable electricity are among the top sectors in which investments have been announced, are live or have been completed. The table below depicts the sector-wise proposed investment in the district.

Table 593: Sector wise investments in Yavatmal District

Sector Name	Proposed Investment (in INR Million)	No of projects
Irrigation	238,576	6
Cement	64,500	3
Road transport infrastructure services	57,313	12
Railway transport infrastructure services	33,472	6
Renewable electricity	22,575	3
Coal & lignite	18,049	14
Cloth	4,109	5
Storage & distribution	3,020	1
Education	744	1
Conventional electricity	560	1
Other	688	13
Total	**443,605**	**65**

36.4 Labor force Aspiration

The main findings of the youth aspirations include

Respondent Profile

Table 594: Distribution of Respondents

Profile	Details	
Urban vs. Rural	Urban	62%
	Rural	38%
Gender Profile	Male	64%
	Female	36%
Age Group	15-25 years	39%
	26-35 years	28%
	36-45 years	21%
	46-55 years	12%
	56-59 years	0%
Educational Level	Up to Xth	63%
	Up to XIIth	24%
	Any Graduation	13%
Occupational Profile	Worker	71%
	Non-Worker	29%
Average monthly household income for those working	INR. 6472	

Figure 235: Past/Current participation in training, %

- ■ Have attended in the past
- ■ Currently attending
- ■ Haven't attended in the past
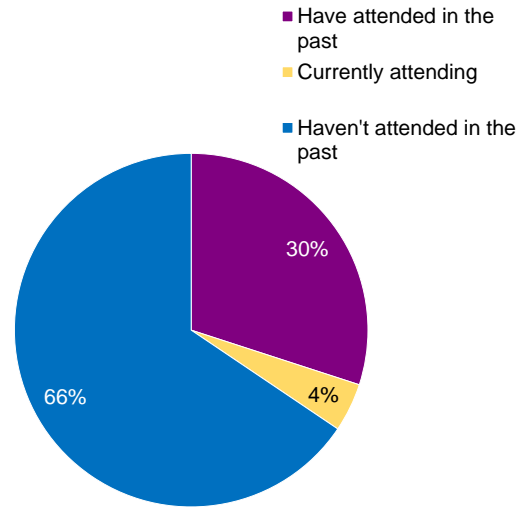
Figure 236: Type of training provider (in %)
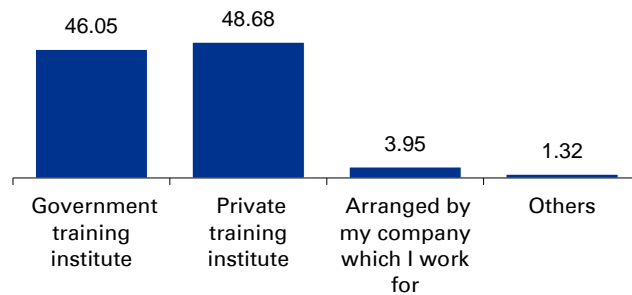
As can be seen in the figure, significant number of respondents (66%) shared that they have not undertaken any technical/ non-technical job related training in the past. 30% reported that they have undergone some training in the past and 4% mentioned that they are currently undergoing training. Considering the age group of the respondents, the majority of which lies between 15 to 35 years of age, an inference can be made that majority of the trainings were undertaken to up skill and prepare for better job opportunities, rather than an on-job training. It is of significance to know that amongst those who did not attend the training 94% were not aware of the training, and remaining knew about the training being organised but did not attend due to high fees.

Of those who underwent vocational training in the past, almost an equal number of trainings (~47 %) were attended at private training institutes and government training institutes, and the remaining were arranged by employers.

Employment, Training and Educational Aspiration

Key findings related to educational attainment:

Figure 237: Key Findings related to educational attainment of the labor force

As per the Figure, in the district, majority (57%) of the respondents aspire to be self-employed and 43% reported a preference for being wage employed. Amongst the respondents, the % of respondents who are interested in up skilling themselves through trainings or education is more in the wage employed as compared to self-employed. The preference in both the categories is towards other skill trainings, followed by graduate non-technical training. A positive correlation can be observed between people seeking wage employment and interested in attending training to upgrading their skills, to open better employment opportunities or for better wages.

Key Findings related to employment:

Respondents who reported to be non-working currently, showed a willingness to work in future. Top few preferred sub sectors ranked by proportion of responses for those aspiring to be self-employed and wage-employed are summarized in table below:

Table 595: Aspirational sub-sectors for labor force

For wage employment	For self-employment
Governance & Administration	Automobiles and auto ancillaries
Agriculture and allied activities	Other Manufacturing
Healthcare & Family Welfare Services	Retail
Textiles or related industry	Art & Culture
Cement	Food Processing
Finance, Banking & Insurance	

Some respondents chose 'other' sectors, which included preferences for opening a kirana store.

Amongst the aspirants looking to be self-employed, they expressed an interest opening a retail or a wholesale shop (grocery/stationery/medical shop/pan shop/clothes etc.).

99% of the respondents have expressed that they would prefer to work within their state, Maharashtra and 15% of the respondents shared that they are willing to work outside their state if they are being paid

relatively higher than their wages in Maharashtra. This can also be triangulated by the fact that though the average expected monthly income under wage employed (13,891) is higher than that of self-employed (INR 12, 240), still a higher preference is recorded for self-employment, as the location of one's own venture can mostly be decided as per the convenience of the owner.

Perceived benefits of acquiring training:

Out of those who attended the training, 74% felt that the training has reaped benefit such as increase in income and acknowledgement through certificate, which indicates an official affirmation of the developed skill sets of an individual. However, the respondents also indicated the challenges they faced after attending the training, most of which included lack of support from employers during the training program and absence of similar training programs in the house for the betterment of the employees.

36.5 Incremental demand and estimation of manpower supply

Crop and animal production, transportation services, banking and financial services and human healthcare and social work are expected to be the major drivers of incremental labour demand in the district. The incremental registered manufacturing sector demand is concentrated in high growth sub sectors of manufacture of textiles. However, a small decline is foreseen in the Manufacture of other non-metallic mineral products.

Table 596: Incremental Demand estimates (2019-2028); in persons for Yavatmal district

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Agriculture & Allied		
Agriculture - Crop and Animal Cultivation	44,382	46,121
Forestry & Logging	156	162
Fishing & Aquaculture	110	114
Sub-Total	**44,648**	**46,397**
Registered Manufacturing		
Food processing	55	58
Textiles	2,949	4,734
Chemicals and Pharmaceuticals	16	18
Construction	1,894	1,988
Services		
Wholesale and Retail Trade	697	885
Transportation	4,884	5,888
Logistics	613	739
IT/ITES	1,023	1,234
Hospitality	364	389
BFSI	1,732	2,253
Real Estate	346	451
Professional, Scientific & Technical Activities	905	1,177
Public Administration & Administrative services	9,420	12,254
Education	6,562	8,536
Healthcare	8,778	11,419

Sector[1]	Consolidated projected Incremental demand estimates (2019-2023) in persons	Consolidated projected Incremental demand estimates (2024-2028) in persons
Other services	23,110	30,063
Sub-Total	**58,435**	**75,289**

Source: KPMG in India analysis, Annual Survey of Industries, Census 2001 & 2011

Note: This does not include estimates of unregistered manufacturing

Additionally, based on the inputs from the district officials, the following emerging sectors and job roles were identified which are expected to generate job opportunities in the district:

1 ***Agriculture & Allied activities*** is an important economic activity of the district. Thus, it was mentioned that Goat farming, dairy farming and fisheries are important sub-sectors in the agriculture sector in the district.
2 The district officials mentioned that various Self-Help Groups (SHGs) are present in the district who are involved in Fishing and Soap Manufacturing which can be leveraged in order to meet the demand in the district.
3 Cotton farming specifically ginning & pressing is important within the district.
4 Cement sector was mentioned as an important and emerging sector within the district.

Estimation of Manpower Supply

Yavatmal district has a significant opportunity in terms of a sizeable projected population of the working age spectrum. By 2023, there will be 14.43 lakh work force participating in the labour market system of the district. Ensuring adequate skilling of the available workforce will ensure increased productivity in the district economy, thus propelling state growth.

Table 597: Manpower Supply for District

District name	Projected Working population (2023)	Projected labour force (2023)	Projected workforce (2023)
Yavatmal	17,73,026	14,58,038	14,43,642

The workforce is further split across the educational attainment within the district as shown below in the Table 598.

Table 598: Projected workforce by education levels

Education level	Projected work force
Illiterate	3,10,986
Literate but below matric/secondary	6,41,860
Matric/secondary but below graduate	2,54,430
Technical degree or diploma equal to degree or post-graduate degree	17,998
Technical diploma or certificate not equal to degree	5,173
Graduate and above other than technical degree	50,276
Literate others	1,62,919

The total target population in the districts for various skill development initiatives (central and state schemes, ITIs and Polytechnics) is ~43658 annually.

Table 599: Size of target population in the district

Particular	Numbers
Enrolment in VIII	50,132
Enrolment in X	45,729
Enrolment in XII	15,660
Dropout at VIII	**7,189**
Passing out of VIII*	42,943
Students not transitioned to IX	**7,068**
Dropout at X	**11,204**
Passing out of X*	34,525
Students not transitioned to XI	**5,683**
Passing out at XII**	28,976
Students not transitioned to Higher Education	19,703
Total Target population	**43,658**

* Note: of this, 83.5% is the transition rate for from secondary to higher secondary. The remaining joining the labour force
** The GER for higher education is 32%. Thus, of those passing out of XII, the remaining joining the labour force
Source: UDISE, AISHE

Below table depicts the annual capacity of the district to train students in Vocational Education

Table 600: Vocational Education annual capacity for Yavatmal district

Particular	Annual Capacity in Numbers
Short Term Skilling	10,410
ITI (Government & Private)	6,408

36.6 Recommendations

Yavatmal, an agrarian district predominantly driven by primary and tertiary sectors, has significant opportunities for skill development to cater to various industries. Hence, the opportunities have been mapped on the basis of economic growth, incremental employment potential and the aspiration of the labour force in the district with respect to different sub sectors as shown in the table below:

Table 601: Sector specific economic growth, employment potential and aspirations

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Agriculture - Crop & Animal production	Red	Green	Green
Forestry & Logging	Red	Red	Green
Fishing & Aquaculture	Orange	Red	Green
Food processing	Green	Red	Red
Tobacco	Green	Red	Red
Textiles	Orange	Red	Orange
Apparel	Orange	Red	Red
Leather	Red	Red	Red
Wood work	Red	Red	Red
Paper and Paper products	Green	Red	Red

Sub-Sectors	Economic Growth	Incremental Employment Potential	Aspiration
Publishing, printing and recorded media	🟧	🟥	🟥
Hydrocarbons	🟥	🟥	🟥
Chemicals and Pharmaceuticals	🟩	🟥	🟥
Rubber and Plastics	🟧	🟥	🟥
Non-metallic mineral products	🟥	🟥	🟥
Iron and Steel	🟥	🟥	🟥
Metal products (except machinery and equipment)	🟧	🟥	🟥
Machinery and Equipment	🟩	🟥	🟥
Automotive	🟩	🟥	🟧
Automotive (transport equipment)	🟩	🟥	🟧
Construction	🟥	🟥	🟥
Wholesale and Retail Trade	🟧	🟥	🟧
Transportation	🟧	🟧	🟥
Logistics	🟧	🟥	🟥
IT/ITES	🟩	🟥	🟥
Hospitality	🟧	🟥	🟥
BFSI	🟧	🟥	🟥
Real Estate	🟩	🟥	🟥
Professional, Scientific & Technical Activities	🟩	🟥	🟥
Public Administration & Administrative Services	🟧	🟩	🟩
Education	🟩	🟩	🟥
Healthcare	🟩	🟩	🟧
Other Services	🟩	🟩	🟥

Source: KPMG in India analysis
Green: High; Amber- Medium; Red- Low
For Economic Growth: >10%- High; <10%->5%- Medium; <5%- Low
For Incremental Employment Potential: >5%- High; <5%->3%- Medium; <3%- Low
For Aspiration: Top 2 responses- High; Top 6 responses - Medium; Responses below top 6 sectors- Low
*The growth of tobacco manufacturing sector has declined in the recent years due to policy changes.

As per the table above, the following sectors can be prioritized for skill development in the district:
- **High economic growth sectors**: Food Processing, Engineering & Capital Goods, Information & Communication Technology, Real Estate Services, Manufacture of motor vehicles, trailers & Semi-trailers, professional, scientific & technical activities, Education, Healthcare, manufacture of chemical & chemical products and Arts, entertainment & recreation.
- **High incremental employment potential sectors**: Agriculture, Finance & Insurance activities, Public Administration, Education.
- **High Aspiration Sectors**: Public Administration & administrative services and Agriculture & Allied

***Priority Sectors to be focused on*:**

Currently the skill development training programs in the district are being run basis the demand and availability of the Training Provider. Going forward, MSSDS needs to focus on providing training to the labour force in sectors which are high economic growth sectors or have high employment potential within the district or are highly aspired by the labour force.

Based on the findings from the skill gap study for the district and the sectors identified, the following sectors are proposed to be taken on priority by MSSDS:

Table 602: Priority sectors for MSSDS

Sl. No.	Sector	High/Medium Growth	High/ Medium Employment Potential	High/ Medium aspiration
1	Automotive	✓		✓
2	Wholesale and Retail Trade	✓		✓
3	Textiles	✓		✓
4	Healthcare	✓	✓	✓
5	Agriculture and Allied		✓	✓

Apart from the above mentioned priority sectors, MSSDS can also explore the potential of the following sectors within the district:

- Public Administration & Administrative services
- Transportation
- Education

These sectors, though low on the aspirational level of the labour force, have a huge potential for employment opportunities and thus selected trainings in the identified job roles / sectors can be taken up by MSSDS in the near future to meet the demand of skilled manpower.

Top Job roles identified on the basis of incremental employment generation sector-wise are shown below in table 603. The basis of selecting the job roles is through the training numbers / placement numbers provided by various central & state level schemes as well as primary inputs while consulting various district officials and employers.

Table 603: Job roles across high demand sectors

High demand sectors	Identified Job Roles
Agriculture and Allied	- Goat Farmer - Dairy Farmer - Micro Irrigation Technician - Greenhouse Operator - Poultry Farmer - Scientific agriculture – surface coating, soil testing, Crop Technician - Fish Retailer
Healthcare	- Nursing - General Duty Assistant - Home Health Aide - Diet Assistant - Emergency Medical Technician – Basic - Pharmacy Assistant - Dental Assistant

High demand sectors	Identified Job Roles
Manufacture of Textiles	• Fitter- Spinning Preparatory • Knitting Machine Operator • Loom Fitter • Sewing Machine Operator • Assistant Ginning Fitter • Assistant Cotton Grader

Conclusion

Looking ahead, the labour market in Maharashtra will be well positioned to drive the next phase of economic growth and requires the right investments in human capital. With a decade left to reap benefits of a demographic dividend and a transitioning information economy, the state must immediately develop a stock of future-relevant skills. It is estimated that by 2023, the 73 lakh incremental employment opportunities will be characterized by a shift away from primary sector activities. Nearly 60% of new employment is likely to be generated in the tertiary sector which is will absorb a majority of the shift away from agriculture and allied activities. By 2023, an estimated 1.8 crore persons are expected to be engaged in tertiary sector activities in Maharashtra. Registered manufacturing is expected to create up to 17.5 lakh incremental employment opportunities in the next 5 years. Nearly 60% is expected to be concentrated in the Mumbai-Suburban, Mumbai-City, Thane, Pune, Nashik Nagpur, Kolhapur, Raigad and Ahmednagar districts. MSME enterprises will cumulatively generate a large proportion of these opportunities.

These changes are expected to be driven by changing consumption patterns, evolving business models and innovation disrupting public and private enterprise. Importantly, impact of technological changes such as artificial intelligence, machine learning, increased automation, big data etc. will result in a different kind of demand for skilled labour. Especially in formal sector jobs, competencies such as technology design and programming, critical thinking and analysis, complex problem-solving etc will grow in importance and will have to be considered during design and delivery of TVET. Not only will the new entrants to the work force be evaluated based on skills and competencies they possess, the existing labour force will also have to undertake periodic and more frequent re skilling or up-skilling efforts.

In addition to large technology enabled changes, local entrepreneurial and/or self-employment enterprise models must be supported. The shifts away from primary sector activities may not necessarily get absorbed immediately and completely in tertiary sector. The study revealed that not only is there is a preference to not migrate the labour force is willing to pay a premium to remain local, in the form of foregone higher wages. Hence, entrepreneurship training including soft skills training is critical and often a prime demand among the labour force.

Specific initiatives that can ensure access and quality of training opportunities made available to the labour force include:

1. Need-based targeting of annual training spend
2. Supporting local and/or regional emerging self-employed or livelihood skills
3. Primary/ rural focussed training programmes to support livelihoods
4. Prioritising 'entrepreneurship development'
5. Exploring collaborations with other departments such as agriculture, rural development (as per need) to leverage existing stock of training capacity to meet skilling needs
6. Collaborating with industry to redesign training design and delivery
7. Initiating efforts for periodic, sub-state level employment-unemployment data for a broader base of occupations

While the above are an indicative list of initiatives that can be explored to further strengthen the reach and efficacy of training efforts in the state, the most important is continuous collaboration with district level stakeholders. District level stakeholders have close linkages with local communities and are well placed to engage with members of the labour force and maximise reach of training activities. Effective collaboration can improve target allocation and mobilisation efforts across the state. Mobilisation of the right candidate is a crucial and necessary measure.

Next steps

Changing economic realities, disruptive impact of technology, new business models all can affect the type of skills needed. Hence, it is extremely valuable for decision makers to adopt policies that will send a clear signal to employers, investors as well as the labour market about the underlying principles of government funding to the skills ecosystem.

This study combined economic analysis with on-field observations and a state-wide primary research survey to estimate the employment expected to be generated and hence priorities for skilling activities. The ultimate goal of deploying this multi-pronged approach to a 'skill gap' study is to offer evidence to decision makers to strengthen their resource allocation decisions. Important decisions such as the following can be better informed by understanding regional needs and aspirations.

Key decisions to be undertaken by decision makers (illustrative list):

Which sub-sectors and occupations should be supported through government funded training programs? What is the role of organised private sector? What kind of emerging, niche, and localized livelihood generation models can be supported? What level of input subsidy (government funded schemes) is critical to create access to quality training.

A well-defined policy linking investments in skill to clearly defined outcomes such as boosting the state's economic growth, supporting self-employment/ livelihood opportunities, supporting labour aspirations, or a combination of these, can have two major benefits. First, it provides clarity to decision makers on how to allocate scarce resources. Second, it sends a clear signal to investors, employers and the labour market about available resources to consider while planning for the future. For the purpose of this study, economic growth, aspirations and employment generation potential were identified as priority parameters. Applying these revealed a broad array of sub-sectors and occupations that could benefit from investments in skilling. Additionally, occupations such as 'guides' in the tourism sector in Chandrapur, bamboo fabrication and manufacturing activities in Gondia, nursing and general duty attendant in Aurangabad were identified as emerging opportunities.

An important and valuable next step is a detailed policy-level review that will clearly define desired, measureable outcomes of investing in skills and link these to resource allocation decisions. Clearly defined and measureable outcomes will in turn inform determination of outputs that can be monitored on an ongoing basis and provide evidence of the level of economic impact such skilling initiatives can have. The outcomes, once defined, can result in changes to the prioritisation framework adopted in this study. Additional considerations such future resource availability (financial, quality infrastructure, trainer capability etc), can merit a review of the prioritization framework. Such additional considerations are both reasonable to expect and likely in the medium to long term for MSSDS. Maharashtra will be the first state in India to recognise and announce a clear TVET/ skills policy linking desired outcomes to resource allocation.

Another **desirable next step of this in depth study is a multi-department, collaborative effort to plug data and information gaps** that hamper evidence based decision making. Through this study it became increasingly evident that there are gaps in availability of basic economic indicators and occupational data at a sub-state and sub-sectoral level. While the announced annual PLFS exercise is likely to provide more frequent employment data. Data adequacy at a sub-state level to analyse changing labour market trends is essential. Collaboration with the Directorate of Economics and Statistics (DES), Government of Maharashtra to leverage their state wide machinery could be an alternative. Initiating a joint consultation with various departments and DES can reveal other alternatives worth exploring as well.

There is also significant potential to **leverage existing institutional capacity at general and technical education institutions to deliver training as well**. Infrastructural facilities of higher education institutions and the typical learning environment created at formal education institutions could improve learning outcomes from private training activities. Additionally, this could help optimise capital expenses and non-

wage recurring expenses through shared capacity, for both formal education and TVET. While this will require a state-wide collaboration effort, a small scale pilot can be launched to test best possible collaboration models. This can also help create industry linkages with education and training in an efficient manner and help institutions collaborate to meet future skill or competency needs.

In summary, there are three key next steps that the state of Maharashtra can take to transform its TVET/ skill ecosystem – define a policy for government funded skilling subsidies, collaboration to plug data gaps, and leveraging existing institutional capacity in the higher and technical education ecosystem.

Additional Information

Stakeholder Mapping:

Based on the approach & methodology of the project different stakeholder categories were classified and identified, further they were surveyed and consulted for understanding the aspirations of the labour force, gaps in availability of labour force and, gaps in existing training capacity in the state. For each of the stakeholder categories, it was ensured that representation across various sub-groups (where applicable to the analysis) were captured with diverse perspectives to certify a well-rounded understanding of the research question.

For example: In order to understand the emerging sectors generating demand for certain skills interactions with employers, government officials and training partners were conducted to understand respective perspectives.

- **Labour force** with representation across gender, educational level, age group and worker/non-worker category
- **Employers** including large industries, mid-size firms, micro enterprises and financial institutions (lenders to enterprises)
- **Training Partners** including Public and Private training institutes, and placement agencies
- **Government** including state and district officials

Stakeholder	Description	Purpose
Labour force	This included people in the age group of 15-59 years who are either employed or unemployed.	The members of labour force were surveyed to understand their aspiration for the sector they want to pursue their career in. They were also surveyed on the type of employment they want to do.
Employers	Included employers that have hired from both skill training institutes and outside the skill training institutes and financial institutions. The employers surveyed were classified into large, medium & small as per the no. of employees working in the organization/industry <=100 employees- 545 101-199 employees- 54 >=200 employees- 32	The employers were surveyed to understand the current situation with respect to hiring and sourcing of employees, and their perception about the quality of training programs. Further, the emerging sectors and districts that will provide employment and any abnormal trends and disruptions observed in employment across sectors and districts was assessed by the survey.
Training Partners	Included institutes providing skill training, educational institutions and placement agencies	The representatives of the training institutes were surveyed to understand the current as-is-situation with respect to trainings offered by them including the type of training, sectors targeted and placements offered. Further, major challenges faced by the training partners in offering skill training was assessed by the survey.
Government Officials	Included state and district	The government officials were

Stakeholder	Description	Purpose
	administrative bodies and industry associations facilitating or executing skilling and employment generation initiatives	surveyed to understand the major schemes and infrastructure projects of the government for assessing the demand for skills under various initiatives. Further, the officials were consulted to understand the emerging sectors and job roles that will generate employment.

Approach:

A multi-stage sampling approach was adopted to select end beneficiaries for the micro-skill gap study in the state of Maharashtra. This was done to ensure representation of beneficiaries for the skill programmes at the taluka level.

- **Stage 1**

To select the sample, workers in the age group of 15-59 years were classified according to employment status and education level (Census 2001 and 2011). The population has been projected for 2018 using the population curve (P2=P1ert). The rate of growth has been calculated using the population growth for the period 2001 to 2011.

The target population in need for skilling initiatives to be studied was identified as below:

i. Marginal Workers (including students, household duties, dependants, pensioners, rentiers, beggars & vagrants etc.)

ii. Non Workers seeking work

iii. Main workers in Non-Managerial Roles (Excluding the Category Legislators and Senior Officials, Corporate Managers, General Managers)

A **cluster sampling approach** was used for selecting the sample. Each of the 36 districts were taken as separate units or clusters.

For the first two groups (Marginal workers and non-workers seeking work), a confidence level of 95%, margin of error of 6% and design effect of 1.5 (since there is a significant inter-district variation in the proportions (Standard Deviation/ Mean=67%) was considered,

For Main Workers, out of the total population, it was assumed that the main workers working in Non-Managerial roles are expected to be the target group of various skilling initiatives conducted as a part of the Government programmes across multiple disciplines and sectors. The target population for sampling in this category are main which excludes workers who are employed in the following job roles:

i. Legislators and Senior Officials

ii. Corporate Managers

iii. General Managers

For the third group (Main workers in non-managerial roles), a confidence level of 95% was assumed with a margin of error of 6%. The design effect, however was assumed to be 1.0 since the inter-district variation in the proportion of the target group is very low (Standard Deviation/ Mean=2.5%).

Using the above set of assumptions and Cochran's Formula (D*Z*Z*p*q)/(e*e)1, the sample size was computed to be **5789 Respondents.**

A total of **536 employers** and **175 training partners** across the districts were also interviewed. The total number of end beneficiaries interviewed is hence **6500.**

- **Stage 2**

The 5789 respondents were distributed across talukas using cluster sampling on the basis of the following criteria:

i. High ranking talukas in each district based on target population defined in stage 1

ii. Gap in target population and existing intake capacity (using seats in both government and private institutes)

It was ensured that each taluka will have a minimum sample of 30 respondents and maximum sample of 60 respondents.

Methodology:

Pure Quantitative interviews were done using CAPI (Computer Aided Personal Interview devices) Tablets

CAPI interviews were conducted through HANSA's proprietary process – **EQUIPI**

The **EQUIPI** process done with android tablets have the following features:

- Controls the questionnaire flow
  - o Logic checks, show card randomization
- Correct selection of respondent
- Back Checks
  - o Provides for time stamping at any point during the interview process
  - o Provides for capture of the location of interview (Geo Code verification)
  - o Part of the interview voice recorded and systematically analyzed
  - o Interviews get back checked by Supervisors & Executive in charge (Interviews which don't meet the survey norms get rejected during back checks)
  - o Supervisors & Executive in charge also go through recordings of few interviews to determine the quality of interviews being done.
- Post Field Work checks
  - o Elimination of wrong post coding
  - o No misplacing of questionnaire & no need of dispatch

The EQUIPI Process
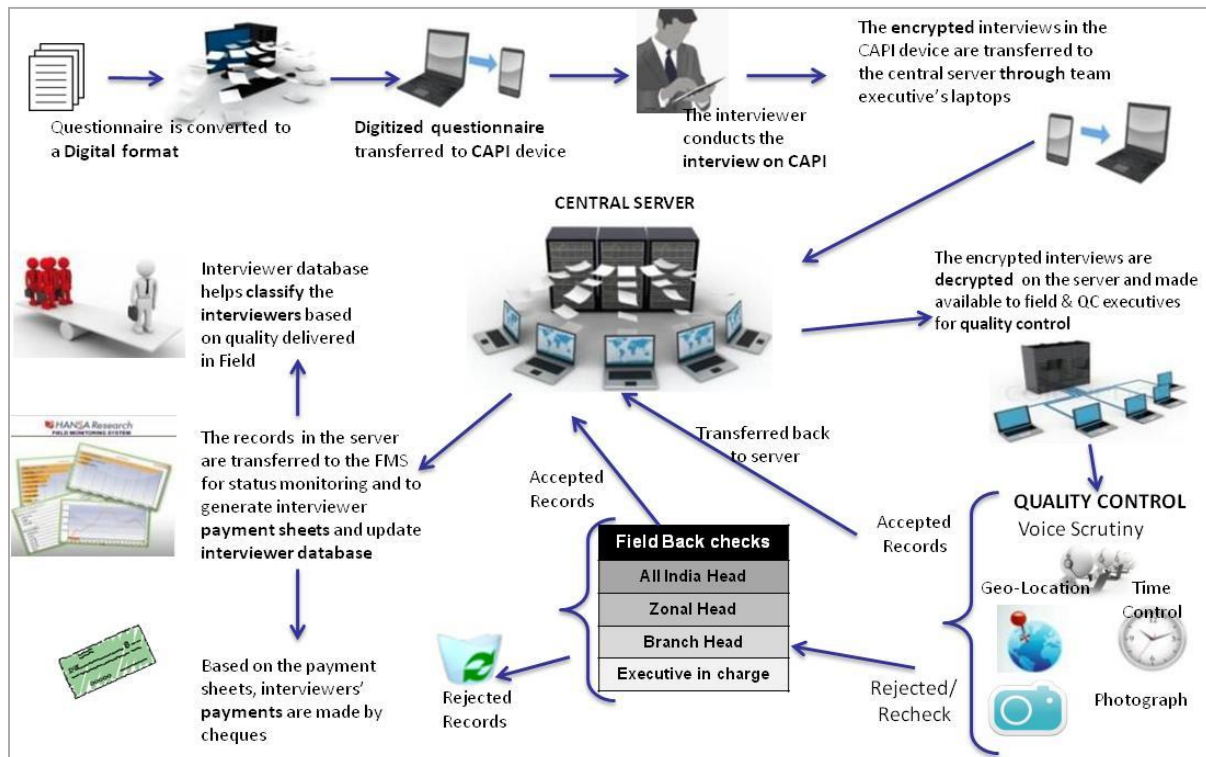
The Geo Codes (Lat. Long. Coordinates) of each of the interview for this study is attached in the apeendix. Once the interview with a respondent is complete, the GPS enabled android tablet records the **Lat. Long. coordinates** of the nearest Post Office & it gets tagged to the interview. The same can be accessed and checked by researchers and supervisors via a central server.

Appendix I: Sector Classification used in the report

Sector as per the report	NIC classification	NIC Codes are per sector reports	Names as per sector reports
Agriculture and Allied	01+02+03	01	Agriculture
Agriculture - Crop & Animal production	01		
Forestry & Logging	02		
Fishing & Aquaculture	03		
Mining	05 to 09		
Electricity, Gas and Water Supply	35		
Registered Manufacturing			
Food processing	10+11	10+11	Food processing
Other manufacturing	12		
Textiles	13	13+14	Textile and clothing industry
Apparel	14		
Leather	15	15	Leather and Leather Goods industry
Wood work	16		
Paper and Paper products	17		
Publishing, printing and recorded media	18		
Hydrocarbons	19		
Chemicals and Pharmaceuticals	20+21	21+7210+46497 +47721	Pharmaceuticals
Rubber and Plastics	22	2219	Furniture & Furnishings
Non metallic mineral products	23	1. 239+241+243 2. 2396 3. 2310	1. Construction Material and Building Hardware sector 2. Furniture & Furnishings 3. Gems & Jewelry
Iron and Steel	24		
Fabricated Metal products (except machinery and equipment)	25		
Machinery and Equipment	28	2817	Furniture & Furnishings
Automotive	29	29+45+282	Auto and Auto Components
Automotive (transport equipment)	30		
Construction	41+42+43	41+42+43	Building, Construction and Real Estate Sector

Sector as per the report	NIC classification	NIC Codes are per sector reports	Names as per sector reports
Services			
Wholesale and Retail Trade ; repair of motor vehicles and motorcycles	45+46+47	1. 4659 + 4759 2. 4773 3. 451+452+453+454 4. 47 5. 464+477 6. 474	1. Furniture & Furnishings 2. Gems & Jewelry 3. Auto & Auto components 4. Organized Retail 5. Pharmaceuticals 6. Telecommunications
Transportation	49+50+51	49+50+51+52+5310+8292	Transportation, Logistics, Warehousing and Packaging
Logistics (warehousing, postal and courier services)	52+53		
IT/ITES (Information and Communication services)	58+59+60+61+62+63	582+62+631	IT/ITES
		581+591+592+60	Media and Entertainment
Hospitality	55+56	551+56	Hospitality (part of Travel, Tourism and Hospitality)
BFSI	64+65+66	64(excluding 6411 & 6499),65,66	Banking, Financial and Insurance sector
Real Estate	68		
Professional, Scientific & Technical Activities[2]	69 to 75	721	Pharmaceuticals
Public Administration & Administrative services	77 to 82 & 84	801	Private Security Services
		79	Travel and Tourism (part of Travel, Tourism and Hospitality)
Education	85	85	Educational and Skill Development Services
Healthcare	86+87+88	86+266+325+853+651	Healthcare
Other services[3]	90 to 97	96	Beauty & Wellness

Notes:

1. The sector classfication used in the report is as per the economic sectors classified under primary, secondary and tertiary activities.

2. Administrative and Support Services include :

79 - Travel Agency, Tour Operator and other reservation activities

80 - Security and investigation activities

82 - Office Administrative, office support and other business support activities

3. Other Services include:

970 - Activities of households as employers of domestic personnel.

Appendix II: List of Data Sources

Sl. No.	List of data sources
1	Economics Survey of Maharashtra 2016-17 Directorate of Economics and Statistics, Maharashtra
2	District Domestic Product of Maharashtra published by Directorate of Economics and Statistics Maharashtra
3	Census 2001,20011
4	Annual Survey of Industries 2017
5	Human Development Report 2012
6	NSSO 68th Round – Employment Unemployment Survey
7	U-DISE : Dashboard and Report Cards 2015-16
8	AISHE Report 2017
9	Data on central level training schemes sourced from NSDC
10	Data on state level training schemes sourced from MSSDS
11	The Future of Jobs Report, 2018, Centre for the new economy and society, World Economic Forum
12	NSSO 64th Round – Migration
13	Employee Provident Fund Organisation – Annual Reports and Monthly Payroll Releases
14	MIDC India Website

Appendix III- List of Departments consulted for primary inputs from every district

Sl. No.	List of departments consulted for every districts
1	District Skill Development, Employment and Entrepreneurship Guidance Centre
2	District Collector Office
3	District Agriculture Department
4	District Industries Centre
5	District Planning Department
6	Education Department (Primary & Secondary)
7	Department of Vocational Education
8	District Animal Husbandry Department
9	District Fisheries Department
10	District Dairy Department
11	District Sericulture Department
12	District Statistical Office
13	Lead District Bank
14	Rural Self-Employment & Training Institute
15	Maharashtra Centre for Entrepreneurship Development
16	Divisional consultations with representatives of District Skill Executive Committee
17	District Rural Development Department
18	Directorate of Economics & Statistics

Appendix IV: Labour Share in Value Added

Industry Description	2015-16
Agriculture, Hunting, Forestry and Fishing	0.55
Mining and Quarrying	0.28
Food Products, Beverages and Tobacco	0.37
Textiles, Textile Products, Leather and Footwear	0.46
Wood and Products of wood	0.31
Pulp, Paper, Paper products, Printing and Publishing	0.42
Coke, Refined Petroleum Products and Nuclear fuel	0.05
Chemicals and Chemical Products	0.25
Rubber and Plastic Products	0.33
Other Non-Metallic Mineral Products	0.31
Basic Metals and Fabricated Metal Products	0.32
Machinery, nec.	0.39
Electrical and Optical Equipment	0.46
Transport Equipment	0.28
Manufacturing, nec; recycling	0.49
Electricity, Gas and Water Supply	0.38
Construction	0.78
Trade	0.46
Hotels and Restaurants	0.56
Transport and Storage	0.53
Post and Telecommunication	0.35
Financial Services	0.32
Business Service	0.45
Public Administration and Defense; Compulsory Social Security	0.85
Education	0.69
Health and Social Work	0.69
Other services	0.49

Source: RBI KLEMS database

	>=0.5	High
	>=0.4 and <5	Medium
	<0.4	Low

Appendix V: List of 71 clusters and their locations

Sl. No.	Name of the cluster	Location
1	Rice Mill Cluster	Charmoshi, District - Gadchiroli
2	Rice Mill Cluster	Sadak-Arjuni, District - Gondiya
3	Jaggery Cluster	Kasa-Birsola, District - Gondiya
4	Printing Cluster	Ambegaon, District - Pune
5	Jardosi Cluster	Yeola, District - Nashik
6	Agri Equipment Cluster	Andarsol, District - Nashik
7	Cashew Cluster	Shrungarwadi, District - Kolhapur
8	Cashew Cluster	Lanja, District - Ratnagiri
9	Printing Cluster	District - Nanded
10	Himroo Shawl Cluster	District - Aurangabad
11	Rubber Cluster	District - Aurangabad
12	Leather Cluster	Matha, District - Jalna
13	Khawa Cluster	Bhoom, District - Aurangabad
14	Raisin Making Cluster	Kawathemahakal, District - Sangli
15	Raisin Making Cluster	Tal. Pandharpur, District - Solapur
16	Marathwada Cotton Processing Cluster	District - Aurangabad
17	Garment Cluster	District - Amaravati
18	Teak Wood Furniture Cluster	Achalpur, District - Amaravati
19	Honey Processing Cluster	District - Amaravati
20	Jaggary Cluster	Tumsar, District - Bhandara
21	Garment Cluster	Kada, Ashti, District - Beed
22	Fabrication Cluster	District - Beed
23	Fabrication & Engineering Cluster	District - Hingoli
24	Stone Craft Making & Carving Cluster	Patur, District - Akola
25	Turmeric Cluster	Waigaon, District - Wardha
26	Dal Mill Cluster	District - Akola
27	Honey Processing Cluster	Patsul, District - Akola
28	Gold Jewellery Cluster	District - Nanded
29	Agriculture Equipment Cluster	Sangmeshwar, District - Ratnagiri
30	Paithani Saree Cluster	District - Aurangabad.
31	Agriculture Equipment Cluster	District - Latur
32	Terry Towel Cluster	District - Solapur
33	Leather Cluster	Georai, District - Beed
34	Bidri Work Cluster	District - Aurangabad
35	Steel Furniture Cluster	District - Nanded
36	Truck Body Building Cluster	Madalmohi, District - Beed
37	Furniture & Engineering Work Cluster	District - Aurangabad
38	Musical Instruments Cluster	Miraj, District - Sangli
39	Coir Cluster	Vengurla, District - Sindhudurg
40	Agarbatti Cluster	Ponbhurna, District - Chandrapur
41	Spices Cluster	District - Jalna
42	Khawa & Dairy Products Cluster	Nandura, District - Buldhana
43	Fabrication & Engineering Cluster	District - Osmanabad
44	Agricultural Implements & Engineering Cluster	Jafrabad, District - Jalna
45	Raisin Cluster Cluster	District - Osmanabad
46	Rice Mill Cluster	Mul-Saoli, District - Chandrapur
47	Lac Bangles Cluster	Achalpur, District - Amravati
48	Pottery Cluster	Bori-Arab, District - Yavatmal
49	Cashew Processing Cluster	Vengurla, District - Sindhudurg

Sl. No.	Name of the cluster	Location
50	Cashew Processing Cluster	Malvan, District - Sindhudurg
51	Modular Furniture Cluster	Kudal, District - Sindhudurg
52	Mango Processing (Mix Fruit Processing) Cluster	Devgad, District - Sindhudurg
53	Wooden Toy Cluster	Sawantwadi, District - Sindhudurg
54	Engineering Cluster (BIMAT)	Waluj, District - Aurangabad
55	Kitchen Trolley Cluster	District - Aurangabad
56	Sarvoday Garment Cluster	District - Beed
57	Spice Cluster	Pimpalner, District - Beed
58	Steel Furniture Cluster	District - Latur
59	Readymade Garment Cluster	District - Parbhani
60	Readymade Garment Cluster	Chimur, District - Chandrapur
61	Bakery Cluster	District - Aurangabad
62	Warli Painting & Framing Cluster	Jawhar, District - Palghar (Thane)
63	Raisin Cluster	Madrup, District - Solapur
64	Readymade Garment Cluster	Junnar, District - Pune
65	Steel Furniture Cluster	Ambejogai, District - Beed
66	Khawa Cluster	Dharur, District - Beed
67	Sant Gorobakaka Matikala Udyog Cluster	District - Beed
68	Readymade Garment Cluster	District - Beed
69	Textile Cluster	Basmat, District - Hingoli
70	Honey Cluster	District - Latur
71	Solar Charkha Cluster	District - Amravati

Appendix VI: List of MSME clusters in Maharashtra (identified by UNIDO)

Sl. No.	District	Location	Product
1	Ahmednagar	Ahmednagar	Auto Components
2	Akola	Akola	Oil Mills (Cotton Seed)
3	Akola	Akola	Dal Mills
4	Aurangabad	Aurangabad	Auto Components
5	Aurangabad	Aurangabad	Pharmaceuticals - Bulk Drugs
6	Bhandara	Bhandara	Rice Mills
7	Chandrapur	Chandrapur	Roofing Tiles
8	Chandrapur	Chandrapur	Rice Mills
9	Dhule	Dhule	Chilly Powder
10	Gadchiroli	Gadchiroli	Castings & Forging
11	Gadchiroli	Gadchiroli	Rice Mills
12	Gondia	Gondia	Rice Mills
13	Jalgaon	Jalgaon	Dal Mills
14	Jalgaon	Jalgaon	Agriculture Implements
15	Jalna	Jalna	Engineering Equipment
16	Kolhapur	Kolhapur	Diesel Engines
17	Kolhapur	Kolhapur	Foundry
18	Kolhapur	Ichalkaranji	Powerloom
19	Mumbai	Mumbai	Electronic Goods
20	Mumbai	Mumbai	Pharmaceutical – Basic Drugs
21	Mumbai	Mumbai	Toys (Plastic)
22	Mumbai	Mumbai	Readymade Garments
23	Mumbai	Mumbai	Hosiery
24	Mumbai	Mumbai	Machine Tools
25	Mumbai	Mumbai	Engineering Equipment
26	Mumbai	Mumbai	Chemicals
27	Mumbai	Mumbai	Packaging Material
28	Mumbai	Mumbai	Handtools
29	Mumbai	Mumbai	Plastic Products
30	Nagpur	Nagpur	Powerloom
31	Nagpur	Nagpur	Engineering & Fabrication
32	Nagpur	Nagpur	Steel Furniture
33	Nagpur	Nagpur	(Butibori) Readymade Garments
34	Nagpur	Nagpur	Food Processing
35	Nanded	Nanded	Dal Mills
36	Nashik	Malegaon	Powerloom
37	Nashik	Nashik	Steel Furniture
38	Pune	Pune	Auto Components
39	Pune	Pune	Electronic Goods
40	Pune	Pune	Food Products
41	Pune	Pune	Readymade Garments
42	Pune	Pune	Pharmaceuticals - Bulk Drugs
43	Pune	Pune	Fibre Glass
44	Ratnagiri	Ratnagiri	Canned & Processed Fish
45	Sangli	Sangli	M S Rods
46	Sangli	Madhavanagar	Powerloom
47	Satara	Satara	Leather Tanning
48	Sholapur	Sholapur	Powerloom
49	Sindhudurg	Sindhudurg	Cashew Processing

Sl. No.	District	Location	Product
50	Sindhudurg	Sindhudurg	Copper Coated Wire
51	Thane	Bhiwandi	Powerloom
52	Thane	Kalyan	Confectionery
53	Thane	Vashind	Chemicals
54	Thane Tarapur	Thane - Belapur	Pharmaceuticals - Bulk Drugs
55	Thane	Thane	Sea Food
56	Wardha	Wardha	Solvent Oil
57	Yavatmal	Yavatmal	Dal Mills

Appendix VII: Incremental Demand Numbers sub sector wise for the State

Sector	2019-23	2024-28
Agriculture and Allied	**10,90,318**	**11,33,038**
Registered Manufacturing		
Food processing	15,475	16,284
Tobacco	-776	-758
Textiles	1,56,566	2,51,333
Apparel	25,091	32,566
Leather	732	498
Wood work	587	646
Paper and Paper products	-198	-197
Publishing, printing and recorded media	-1231	-1,198
Hydrocarbons	-735	-702
Chemicals and Pharmaceuticals	40,663	45,521
Rubber and Plastics	4,132	4,266
Non metallic mineral products	-27,021	-11,621
Iron and Steel	10,520	11,020
Metal products (except machinery and equipment)	3,95,300	3,85,962
Machinery and Equipment	10,91,336	13,93,613
Automotive	22,172	23,813
Automotive (transport equipment)	22,076	28,713
Construction	**1,23,402**	**1,29,528**
Services		
Wholesale and Retail Trade	49,353	62,691
Transportation	4,94,664	5,96,374
Logistics	62,066	74,827
IT/ITES	1,03,650	1,24,962
Hospitality	31,884	34,017
BFSI	2,23,007	2,90,102
Real Estate	44,601	58,020
Professional, Scientific & Technical Activities	1,16,510	1,51,564
Public Administration and Administrative services	10,47,293	13,62,386
Healthcare	3,47,845	4,52,499
Education	4,65,303	6,05,297
Other Services	14,51,240	18,87,867

Appendix VIII: Technology Adoption in India

Technology adoption	Share of companies surveyed
User and entity big data analytics	89%
Internet of things	77%
App and web enabled markets	76%
Machine learning	75%
Cloud computing	72%
Digital trade	64%
Augmented and virtual reality	63%
New materials	58%
Encryption	57%
Wearable electronics	53%
3D printing	52%
Autonomous transport	50%
Distributed ledger (blockchain)	48%
Stationary Robots	44%
Quantum computing	41%
Non-humanoid land robots	40%
Biotechnology	31%
Humanoid robots	27%
Aerial and underwater robots	21%

Appendix IX: Futuristic Job Roles and Sectors

Top Sectors identified by World Economic Forum

- ✓ Automotive
- ✓ Aerospace
- ✓ Supply Chain & Transport
- ✓ Aviation
- ✓ Travel & Tourism
- ✓ Information & Communication Technology

- ✓ Chemistry
- ✓ Advanced Metals & Biotechnology
- ✓ Consumer Business
- ✓ Financial services & Investors
- ✓ Healthcare
- ✓ Professional Services

Top Job Roles

- ✓ Sales & Marketing Professionals
- ✓ Sales Representatives
- ✓ Software and Applications Developers and Analysts
- ✓ Data Analysts and Scientists

- ✓ Assembly and Factory Workers
- ✓ Financial Analysts
- ✓ Financial and Investment Advisers

Emerging Skills

- ✓ Analytical thinking and innovation
- ✓ Active learning and learning strategies
- ✓ Creativity, originality and initiative
- ✓ Technology design and programming
- ✓ Critical thinking and analysis

- ✓ Complex problem-solving
- ✓ Leadership and social influence
- ✓ Reasoning, problem-solving and ideation
- ✓ Emotional intelligence
- ✓ Systems analysis and evaluation

Source: Future of Jobs 2018, India Country

Appendix X: Job Roles across common high potential service sub-sectors

Public administration and administrative services (including security services and travel related services), other personal services such as beauty and wellness, domestic help, repair of household goods, and education are high potential employment generation service sub-sectors across the districts. Following are the top job roles for these sectors :

Public Administration and Administrative Services
- ✓ Unarmed Security Guard
- ✓ Ticketing Consultant
- ✓ Travel Consultant
- ✓ Visa Assistance Consultant

Education
- ✓ Teacher-Class/Subjects (School Education)
- ✓ Lab Assistant (Higher Education)
- ✓ Professors Junior (Higher Education)
- ✓ Trainers (Vocational Education)
- ✓ Mobilizers (Vocational Education)
- ✓ Placement Coordinators (Vocational Education)

Domestic Help
- ✓ Child Care Taker
- ✓ General House Keeper
- ✓ Housekeeper cum cook
- ✓ Baby Caregiver
- ✓ Household multipurpose executive

Beauty and Wellness
- ✓ Assistant Beauty/Wellness Consultant
- ✓ Hair Stylist
- ✓ Personal Trainer
- ✓ Bridal Make-up artist

KPMG

Narayanan Ramaswamy
Partner, IGH - Social
M: +91 9840078242
E: narayananr@kpmg.com

Debabrata Gosh
Director, IGH - Social
M: +91 9891906053
E: debabrata@kpmg.com

.