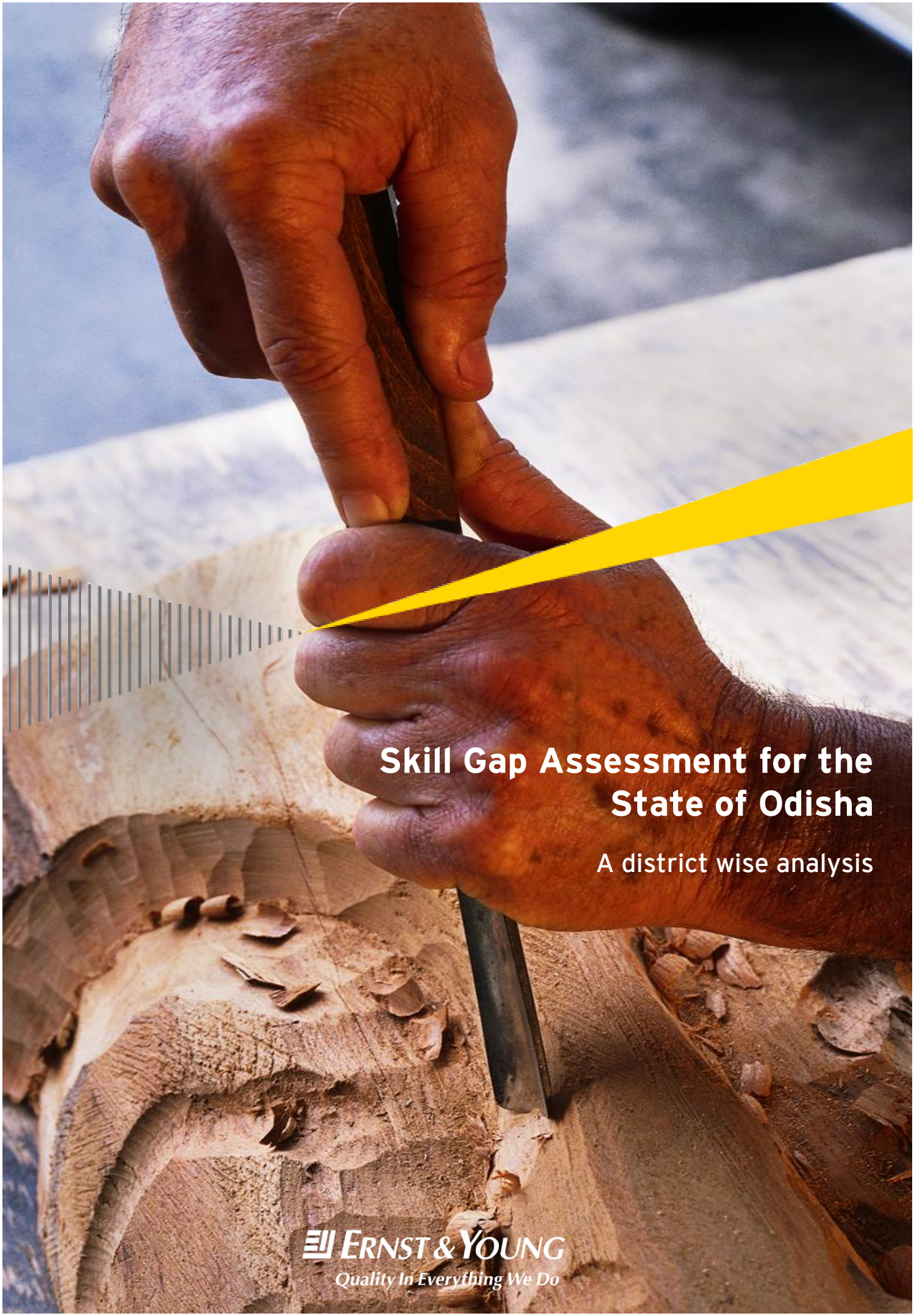

Skill Gap Assessment for the State of Odisha

A district wise analysis

ERNST & YOUNG

Quality In Everything We Do

List of Abbreviations

Abbreviated terms	Explanation of abbreviated terms
APICOL	Agriculture Promotion and Investment Corporation of Odisha Limited
B.Sc.	Bachelor of Science
BAMS	Bachelor of Ayurveda, Medicine and Surgery
BDS	Bac1helor of Dental Surgery
BHMS	Bachelor of Homeopathic Medicine and Surgery
BPO	Business Process Outsourcing
BRGF	Backward Region Grant Fund
Build. Const. Real Est.	Building, Construction, Real Estate
CA	Chartered Accountant
CAGR	Compound Annual Growth Rate
Capex	Capital Expenditure
CII	Confederation of Indian Industry
CMIE	Centre for Monitoring Indian Economy
CoE	Centre for Excellence
COPA	Computer Operator and Programming Assisstant
CSC	Common Service Centre
DAO	District Agriculture Office
DHE	Directorate of Higher Education
DIC	Department of Industries and Commerce
DSMS	District Supply & Marketing Society
EDP	Electronic Data Processing
EU	European Union
FMCG	Fast Moving Consumer Goods
FY	Financial Year
GDDP	Gross District Domestic Product
GDI	Gender Development Index
GDP	Gross Domestic Product
GSDP	Gross State Domestic Product
HDI	Human Development Index
HDPE	High Density Polyethylene
HR	Human Resource
ICCL	Indian Charge Chrome Limited
ICT	Information and Communication Technologies
ICWA	Institute of Cost and Works Accountants
IDCO	Industrial Infrastructure Development Ocrporation of Odisha
IDCOL	Industrial Development Corporation of Odisha Limited
IFFCO	Indian Farmers Fertiliser Cooperative Limited
IL & FS	Infrastructure Leasing & Financial Services
IMFA	Indian Metal and Ferro Alloys Limited
IOC	Indian Oil Corporation
IPICOL	Industrial Investment Promotion Corporation of Odisha Limited
IT	Information Technology
ITC	Industrial Training Centre
ITeS	Information Technology Enabled Services
ITI	Industrial Training Institute
JSPL	Jindal Steel and Power Limited
KBK	Undivided Kalahandi, Bolangir and Koraput Districts
Kg	Kilogram
Km	Kilometre
KVK	Krisi Vigyan Kendra
LPG	Liquified Petroleum Gas
M. Tech	Mater of Technology
MBA	Master of Business Administration
MBBS	Bachelor of Medicine Bachelor of Surgery
MCA	Master of Computer Application
MCL	Mahanadi Coalfields Limited

mfp	Minor forest produce
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
mm	Milimetre
MoU	Memorandum of Understanding
MSME	Micro, Small and Medium Enterprises
MT	Metric Tonnes
MW	Mega Watt
NALCO	National Aluminium Company
NeGP	National electronic-Governance Plan
NGO	Non Government Organization
NH	National Hoghway
no.	Number
NSDC	National Skill Development Corporation
NSS	National Service Scheme
NTFP	Non Timber Forest Products
NTPC	National Thermal Power Corporation
OBC	Other Backward Castes
OPEPA	Odisha Primary Education Programme Authority
ORMAS	Odisha Rural Development & Marketing Society
Oscom	Odisha Sands Complex
OTELP	Odisha Tribal Empowerment & Livelihood Programme
p.m.	per month
PHC	Public Health Centre
PPP	Public Private Parnership
PVC	PolyVinyl Chloride
PWD	Public Works Department
RKVY	Rastriya Krishi Vikas Yojana
RTE	Right to Education
SC	Scheduled Caste
SCEVT	State Council of Technical Education and Vocational Training
SCVET	State Council for Vocational Education & Training
SEZ	Special Economic Zone
SHG	Self Help Group
SJSY	Swarn Jayanti Swarojgar Yojna
SME	Small and Medium Enterprises
sq	Square
SSI	Small Scale Industry
ST	Scheduled Tribe
TCS	Tata Consultancy Services
TV	Television
UID	Unique Identification
UNIDO	United Nations Industrial Development Organization
USA	United States of America
VT	Vocational Training
VTP	Vocational Training Provider

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1. Study background

Skill development has never been in the discourse across the country as it has been in the last few years. It stems out of the realization that the skill base in the country is not strong and India will not be able to reap the benefits of its demographic advantage if this area is not strengthened. As per the Annual Report to the People on Employment (Ministry of Labour, Government of India, 2010), it is estimated that only 2 percent persons in the age group of 15-29 years having received formal vocational training and around 8 percent reported to have received non-formal vocational training, indicating thereby that higher proportion of youth population actually enter the world of work without formal vocational training.[1] In order to enhance the employability of the youths, concerted efforts have to be made to enhance the skill development infrastructure in a manner that all those who enter the labour force acquire relevant skills beforehand.

Some countries including USA, Australia and EU undertake advanced systematic assessments of future skills demand using statistics and with the involvement of industry. Similar human resource planning is still at its nascent stage in our country. NSDC has conducted studies to identify skill gaps across different sectors. It has mapped 20 high growth sectors to identify what is the skill requirement for the respective sector.

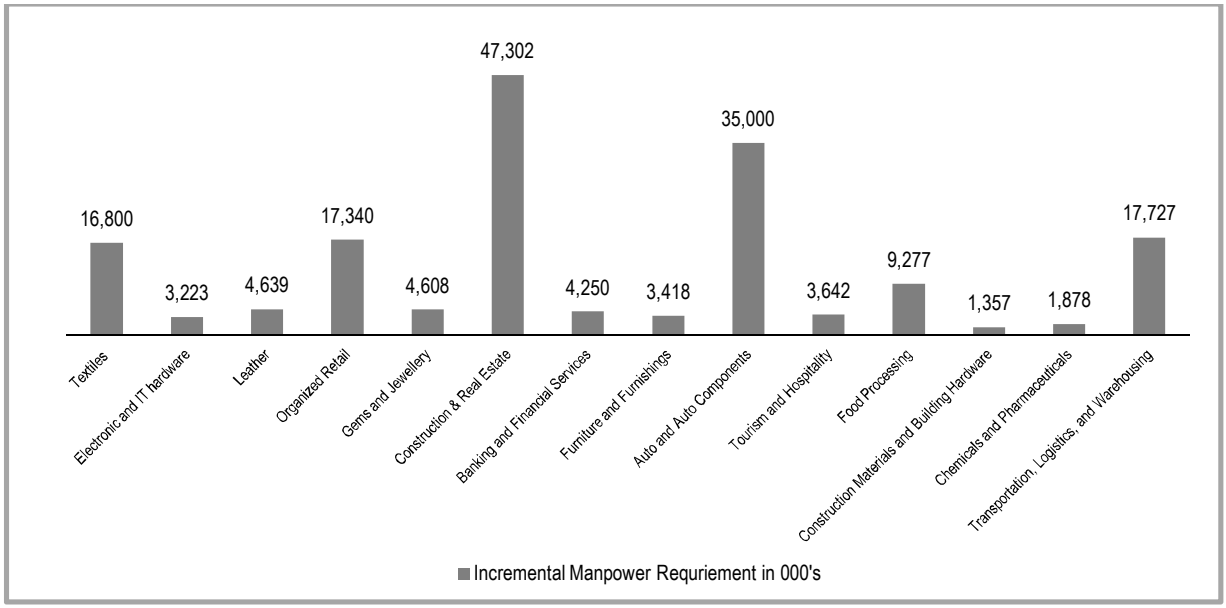


Figure 1: Manpower requirement in 2022 across Sectors

The target of creating 500 million skilled workers by 2022 will be achieved with the active involvement of policy makers, skill training institutions and employer organizations. Sustainable development can be achieved by developing strategies that fit with the local context. Therefore as one of its strategies NSDC is now keen to conduct studies across geographies so that local economic and development policy analysis can be undertaken to get a demand side perspective. At the same time there it would understand the supply side factors so that appropriate interventions can be planned. Odisha is one such state where it intends to carry out a skill gap analysis.

[1] NSSO data for 2004-05

1.1 Objectives of the study

- Review the socio-economic profile of Odisha
- Identify developmental opportunities keeping in mind factor endowments and stakeholder perspectives
- Identify specific developmental initiatives/projects which have an impact on employment generation
- Identify the current and future (next 5 years) skills requirements and estimate the gap that exists
- Study the existing VT infrastructure both in the private sector and the government domain
- Suggest suitable interventions/recommendations to address the skills gap
  - Recommendations have to be specific and actionable
  - Recommendations should also include specific initiatives that NSDC can take based on the mandate of the organization
- Create an action plan with indicative timelines

1.2 Approach and Methodology

The study entailed primary and secondary data collection and analysis. The key aspects that defined the contours of the study were as follows:

- The study covers all the 30 districts in the State.
- Sectors: 19 broad sectors identified by NSDC and agriculture
- Skilled job types considered : Highly skilled, skilled and semi-skilled
- Tenure: 15-year period broken down into three phases of five year each
- Secondary data analysis to project skilled workforce required over the next 15 years
- Primary research undertaken to add peoples' perspective

Secondary data analysis

The available secondary data was analysed in the following work steps.

- **Computation of incremental workforce demand**: The available data on broad categories of workforce has been primarily mapped into three economic activities – agriculture, industries and services. This workers' data by economic activity has been further subdivided into the given sectors. The sector growth numbers have then been arrived at by doing a state-comparable analysis to identify the growth ranges and Odisha's standing. Scenario analysis has been used to arrive at the growth of the sector. The concept of labor elasticity factor (labor growth with respect to sector growth) has been used to arrive at labor growth projections. The labor growth numbers have then been used to arrive at the labor demand in the next 15 years. The differential labor demand data, with respect to previous year data, has then been used to compute the incremental labor demand.

The skilled human resource requirement is further classified as

- **Semi-skilled human resource:** Diploma holders, graduates other than engineers, vocational training (ITI pass-outs)
- **Skilled human resource:** Engineers (including diploma engineers), Doctors, technologist-graduates etc) and;
- **Highly skilled human resource:** MBA/MCA/CA/ICWA/M.Tech or any other post-graduation.
- **Computation of incremental workforce supply**: The incremental supply for the various skill sets has been arrived at, based on the intake of various students in institutes of the district. The intake has then been multiplied by the utilization rate (computed from vacancy data) to arrive at the actual workforce supply being generated. The level of qualifications offered by the institute has been categorized into three skill types to arrive at the incremental supply of workforce for these three skill-types. Again, scenario analysis has been used to derive supply side numbers.
- **Incremental workforce demand-supply gap:** The difference between incremental workforce demand and incremental workforce supply for these three broad skill sets has been considered to calculate the incremental requirement gap in skilled jobs. This gap has then again been broken down by the sectors.

The above approach was followed to arrive at the incremental demand-supply gap in. Along with data analysis some key policies related to the state were also examined to get a perspective about the future growth plans. Policies related to agriculture and industries were reviewed.

Primary data collection

A lot of emphasis was given to primary data collection to get the perspective of different stakeholders including the government officials, members from the industry, vocational training providers, NGOs and most importantly members from the community especially youth and women. The information shared by them has enhanced the level of qualitative information gathered. It helped to gauge the aspirations of people which are important while making recommendations for the study so that these are more relevant for people for whom planning is done.

1.3 Limitations of the study

- There were delays in conducting field visits since almost 20 districts were affected by floods. Since the district level officials had been involved with relief work, the visits had to be delayed.
- It was a challenge to undertake secondary data analysis since there was paucity of data – both current and past. In addition, many a times there was a mismatch between data on a particular indicator taken from two different sources. Therefore only reliable data sources were used to collate information (Census 2001, Provisional report of census 2011; Economic Survey of Odisha 2010-11; District Statistical Handbooks published by the Directorate of Economics and Statistics, Government of Odisha, Reports of Economic Census-2005, Reports published by the Directorate of Industries, Government of Odisha, Reports published by State Council of Vocational Education and Training & Directorate of Technical Education and Training, Reports and data published by the Department of Higher Education and Odisha Primary Education Program Authority etc.)

- It is possible that a number of individuals have acquired skills through traditional means (family) or learnt through experience. Since the numbers of individuals in this category are not available, we have not included this in our analysis. The available data sources like Economic Survey of Odisha 2010-2011, Economic census of Odisha 2005, etc. give information either by different occupation establishments or by qualification. The information on jobs by skill/designation is not provided by such reliable sources.
- The unskilled category in the study includes all those who have received education upto school level (including never enrolled, drop outs). There is no data available of this category of individuals, which is why it has not been possible to provide analysis of the unskilled category.
- The information contained in the Report is based on judgmental estimates and assumptions, about circumstances and events. Accordingly, we cannot provide any assurance that the projected results will be attained in this ever changing dynamic market environment. We neither represent it to comprehensive or sufficient for making business decisions nor as replacement of professional advice.

2. Socioeconomic profile of Odisha

The state of Odisha (earlier called Odisha) was established in the year 1936. There were 13 districts which were increased to 30 in the year 1992. It is the ninth largest and eleventh most populated state of the country with a population of three crores of which more than 22 percent are tribals. The state has over 51000 villages. Its official language is Oriya but there are several dialects. The state shares boundaries with Jharkhand in the north, West Bengal in the north-east, Chhattisgarh in the west and Andhra Pradesh in the south.

Figure 2: Map of Odisha

The climate of the state is hot and moist. The state is also prone to natural calamities – flood, cyclones and drought – which have caused a lot of damage to the people. The state has ample natural resources. The landscape has forests, lakes, rivers and rich flora and fauna. The landmass is 1, 55,707 sq km. It has an uninterrupted coastline of about 480 km and a mountainous area in many districts. Almost one third of its land is covered with forests. Odisha is known for its rich culture, art and craft. The Jagannath temple, Konark and Simlipal wild life sanctuary are some important and well known tourist destinations.

Socio- Economic Profile

Odisha has taken strides to improve its social indicators. There has been improvement on many fronts, while some areas are still a matter of concern. There has been a marked improvement in the literacy levels in the State. The literacy levels have increased from 63.08 percent (2001) to73.45 percent with a male literacy of 82.40 percent and female literacy of 64.36 percent (2011). A lot of emphasis is being given to improve the literacy levels of SC and ST communities, particularly girls. According to the Economic Survey 2010-11 the state government has been annually establishing 1000 hostels with 100 seats for ST and SC students. The following table presents information on some key indicators:

Indicator	Odisha	
Literacy rate	63.08 (2001) 68.3% (2007-8)	The corresponding increase at the national level has been 65.38% (2001) and 71.7% (2007-8)
Dropout rate (primary level)	41.8% (2000-01) 2.83% (2009-10)	Contributing factors – mid day meal, hostels for SC/ST children, improvement in infrastructure
Dropout rate (upper primary)	57% (2000-01) 8% (2009-10)	
Birth rate	21.4% (2008)	Corresponding figure at national level is 22.8%. Result of improvement in infrastructure, delivery and accessibility.
Infant mortality rate	Urban – 49% (2008) Rural – 71% (2008)	The overall IMR at national level is 53percent whereas for Odisha it is 69percent. Main reasons – poor availability of birth attendants, high%age of low birth weight babies, lack of professional pre and post natal care.
HIV positive cases	312 (2002) 16,733 (2009-10)	The steep rise in HIV cases is a matter of concern
Source: Economic Survey of Odisha, 2010-11		

Table 1: Socio Economic Indicators of Odisha

The human development index of Odisha has increased from 0.404 in FY01 to 0.537 in FY06. The poverty rate has decreased from 47.2 percent in FY2000 to 28.2 percent in the year FY2008. The literacy rate has increased in excess of 15 percent in the last decade. The improved performance on the social development indicators may be attributed to increased Government spending on various social sector schemes. It is evident from the Figure 3, that between FY2005 and FY2011, the expenditure on social services increased at a CAGR of 21.1 percent. Similarly, the proportion of revenue expenditure on social services gradually increased from 32.2 percent in FY2005 to 38.6 percent in FY2011.

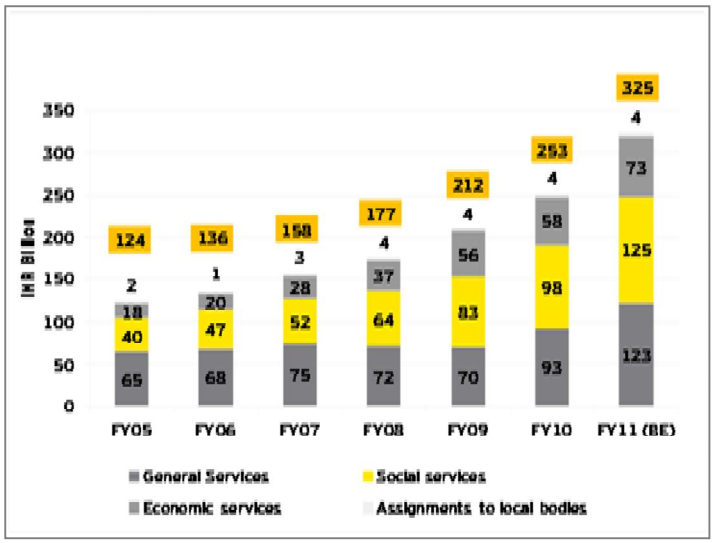


Figure 3: Social Sector Spending- Odisha

Over the last few decades, Odisha has witnessed rapid changes in its population. The growth rates in rural areas have shown a decline. There is rapid growth of cities and migration to urban areas in search of better livelihood. The status of women has improved only marginally. The combined SC/ST population which is about 39 percent have remained largely been deprived which has made the state government give special focus to the areas inhabited by these social groups. The rural-urban poverty gap is larger than the all-India average. According to the 61st Round of NSS, poverty has shown a sharp decline in the coastal areas while it is still a matter of concern in the northern and southern districts. 19 out of its 30 districts are covered under the Backward Region Grant Fund (BRGF).

Economic

The state of Odisha, in the last couple of decades has witnessed a considerable upswing in terms of the growth trajectory. From being one of the poorest states in 1990's it has witnessed significant Gross Domestic Product (GDP) growth in the past decade. In the last quinquennium the state GDP has grown annually (Annual Average growth rate) at 9.4 percent. This growth in the state GDP is congruent with the social sector spending and development. The growth in the state GDP is particularly due to growth in the secondary (industry) and the tertiary sector (services). The service sector constitutes around 54 percent of the state GDP (in FY2010), followed by industries sector at 28 percent and agriculture sector constitutes the remaining 18 percent. In the last six years, contribution from industry and service sector has increased 4 percent and 2 percent respectively, indicating a higher growth in these sectors.

S.No.	District	Literacy rate	Per capita income at 2004-2005 at current prices
1	Angul	78.96	55,937
2	Balasore	72.51	14,331
3	Bargarh	83.25	13,135
4	Bhadrak	65.5	12,280
5	Balangir	75.16	15,981
6	Boudh	80.66	14,467
7	Cuttack	84.2	20,335
8	Deogarh	73.07	13,947
9	Dhenkanal	79.41	16,540
10	Gajapati	71.88	14,975
11	Ganjam	54.29	14,686
12	Jagatsinghpur	78.36	24,213
13	Jajpur	80.44	15,090
14	Jharsuguda	87.13	38,747
15	Kalahandi	87.51	13,088
16	Kandhamal	69	20,547
17	Kendrapara	60.22	12,245
18	Keonjhar	65.12	26,211
19	Khurda	49.87	24,578
20	Koraput	85.93	25,171
21	Malkangiri	49.49	12,973
22	Mayurbhanj	63.98	13,292
23	Nabarangpur	48.2	11,358
24	Nayagarh	58.2	11,549
25	Nuapada	79.17	13,224
26	Puri	85.37	14,918
27	Rayagada	50.88	19,326
28	Sambalpur	76.91	21,577
29	Sonepur	74.42	12,667
30	Sundargarh	74.13	24,581
Source: Economic Survey of Odisha, 2010-11			

Table 2: District-wise literacy rate and per capita income

The annual growth rate in the 10th five year plan was 9.51 while in the first three years of the 11th Plan the state economy has grown at an annual rate of 9.57 percent (at 2004-5 prices). The real per capita income in the state, although still behind the national average has shown an upward trend. There are variations in the annual growth rates across districts. The average growth rates are higher in Jajpur, Keonjhar and Sundargarh, Angul and low in Malkangiri and Nabarangpur. There are regional disparities. Some districts despite having high literacy levels do not have a high per capita income which shows that there are limited opportunities for employment. Kalahandi, for instance, has high literacy rate but its annual growth rate is only 4.9 percent as a result of which

the per capita income is lower than some other district with lower literacy rates. Uneven opportunities of employment result in migration of people to other states. Ten major cities including those of Surat, Kolkata, Delhi, Mumbai, Chennai, Bengaluru, Hyderabad, Vishakhapatanam, Jamshedpur and Bhilai absorb about one third of the total migrant population from Odisha. The most favoured destination states for search of work/employment are Gujarat, West Bengal, Maharashtra, Chhattisgarh and Andhra Pradesh. Many people from southern and western parts of Odisha work in and around Raipur as daily wage earners in brick kilns, as rickshaw pullers, as casual workers in spinning mills etc. Most people from Odisha have been found working as diamond cutters in the diamond industries of Gujarat. In other cities they are engaged as domestic help, hotel boys, plumbers and security guards. Besides inter-state migration there is intra state migration from the interior areas of districts like undivided Koraput, Phulbani, and Keonjhar to big cities in search of work.

Agriculture

Although about 65 percent of the State's workforce is dependent on the primary sector – agriculture, fisheries, animal husbandry, fisheries and forestry – it contributes only 18 percent towards State's GSDP. Inadequate and erratic irrigation still remains a major constraint for improving agriculture and agricultural productivity. The share of cultivators and agricultural workers has sharply declined between 1991 and 2001. There has been a shift of main workers away from agriculture and allied activities. However, it is the mainstay of Odisha's economy as it provides employment to majority of the state's population. Crop production, animal husbandry, fisheries and forestry are the major sub-segments in agriculture.

The economy of the state is largely agrarian. Being largely rural agriculture is an important source of livelihood both for owner cultivators and daily labourers. Mixed farming (crop and livestock) has been the most predominant farming system for over 80 percent of rural households and 30 percent of their incomes are derived from livestock. The long coastline and other fresh water resources have provided opportunities for fisheries. The state is ranked 7th in fish production. According to the Fishery Survey of India there is scope to increase it from 342.7 thousand metric tonnes (FY07) to 513.7 thousand metric tonnes.

The livestock infrastructure in the state is poor considering the livestock population and its potential to supplement household economy and contribution to the farming system in a subsistent economy setting of rural Odisha (Atlas of Development Trends Odisha, Foundation of Ecological Security). The ratio of the number of institutions is quite low. This ratio is lower in districts having more inaccessible villages like those of Gajapati, Kandhamaal, Deogarh, Rayagada etc. The number of local aid centres with artificial insemination facilities is 2209 which is half the corresponding number in the neighbouring state of Andhra Pradesh. The per capital milk production is only is only about 26 kg as against the national average of 82 kg.

Odisha formulated its first agriculture policy in the year 1996 which augmented a shift in agriculture from subsistence to commercial and accord it a status of industry. The policy was revised in 2008, giving it a more futuristic form to address the emerging trends, chalk out an agenda for agricultural improvement in the next 10 years. The policy aims to enhance productivity of major crops, facilitate investment in agriculture through public private partnership particularly in areas like modern farming, post harvest management, marketing, agro processing and value addition. The policy also outlined a strategy to improve horticulture and floriculture. A significant

aspect of the policy was to encourage integrated farming which would help in reducing dependence on any one area. This would mean that capacity of the farmers would be enhanced to practice a combination of agriculture, horticulture, livestock, poultry, agro forestry, sericulture, pisciculture, whatever was possible for them. The policy made provision for strengthening marketing linkages, access to credit and the use of ICT to promote information and communication with regard to agriculture. Myriad of schemes have stemmed out of these policies, most significant of these is the establishment of APICOL which was set up to promote entrepreneurship in the area of agriculture.

Industries

The economy of Odisha has been on a growth trajectory in the recent years. In the industries' sector, the growth in GDP is led by large scale industries, followed by medium and small scale industries and traditional industries such as handloom and handicraft. The state is inviting heavy investment in mining and power sectors giving rise to high levels of industrialization and urbanization.

Odisha has had increased focus on infrastructure development in the state in terms of increase in road and rail network, proposed expansion of airport. Communication facilities have been stronger in coastal districts of Cuttack, Puri and Ganjam. There has also been significant growth in the construction of gram panchayat and forest roads. Paradip is one of the major ports of India. A new port facility between Haldia and Paradip is being developed.

Key Policy Initiatives

The first major policy document for industrial growth in Odisha was developed in 1996 which outlined its intent to develop industries by attracting investments, developing infrastructure and harnessing the advantages of its vast natural resources. At the same time there was considerable emphasis on advancing agro based industries, strengthening rural economy. The policy gave special focus on skill development and strengthening entrepreneurship.

In 2001 the state government announced policy resolution with the aim to transform Odisha into a vibrant industrial state. It resolved to create an enabling environment to attract private players to invent in the state. A few priority sectors were identified where it would give greater focus – electronics, telecommunication, IT enabled services, agro and marine based industries, craft, tourism, mineral based industries including gem cutting and polishing and fly ash based industries. The policy resolution reemphasized the need for human resource development particularly by enhancing the role of private sector in setting up of specialized institutes and training facilities. Incentives were given to set up industrial units in some of the backwards districts – Kalahandi, Nuapada, Bolangir, Sonepur, Koraput, Malkangiri, Rayagada, Nabarangpur, Gajapati and Deogarh.

In 2005 the state government enacted the State Employment Policy 2005 with the aim to create large scale self and wage employment opportunities. The policy once again emphasized its intent to create self employment opportunities in agriculture and allied sectors, handicraft, cottage industry and IT industry. One of its objectives was to facilitate launching of training programmes for the educated and uneducated unemployed persons to upgrade their skills. Recognising the potential of the primary sector to generate employment opportunities the policy laid special emphasis on sectors like forestry, watershed development and horticulture with associated land and rural communication development. Special focus was given on the development of SC/ST/OBC, Minorities and women's empowerment.

More recently in 2007 a public private partnership policy has been introduced to facilitate the partnership between the government and private players. Its objectives include putting a legal and institutional mechanism in place to encourage PPP.

In 2008 the state government enacted the Odisha MSME development policy that focused on revival of sick MSMEs, maximizing the growth of existing MSMEs, broad basing their growth in all potential sectors of economy. The policy too has laid special emphasis on skill development and linkage between industries and technical institutions.

Service Sector

The major contributors to the growth of the service sector are trade, hotels and restaurants, construction and real estate and transport storage and communications. These constituents of the service sector also provide the opportunity for both employment generation and self employment.

Service segment contributes a significant 54 percent to the state's GSDP. Trade, hotels and restaurants are the main contributors. Other sectors are construction and banking. Odisha has the advantage of having almost 60 percent of its bank branches in rural areas.

As per quick estimates 2009-10, the trade, hotels and restaurants sub-sector contributed about 23 percent, followed by `other services' (21percent) and transport, storage and communication (18 percent) in the State GDP service sector. Although banking and insurance sub sectors contribute only about 6 percent of the service sector, it provides indirect benefits in the form of strengthening the financial infrastructure. Tourism has huge growth potential since it involves labour intensive activities; yet, it has shown less growth as compared to other states.

Infrastructure

Odisha is deficient in infrastructure development although concerted efforts are being made to improve it. On the positive side the power sector reforms have been carried out which makes power easily available although its distribution and transmission losses are still a problem. Road density in Odisha is better than the all-India average but the state lags in surface density. This is being improved with the support of programmed like *Pradhan Mantri Sadak Yojana* and *Bharat Nirman*. A number of bridges and all weather roads are being constructed to improve connectivity with the remote habitations. Railway density in the state is 15 km per thousand sq km of area which is lower than the national average of 20 km per thousand sq km. The cargo shipment activity at Paradip too has shown consistent improvement. The tele-density is yet to catch up with the national average, although postal density is higher than the national average. The state is taking several steps to improve the use of information technology. E governance is being encouraged to improve governance at all levels.

Thus, the state is taking steps in several directions to bring about improvement in its economy as well as human development indicators. The factor endowments for growth of industry and giving a better quality of life to the populace are making progress albeit slowly. Since majority of the population is dependent on agriculture, greater steps need to be taken to take it beyond the subsistence level. Furthermore, there is a great need to develop the capacities of people so that they practice integrated farming involving other primary sectors like horticulture, fisheries, animal husbandry and undertake value addition through food processing so that the overall contribution of the agriculture sector to the economy of the state shows rapid improvement.

3. Key findings

There are two faces of Odisha – one traditional and the other is emerging Odisha. The traditional Odisha is culturally very rich which is reflected in the handicraft, fine art and performing art. Religion is deeply embedded in its social fabric. Traditional Odisha also has greater dependence on the primary sector. The emerging Odisha is witnessing a surge in the industry dependent on its rich natural resources. Mining related has stepped up substantially in the last few years. The potential for the service sector is increasing rapidly. Therefore the need for grey collar (knowledge workers) and blue collar (shop floor in manufacturing and service sectors) is being increasingly articulated. What emerged as a latent but huge potential for skill development was for the rust collar workforce (skilled workers at the grassroots level) especially in the primary sector. The study has looked as skill requirement from the point of view of sectors which are contributing to the State GDP. It also draws from the experience of the stakeholders – the government officials, members from the industry, community members and training providers. It endeavours to identify some issues related to the eco system for skill development, which need to be outlined before further discussion.

- The population of Odisha is largely agrarian. About 65 percent of its population depends on **agriculture and allied areas**. Although the contribution of service sector (53.7 percent) is much higher than that of industry (27.8 percent) and agriculture (18.4 percent), what concerns a large majority of people should be given high priority. The fact that contribution of the agriculture sector to the Odisha economy has been reducing over the years (23.89 percent in 2004-5 to 18.44 percent in 2009-10) is a matter of concern even from the point of view of food security. This issue has been recognized by the State Government which is why there is a progressive Agriculture policy drawn which has the right elements to give agriculture the status of an industry. The policy has unfolded into a number of schemes and support institutions. Yet it was evident that the efforts need to be expedited because across the districts visited by the team, the preference of the youth belonging to families of agriculturists, to join the service/industry was quite evident. They do not seem to take pride in farming and are dissatisfied with low returns for their efforts.
- The artisan groups voiced similar concerns. Many artisans who contribute to the rich cultural heritage, not only for the state but for the entire nation, are being stressed. They require support in terms of design diversification, marketing support to get better economic returns. Although steps are being taken to support some such groups, these efforts need to be expedited.
- Another concern voiced by a surprisingly large number of respondents was that the youth lacked **motivation**. According to them, the youth is not interested in acquiring new skills. Even if they are provided trainings, they do not continue to work in that area and drop out. This could be attributed to a number of factors such as fear of moving out of their area of comfort, inadequate wages, limited exposure, dominant caste factors. Random interactions with people indicated some deep rooted issues.
  - `I worked as a driver in another city but the cost of living was very high and four of us shared a room. Here I earn less but am with the family and get to eat food at home'.
  - `Some economically disadvantaged upper cast families would rather live in penury than do manual labour like housekeeping in a hotel'.

- `The tribals consume alcohol as a way of life. You can't depend on them for work. We source workers from other districts/states'.

All these are mindsets and real issues which the youth encounter on a day to day basis. Skill development is mastering a process though practice, theory, motivation and feedback. Focusing on one aspect would not resolve the issue. The mindset at both ends has to be changed through appropriate interventions. In the words of one of the respondents `*the career fairs are organized where security guard agencies come and orient the youth. Those agencies which stay back beyond the duration of the fairs and interact more closely with the youth find greater success.*' A simple statement, but demonstrates that working on the attitude takes time and greater effort.

- One of the best ways to motivate and orient individuals is to start young. This is the rationale for introducing **vocational education** in schools in line with the education policy 1986. Although there is a Directorate of Vocational Training, over the years vocational education appears to have got diluted. The no. of teachers imparting vocational education has reduced. In addition the infrastructure required to undertake vocational training is not adequate across schools. Quite significantly agro based vocations had been introduced in schools to develop their interest, but interactions with some of the vocational education providers indicated that it has not worked very well for various reasons. Although the team did not examine the aspect of vocational training very closely, but it did emerge as an area that requires strengthening if one were to improve the overall skill development scenario in the state.
- **Formal Institutions** play a significant role in skill development. It is being increasingly recognized that the graduate courses need to be made more applied to enhance the employability of students. The team looked at the vocation training providers more closely than the graduate courses. There are a large number of private vocational training providers offering a range of courses. The unregistered institutes would be a much higher number and difficult to ascertain. Many of the private institutes charge a very high fee and the quality of training imparted is questioned even by the youth aspirants. With regard to the government ITIs, interactions with the faculty of the institutes and available figures showed that the vacancy rate is very high. There are a number of reasons for this – lack of faculty, choice of courses offered not demand driven, uneven spread of the institutes, and weak linkage with industry. None of the institutes are offering agro based trainings which have a huge potential in the state.
- While it is important to introduce new demand based skills, the importance of **skill enhancement** cannot be undermined. Skill development is a lifelong learning. Updation of existing skills to meet the emerging requirements and also to increase efficiency needs to be encouraged. Public sector offers employment opportunities to a significantly high proportion of population. During interactions and though observations one noted that there was still heavy reliance on traditional ways of communication. There was hesitation to make optimum use of computers even when these were available. The use of fax was preferred over e-mails. This is an area that warrants attention. Besides increasing efficiency in work, there is a wealth of knowledge and information which needs to be harnessed though the use of technology to make use of it in effective planning.
- Skill development has to be all encompassing with special focus on the **disadvantaged groups** - persons with disability, women, socially disadvantaged groups the scheduled castes, scheduled

tribes and minority groups. The state government has set up a separate department to increase available opportunities for education and employment the socially disadvantaged groups. Hostel facilities are being offered to students in tribal areas to promote education among them. The vocational rehabilitation centre has good infrastructure for imparting training to persons with disability. Hostel facilities are also being provided, although not for those with mental retardation. There are some outreach programmes available for the PWDs in rural areas. All these programmes require expansion and wider support.

- **Employment exchanges** which are supposed to be repository of information and provide linkages between the students and the employers are in a state of disarray. Although the infrastructure exists, their utility is limited. Usually students who register with them are graduates, but the placement rate is very poor, mostly in the government sector. These structures can be put to better use and can act as repository of information for local level, conduct research to ascertain employment requirements, organise career fairs, provide linkages with the industry and several other functions.

Skill Requirement across different sectors

The report provides detailed information and analysis of each of the districts, but at an aggregate level certain trends emerged during the course of the study which may inform the planning process for skill development. Some of these observations have been shared in this section of the report.

Given the current growth trends, contribution to the state GDP and state policies to promote certain areas, the areas of development the growth areas can be mapped for the secondary and tertiary sectors. There are a number of areas within the primary sector which need to be promoted to enhance their contribution to the state economy as well as increase the per capita income of those involved in this sector. Table 8 maps some high, medium and low labour growth areas on the basis of its contribution to the State GDP and current level of skill requirement.

Primary Sector	Secondary Sector	Tertiary Sector
Food processing; floriculture; horticulture especially cashew nuts, mangoes, pineapple; animal husbandry; fisheries	Automobile and automobile components; Chemicals and Pharmaceuticals, Construction material and building hardware; Electronics and IT; hardware	Education and skill development; Healthcare, IT & ITeS, Media and entertainment, Tourism. Transportation and logistics

Table 3: Key skill development requirements in the State

Primary Sector

Although agriculture appears largely as a low labour growth area, as argued earlier, since it is the biggest provider of sustenance to the people in Odisha, there is a need to diversify the existing skill levels of people to other allied areas to help them get better economic returns for their efforts. This of course needs to be backed by suitable policies to encourage entrepreneurship in areas like storage, food processing; and support to the farmers to give them better sale price for their produce.

Skill development in this sector largely takes place through specific schemes of the state government. These schemes have limited coverage and provide training in select areas, not holistically. Interactions with people showed that awareness about such training programmes is not very high. There are a number of vacancies in several districts which impacts the outreach programmes. Therefore, the farmers continue to use their traditional methods. The practice of

integrated farming needs to be encouraged wherein the farmers, in addition to growing the crop, follow other allied activities like vegetable growing, bee keeping, and animal husbandry. For this, appropriate skills need to be imparted to give them confidence to move beyond their area of familiarity. In addition, semi food processing at the household level would further increase opportunities for the farmers especially women. While the driving factor for this would be creation of a value chain, which can be done with the support of government and the industry, there is scope for enhancing the skills of local people, especially the youth, in providing services to the families to provide this knowledge on a sustained basis and also address minor problems that may arise. In other words there is a need to develop a workforce of `para agriculturists' and `para vets' who can provide multi faceted services – veterinary, agro based info, repairing of implements etc. They may be given skills in the area of information technology to act as facilitators in improving access to information in relevant areas related to the primary sector.

As mentioned earlier, the state has adopted a policy of giving the status of an industry to the agriculture sector. APICOL was set up to promote enterprises within the agriculture sector. It has found limited success for a variety of reasons including shortage of adequately skilled staff, eligibility requirements that make people with low economic profile hesitant to come forward to avail the benefits of the schemes. Training in EDP is organized but only about 10-15 percent of the candidates come up with proposals to set up an enterprise. Most of them have started agri service centre (where they give agricultural implements on rent). The EDP training needs to be designed differently where the focus is more on problem solving and developing the capacities of the trainees through mentoring so that they are able to develop viable proposals. There are a several areas where agro based industries can be set up such as rice/dal/maize milling, dehydration of vegetables, cattle poultry, cotton/coconut/groundnut oil, mushroom cultivation, sugar mill, potato chips, fruit processing.

Secondary Sector

Odisha is on the threshold of transforming the industrial sector. Its long coastline, inland waters, minerals and natural resources and rich cultural heritage makes it an attractive destination for the industries. The State Government policy envisages development of industries at all levels and promotes the state as a manufacturing hub rather than only for its mining industries. There are plans to develop SEZs to promote technologically advanced industries, promote MSME and SSI through cluster development.

The state policy states that it will be proactive in certain sectors

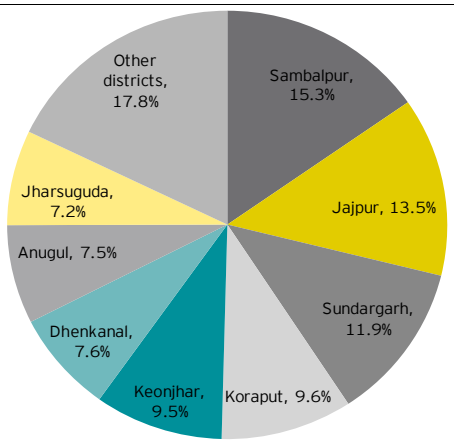
- Mineral-based industries.
- Craft-based products;
- Agro and marine-based industries, industries based on medicinal herbs and minor forest produce;
- Tourism;
- Electronics, Information Technology and Biotechnology.
- Fly ash based industries

The top five districts of Odisha that have achieved higher growth included Keonjhar, Jajpur, Sundargarh, Angul, Khordha with respective average annual growth rates of 11.7 percent, 11.1

percent, 10.2 percent, 9.9 percent and 9.5 percent between FY01 and FY07. Most of the industries are located across 15 districts of the state.

Large Industries	Medium and Small Industries	SEZs
Sambalpur	Cuttack	Khurda
Jajpur	Sundargarh	Cuttack
Sundargarh	Ganjam	Ganjam
Koraput	Balasore	Kendrapara
Keonjhar	Mayurbhanj	Jagatsinghpur
Dhenkanal	Khordha	Jharsuguda
Angul	Jajpur	
Jharsuguda	Keonjhar	

Large-scale industries: Most large-scale industries in Odisha are mineral-based. Odisha consists of 10 percent of steel production capacity of India and 25 percent of iron ore reserves of the country. In addition, Odisha has the highest aluminum production capacity in India. The upcoming investments in Odisha are in industries including steel, cement, aluminum and petroleum & chemicals[2]. The state is also attracting investments in power sector. As depicted in the chart below, 8 districts contribute to 80 percent of investments by large scale industries.



- Sambalpur and Jajpur are the top 2 districts having presence of large scale industries. Both the districts have 14 industrial units each.
- Sundargarh is the third-largest district having presence of large scale industries. However, the number of industrial units (62 in number) is highest in the district. Followed by Sundargarh, Keonjhar has 27 large-scale industries.

Source: National Informatics Centre

Figure 4: District-presence of large scale industries (investments as of FY10)

Sector	Number	Locations
Formally approved SEZs		
IT/ITES	4	Khurda, Chandaka
Metal-based	4	Kalinganagar, Jharsugura, Sambalpur
Mineral-based	1	Ganjam
Multi- product	1	Ganjam
Solar	1	Cuttack
In principle approved SEZs		
Multi-product	2	Kendrapara, Jagatsinghpur
Textiles	1	Cuttack
Source : SEZ, India		

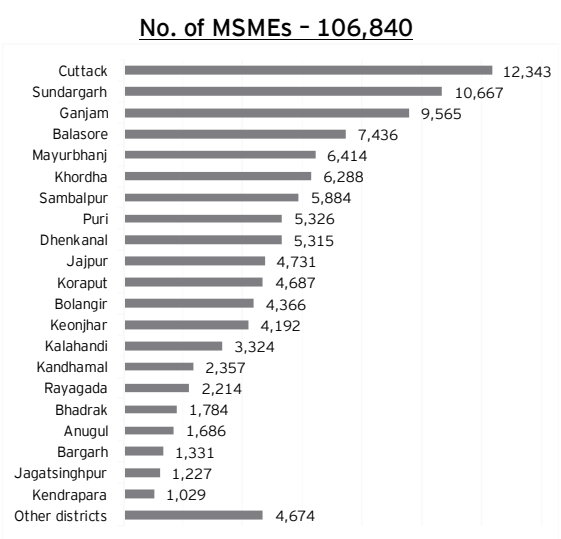
Table 4: SEZs proposed in the State

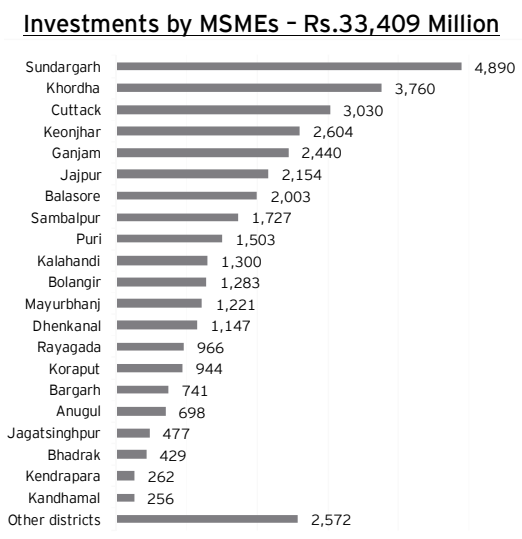
[2] Economic Survey: Odisha, 2010-11

Besides these there are plans to develop Special industrialized parks:

- Konark Knowledge park – Biotech-pharma-IT park which will conduct high quality research on bio tech, medicine manufacturing, industry, agriculture and IT
- Gopalpur industrial park – Being developed by Tata Steel to facilitate industrial development in the Gopalpur region.
- JSPL industrial park – Jindal Steel and Power Limited plans to establish industrial park near Angul.
- Mega food park, Khordha – A special purpose vehicle is being formed with IL&FS in 250 acres of land.
- Infopark – Will be established in Bhubaneshwar to take up IT projects.

Micro, Small and Medium enterprises (MSME): The MSME sector in the state is much bigger than the large industry segment in terms of investment. The state has MSME presence primarily in Cuttack, Sundargarh, Ganjam, Balasore, Mayurbhanj and Khordha districts, as depicted in the chart below. Approximately 50 percent of MSMEs are present in these districts. In terms of outstanding investments, Sundargarh, Khordha, Cuttack, Keonjhar, Ganjam and Jajpur are the top six districts, contributing to 50 percent of total MSME investments.





Source: National Informatics Centre, Odisha

Figure 5: Number of MSME units and MSME Investments in Districts of Odisha – FY10

Livelihood and employment generation sectors in the MSME enterprise segment have received some incentives and infrastructure (such as clusters). The potential for livelihood and employment given the rich local arts and crafts seems extraordinarily high. MSME provides 89 percent of the employment and needs to be promoted and broad based. However, its penetration in more than half of the districts is low.

***Traditional and employment-oriented sectors*:** Handicraft, handloom, sericulture, salt and coir are the traditional sectors of Odisha:

- **Handicrafts** – The state has more than 250 handicrafts clusters. Some of the key handicraft items include silver filigree, appliqué, horn carving, terracotta and patta painting.
- **Handloom and sericulture** – The state is known for craftsmanship in the country. As of FY10, there were 49,095 looms. Approximately 23 percent of handlooms are present in Bargarh district.
- **Salt** – Salt sector is an employment generation sector for the state. This cottage sector is primarily present in Ganjam, Puri and Balasore.
- **Coir** – Coir sector provide employment to rural women. There are approximately 1,063 coir industries present in the state, including 210 set up during FY10.

During interactions with some of the stakeholders, some of the challenges being faced by these sectors were shared. The handloom sector is undergoing stress for want of marketing linkages, design diversification and access to credit. Although there are several examples of middlemen being exploitative, yet this is a section of service providers which cannot be wished away. It is necessary to take safeguards to ensure that they do not take advantage of the artisans, but it is important to develop these skills to enable the hub function in a professional manner. There is potential to develop skills of people in the existing clusters so that these become rural business hubs where the capacities of people are developed to undertake allied activities like Yarn Making, Dyeing, Finishing, Tailoring, Packaging and Marketing.

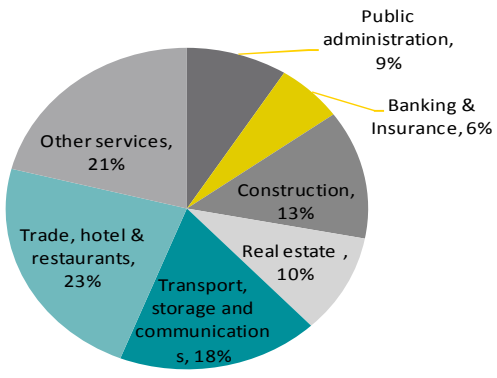
There are some areas that need use of technology to make these cost effective. Coir was identified as one such area which can be promoted by using more technology in processing it. During discussions it was shared that the coir units are finding it difficult to operate due to heavy reliance on labour. Increase in wage labour makes their venture less cost effective, which is why many small units have closed down. Examples were cited where the raw material is thrown into the sea or lies strewn without use. Skill development may take place in the use of mechanized implements to process the raw material and convert into products which have immense potential for diversification.

Tertiary Sector

Service segment is a major contributor (54 percent) to the state's GDP. As depicted in the chart, trade, hotel and restaurants is the major contributor (23 percent in FY10) to the service segment.

- Trade, hotels & restaurants – The state has high potential for tourism sector. The number of tourist arrivals increased from 2.73 million in 1999 to 6.94 million in 2009. It also generates direct and indirect employment (ratio of direct to indirect employment jobs being 1:3).

Figure 6: Sector-wise spending



Source: National Informatics Centre, Odisha

- Construction – The sector has witnessed a slower CAGR of 5.2 percent between FY05 and FY10, as compared to India's growth of 9 percent during the same period.
- Banking – The state has major bank branch network in rural areas. As of FY10, approximately 59 percent of bank branches are based in rural areas.

MSMEs have a strong presence in repairing and servicing sector, as depicted in the table below. In the manufacturing sector, food & allied sector and engineering & metal sector have majority of MSME presence in Odisha.

Sector		No. of MSMEs	Top 5 districts
	Repairing & Servicing	33,411	Sundargarh, Cuttack, Ganjam, Khordha and Jajpur
Manufacturing	Food & Allied	23,925	Ganjam, Balasore, Cuttack, Sundargarh and Sambalpur
	Engg. & metal	12,026	Sundargarh, Cuttack, Ganjam, Khordha and Sambalpur
	Textiles	8,070	Cuttack, Ganjam, Puri, Jajpur, and Mayurbhanj
	Glass & ceramics	7,920	Ganjam, Cuttack, Dhenkanal, Balasore and Mayurbhanj
	Forest products	6,560	Cuttack, Balasore, Mayurbhanj, Puri and Ganjam
	Paper & products	2,797	Cuttack, Sundargarh, Khordha, Balasore and Ganjam
	Chemical	2,790	Cuttack, Ganjam, Sundargarh, Khorda and Puri
	Rubber & plastics	1,726	Cuttack, Sundargarh, Khordha, Balasore and Ganjam
	Electricals	1,107	Khordha, Cuttack, Sundargarh, Ganjam and Balasore
	Livestock & leather	428	Cuttack, Sundargarh, Ganjam, Sambalpur and Puri
	Misc. mfg.	6,080	-
Total		106,840	

Source: National Informatics Centre, Odisha

Table 5: Number of MSME units and MSME Investments in Districts of Odisha – FY10

Districts with predominant presence have the strongest repairing and servicing MSME presence. Districts with high urban population such as Cuttack, Ganjam (Berhampur), Sundargarh (Rourkela) and Sambalpur have a high presence of MSMEs in Food & Allied sector.

The top three sectors (in terms of number of MSMEs) – repairing & servicing, food & allied and engineering & metal-based sectors are amongst the major employment providers. In addition, glass and ceramic industry is one of the major employment generators. Textiles and forest-based MSMEs are the next highest employment providers.

IT and Telecom: Led by the surge in mobile telephony, telecom connectivity in the state has witnessed a revolution. The network has spread to the remotest corners of the state. The state has 18.6 million mobile subscribers.

Odisha houses all the big four domestic IT giants viz. TCS, Infosys, Wipro and Mahindra Satyam. The state has created a number of IT Parks and towers such as Infocity and Tower 2000. The government's IT department is leveraging IT services for the benefit of the common

Odisha has more than 300 software units and 12,000 software professionals. By 2015, the number of professionals is expected to reach to 200,000.

people in the rural areas. Under the National e-Governance Plan (NeGP), the government is establishing 8,558 Common Service Centres (CSCs) out of which 5,436 have already been rolled out. These CSCs are offering web enabled e-governance services to the people of the rural areas of the state.

Banking and Financial Services: As per the CMIE data on GSDP figures, the banking, financial services & insurance sector has been witnessing high growth numbers across all the Indian states. With financial inclusion becoming a top priority, the banking and insurance sector grew within the range of 12 percent – 22 percent during the last 5 years (2006-10). The contribution of Odisha's banking and insurance sector towards GSDP has witnessed 17.4 percent growth during this period. In Odisha the average population per bank branch (17,000) is higher than the national level (16,000). With high upside potential, this sector is foreseen to witness increasing number of skilled jobs. Higher requirement is foreseen for highly skilled and semi-skilled workforce within this sector.

Supply of Skills

As is evident through discussion in the previous section, the demand for skilled workforce would increase substantially. The study took into account the current contribution of different sectors to the State GDP, labour elasticity and the suggested proportion of different skill levels in the NSDC studies for the sectors to ascertain demand for workforce. Subsequently an overview was taken of the educational institutions offering different courses, especially technical courses. The following figure shows the proportion of different streams of higher educational institutions. As in the case of other states in the country, the proportion of degree colleges is highest in Odisha. While the employability of simple graduate courses has raised questions across the country, it may also be seen as a potential area of improvement which can benefit a large number of students.

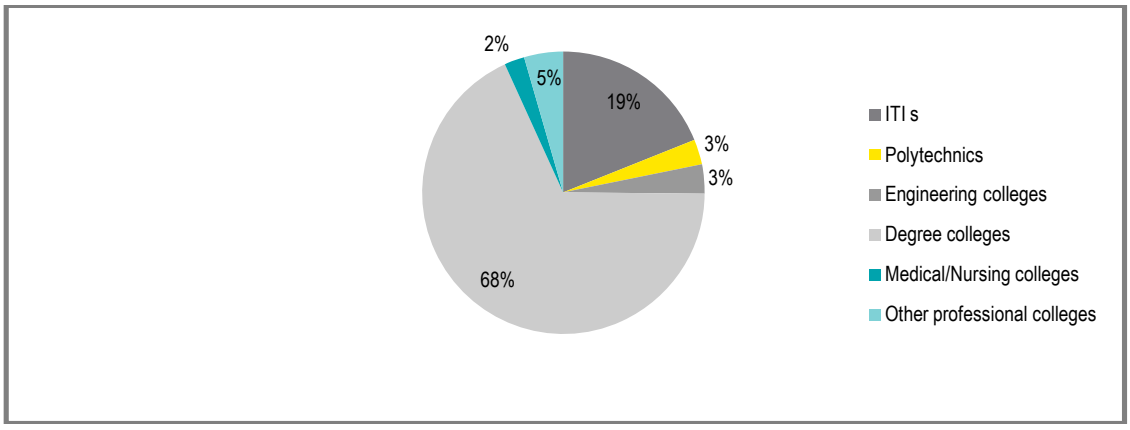


Figure 7: Status of Higher Education Institutions; Economic Survey of Odisha, 2010-11

A further desegregated data of the technical institutions shows that it is heavily skewed towards engineering courses. The following table presents information on the technical colleges in Odisha:

Institution	No.	Intake Capacity
Government Engineering College	8	1,960
Private Engineering College	93	35,700
Government Engineering schools/Polytechnics	13	3,080
Private Engineering Schools/Polytechnics	77	23,895
Architecture	2	200
Film and TV Institute	1	200
Government MCA Colleges	13	472
Private MCA Colleges	47	3,345
Government MBA College	10	505
Private MBA Colleges	61	4,920
ITI/ITC	582	60,849
National Institute of Technology	1	360
Indian Institute of Handloom and Textiles	1	60
Odisha University of Agriculture and Technology	1	1,250
Government Medical Colleges	3	450
Government Dental Colleges	1	20
Private Medical College	3	600
Private Dental College	4	30
Government Pharmacy College	1	60
Government Nursing College	1	20
Private Pharmacy College	32	1,840
Private nursing College	11	245
Nursing Schools	17	480
Colleges of Hotel Management	21	Not Available
Colleges for Teacher training	14	997
Government Secondary Training schools	35	1,650
Source: Economic Survey of Odisha, 2010-11 and Website search		

Table 6: Technical colleges in Odisha

The existing number of institutions will not be able to address the skill development requirements of different sectors. In 2010, 4.29 lakh students enrolled for Secondary School examination and 2.92 lakh passed their examination. The combined enrolment of all the educational institutions mentioned above would be 1.43 lakhs, which would include students from other states also. Therefore the students who drop out, are unable to pass their examination would have limited options for skill development and would add to the unskilled workforce. Even those students who pass their school examination, not all will be able to take admission in the existing institutions, which explains the mushrooming of several private institutions offering different courses to students, mostly charging a very high fee. The other problem is that of a very high level of vacancies at the ITIs. This is a very strong signal that there is a mismatch between the expectations of people and the courses being offered.

There are some educational institutions which are reaching out to these students and offering some opportunities for skill development. The *Gram Tarang* programme of the Centurion University is one such example. Following the hub and spoke model of having a mother centre with several satellite centres, the programme offers about 37 courses to students with different levels of education (5th, 10th and 12th pass students). These centres operate mostly in the backward regions of the State. The programme develops linkages with potential employers and has a good placement rate. Another model is that of Kalinga Institute of Social Sciences. It provides educational opportunities to tribal children upto post graduate level. Vocational training is provided as part of their education

and students are able to earn while they learn. Almost 10,000 children have benefited from this initiative since its inception in 1993.

As per our analysis the following sectors, largely from the tertiary or service sector would require significant skill development.

Sectors	Total incremental demand supply gap for the skilled jobs		
	2011-16	2011-21	2011-26
Agriculture	(12,176)	(27,819)	(46,059)
Auto & Auto Components	(15)	318	1,015
Chemical & Pharmaceuticals	403	1,155	2,284
Construction materials & building hardware	16,138	41,561	77,070
Electronics & IT Hardware	346	1,084	2,247
Food Processing	4,245	8,207	12,594
Furniture & Furnishings	785	2,534	5,201
Leather & Leather Goods	40	88	145
Gems & Jewellery	-	-	-
Organised Retail	-	-	-
Textile	272	1,566	3,839
Unorganised sector	(2,305)	(1,493)	2,456
Banking, Financial Services & Insurance	164,086	443,426	902,692
Building, Construction & Real Estate Services	2,829	7,602	14,060
Education & Skill Development	165,167	390,065	692,849
Healthcare	151,398	362,330	651,037
IT & ITES industry	139,140	337,820	614,363
Media & Entertainment	80,259	209,415	400,582
Tourism, travel, hospitality & trade	120,634	331,267	656,018
Transportation, logistics, warehousing & packaging	(1,926)	5,405	22,192
Total	**829,318**	**2,114,531**	**4,014,585**

Table 7: Sector wise total incremental demand-supply gap for skilled jobs

Most of these are skills across different service sectors. Some potential areas for skill development are:

- Banking – business correspondents, actuarial experts, financial managers
- Education – school teachers (a large number of teachers are required to fulfill the requirements of the RTE); faculty members at the ITIs and colleges
- Health care – nursing staff, lab technicians, para health workers
- IT & ITeS – Data operators, BPO, data analysts, IT service providers for HR functions
- Media and entertainment – technicians, event managers, media experts for print and electronic media
- Travel and Tourism – Drivers (especially of heavy vehicles), mechanics, tourist guides, housekeepers, interpreters, travel agents

Districts and Sector	Angul	Balasore	Bargarh	Baudh	Bhadrak	Bolangir	Cuttack	Deogarh	Dhenkanal	Gajapati	Ganjam	Jagatsinghpur	Jajapur	Jharsuguda	Kalahandi	Kandhamal	Kendrapara	Keonjhar	Khurda	Koraput	Malkangiri	Mayurbhanj	Nabarangpur	Nayagarh	Nuapada	Puri	Rayagada	Sambalpur	Sonapur	Sundargarh
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Tourism, travel, hospitality & trade																														
Transportation, logistics, warehousing & packaging																														
	High Growth																													
	Medium Growth																													
	Low Growth																													
Source: EY Analysis																														

Table 8: Sectors with labour growth trends

Snapshot of District wise skill gap (Quantitative analysis)

Table 9: District wise skill gap-Quantitative analysis (1)

Description	Angul	Ganjam	Cuttack	Boudh	Bhadrak	Bolangir	Bargarh	Balasore	Deogarh	Dhenkanal	Gajapati
Total population (2011)	1,271,703	3,520,151	2,618,708	439,917	1,506,522	1,648,574	1,478,833	2,317,419	312,164	1,192,948	575,880
Worker population (2011)	505,969	1,454,479	888,193	201,195	435,007	690,094	651,941	738,472	143,676	398,641	305,827
Projected total population (2026)	1,498,322	4,137,535	3,098,057	562,619	1,808,538	2,256,729	1,702,424	2,838,129	379,380	1,410,528	673,416
Worker population (2026)	596,134	1,709,574	1,050,775	257,313	522,214	944,668	750,511	904,403	174,612	471,349	357,625
Current Job Opportunities for all skilled jobs (Demand-2011)	**215,032**	**734,847**	**481,737**	**95,054**	**208,690**	**334,246**	**305,731**	**334,653**	**73,221**	**185,930**	**146,910**
Semi-skilled	106,478	303,813	204,725	37,570	87,496	135,223	128,149	138,164	28,808	77,941	57,895
Skilled	84,013	325,330	206,327	42,946	89,340	151,657	131,668	143,903	34,139	81,975	67,724
Highly skilled	24,541	105,704	70,684	14,537	31,854	47,365	45,914	52,585	10,274	26,013	21,290
Projected Job Opportunities for all skilled jobs (Demand-2026)	**289,437**	**1,376,279**	**936,627**	**170,656**	**370,389**	**601,293**	**540,778**	**585,455**	**130,552**	**328,089**	**259,798**
Semi-skilled	136,991	505,152	360,095	58,381	137,848	212,608	201,555	213,355	44,261	121,621	89,696
Skilled	117,395	636,982	409,460	81,829	166,359	290,575	243,403	264,106	65,220	154,250	128,036
Highly skilled	35,051	234,145	167,072	30,446	66,182	98,111	95,821	107,994	21,071	52,217	42,067
Incremental Job opportunities to be created in next 15 years (2012-26)	**74,405**	**641,432**	**454,890**	**75,602**	**161,699**	**267,047**	**235,047**	**250,802**	**57,331**	**142,159**	**112,888**
Semi-skilled	30,513	201,339	155,370	20,810	50,353	77,384	73,406	75,191	15,453	43,680	31,800
Skilled	33,382	311,652	203,133	38,883	77,019	138,917	111,734	120,203	31,081	72,275	60,311
Highly skilled	10,510	128,441	96,387	15,909	34,328	50,746	49,907	55,408	10,797	26,204	20,777
Training Capacity - 2011-2026	**92,947**	**108,607**	**160,351**	**6,485**	**78,671**	**43,147**	**49,480**	**131,969**	**3,911**	**62,209**	**17,573**
Semi-skilled	71,917	82,242	106,066	6,485	60,662	37,856	39,629	100,721	3,911	39,081	10,389
Skilled	21,030	23,423	47,684	-	17,226	5,291	9,131	30,519	-	21,224	7,184
Highly skilled	-	2,943	6,601	-	783	-	720	729	-	1,904	-
Incremental Skill gap during next 15 years (2012-2026)	**(18,542)**	**532,825**	**294,539**	**69,117**	**83,028**	**223,900**	**185,567**	**118,833**	**53,420**	**79,950**	**95,315**
Semi-skilled	(41,404)	119,097	49,304	14,325	(10,309)	39,528	33,777	(25,530)	11,542	4,599	21,411
Skilled	12,353	288,230	155,449	38,883	59,793	133,626	102,603	89,684	31,081	51,051	53,127
Highly skilled	10,510	125,498	89,786	15,909	33,545	50,746	49,187	54,679	10,797	24,300	20,777

Table 10: District wise skill gap- Quantitative analysys (2)

Description	Jharsuguda	Jajpur	Jagatsinghpur	Khordha	Keonjhar	Kalahandi	Kandhamal	Koraput	Kendrapara	Malkangiri
Total population (2011)	579,499	1,826,275	1,136,604	2,246,341	1,802,777	1,573,054	731,952	1,376,934	1,439,891	612,727
Worker population (2011)	215,549	502,036	354,613	688,074	716,990	731,406	345,773	665,278	429,418	300,925
Projected total population (2026)	702,489	2,177,207	1,266,260	2,940,057	2,235,309	2,010,926	878,298	1,734,236	1,674,577	820,854
Worker population (2026)	261,296	598,506	395,064	900,566	889,015	934,998	414,906	837,911	499,408	403,141
Current Job Opportunities for all skilled jobs (Demand-2011)	**98,446**	**225,975**	**142,378**	**394,993**	**253,104**	**348,944**	**148,088**	**253,316**	**207,231**	**130,747**
Semi-skilled	48,259	96,615	60,741	156,519	110,293	139,528	62,326	105,808	84,055	55,863
Skilled	39,091	98,404	60,920	172,305	106,032	159,153	64,938	112,071	92,670	57,317
Highly skilled	11,095	30,956	20,717	66,169	36,780	50,263	20,824	35,436	30,507	17,567
Projected Job Opportunities for all skilled jobs (Demand-2026)	**146,176**	**389,876**	**236,330**	**816,138**	**395,241**	**620,400**	**249,343**	**396,207**	**366,994**	**210,221**
Semi-skilled	66,854	151,188	90,781	289,761	156,922	218,447	88,769	149,342	131,848	79,048
Skilled	60,950	178,914	106,399	354,009	177,764	300,805	120,266	186,517	173,797	101,175
Highly skilled	18,372	59,774	39,151	172,368	60,555	101,148	40,307	60,348	61,349	29,997
Incremental Job opportunities to be created in next 15 years (2012-26)	**47,730**	**163,901**	**93,952**	**421,145**	**142,136**	**271,456**	**101,254**	**142,890**	**159,763**	**79,474**
Semi-skilled	18,595	54,573	30,040	133,242	46,629	78,919	26,443	43,533	47,794	23,186
Skilled	21,858	80,510	45,479	181,704	71,732	141,652	55,328	74,445	81,127	43,858
Highly skilled	7,277	28,818	18,433	106,199	23,775	50,885	19,483	24,912	30,842	12,430
Training Capacity - 2011-2026	**27,179**	**73,660**	**44,181**	**262,150**	**55,813**	**25,115**	**16,040**	**42,727**	**44,718**	**6,462**
Semi-skilled	17,081	67,787	44,181	142,875	45,662	19,553	16,040	33,343	41,107	6,462
Skilled	9,180	5,873	-	98,134	9,696	5,562	-	8,826	3,611	-
Highly skilled	918	-	-	21,141	455	-	-	558	-	-
Incremental Skill gap during next 15 years (2012-2026)	**20,551**	**90,241**	**49,771**	**158,995**	**86,323**	**246,341**	**85,214**	**100,163**	**115,045**	**73,012**
Semi-skilled	1,514	(13,214)	(14,141)	(9,633)	967	59,366	10,403	10,190	6,687	16,724
Skilled	12,678	74,637	45,479	83,570	62,036	136,090	55,328	65,619	77,516	43,858
Highly skilled	6,359	28,818	18,433	85,058	23,320	50,885	19,483	24,354	30,842	12,430

Table 11: District wise skill gap- Quantitative analysys (3)

Description	Mayurbhanj	Nabarangpur	Nuapada	Nayagarh	Puri	Rayagada	Sambalpur	Sonepur	Sundargarh	Orissa
Total population (2011)	2,513,895	1,218,762	606,490	962,215	1,697,983	961,959	1,044,410	652,107	2,080,664	41,947,358
Worker population (2011)	1,162,053	602,860	279,263	320,606	509,096	462,032	470,342	285,209	839,692	16,294,709
Projected total population (2026)	3,022,213	1,578,428	740,965	1,129,850	2,039,542	1,197,855	1,231,780	860,987	2,521,092	51,128,603
Worker population (2026)	1,397,024	780,769	341,183	376,461	611,504	575,333	554,723	376,566	1,017,435	19,861,220
Current Job Opportunities for all skilled jobs (Demand-2011)	**530,741**	**284,141**	**136,992**	**167,206**	**250,671**	**186,043**	**243,209**	**140,863**	**381,595**	**7,640,734**
Semi-skilled	219,299	118,658	54,785	68,013	103,688	80,950	108,317	56,346	167,697	3,204,023
Skilled	233,612	128,543	62,557	75,180	109,778	79,624	100,601	64,186	162,651	3,338,658
Highly skilled	77,830	36,940	19,650	24,013	37,205	25,469	34,291	20,330	51,247	1,098,053
Projected Job Opportunities for all skilled jobs (Demand-2026)	**954,992**	**498,303**	**249,945**	**303,415**	**450,553**	**299,178**	**426,924**	**254,278**	**648,032**	**13,501,898**
Semi-skilled	345,346	186,120	87,570	109,122	165,777	116,659	167,226	89,649	260,306	5,032,297
Skilled	449,563	242,255	121,048	143,584	207,449	137,867	184,393	122,936	283,762	6,211,068
Highly skilled	160,083	69,928	41,327	50,709	77,328	44,652	75,305	41,692	103,963	2,258,534
Incremental Job opportunities to be created in next 15 years (2012-26)	**424,251**	**214,161**	**112,953**	**136,209**	**199,883**	**113,135**	**183,715**	**113,415**	**266,437**	**5,861,164**
Semi-skilled	126,047	67,461	32,785	41,108	62,089	35,709	58,910	33,303	92,609	1,828,274
Skilled	215,951	113,713	58,491	68,405	97,671	58,242	83,792	58,750	121,111	2,872,410
Highly skilled	82,253	32,988	21,677	26,696	40,123	19,184	41,014	21,362	52,717	1,160,481
Training Capacity - 2011-2026	**115,761**	**11,341**	**14,710**	**34,317**	**68,150**	**49,403**	**61,191**	**11,569**	**126,744**	**1,846,579**
Semi-skilled	100,632	11,341	11,166	27,477	58,965	22,409	47,539	11,569	104,715	1,388,865
Skilled	14,391	-	3,544	6,840	8,402	25,318	9,202	-	20,373	411,660
Highly skilled	738	-	-	-	783	1,676	4,450	-	1,656	46,055
Incremental Skill gap during next 15 years (2012-2026)	**308,490**	**202,820**	**98,243**	**101,892**	**131,733**	**63,732**	**122,524**	**101,846**	**139,693**	**4,014,585**
Semi-skilled	25,415	56,120	21,619	13,631	3,124	13,300	11,371	21,734	(12,106)	439,409
Skilled	201,560	113,713	54,947	61,565	89,269	32,924	74,590	58,750	100,738	2,460,750
Highly skilled	81,515	32,988	21,677	26,696	39,340	17,508	36,564	21,362	51,061	1,114,426

Development potential and skill requirements (District wise summary)

Name of the districts	Primary Sector	Secondary Sector	Tertiary Sector
Angul	▶ Skill development is required in scientific management and production, value addition and processing along with infrastructure in terms of forward and backward linkages. Mango, groundnut, banana, cashew, vegetables (in selected blocks) and forest based products.	▶ Surplus workforce in the semi skilled category indicating low absorption owing to poor quality of technical skills and limited intake from local industries. ▶ Growth potential in metal, power and mining industries along with downstream and demand based industries. ▶ Skill development to focus on improving the quality of faculty and equipments, initiate industry responsive courses.	▶ Growth has been slow, but considering the high level of industrial progress, this sector has immense potential in all respects. ▶ Demand for quality health care, education, storage, repair and servicing, hotels, trade, tourism etc will create ample opportunities for skilled job.
Balasore	▶ There is potential to improve the fisheries sector by imparting training in Pisciculture and semi processing of sea food. ▶ The climate is suited for floriculture; therefore capacity building to grow flowers and related marketing linkages would help to increase income levels of local people.	▶ Ancillary units related to the plastic industry would require associated trainings, development of pockets where traditional crafts are produced through cluster development or development of rural hubs; processing of sea food are useful training programmes to be considered	▶ Tourism, development of industry would give rise to demand for a number of services like hospitality, education, banking and financial services. Other services like masons, repair and servicing work, electricians, drivers would also be in demand.
Bargarh	▶ The district ranks #1 in terms of per capita agriculture output. Sugarcane in Mahanadi command zone, vegetables, ground nuts and green & black gram are the potential crops. Potential exists for commercialization of HYV paddy. Skill development is required in undertaking commercial agriculture through scientific technology and entrepreneurial skills among the progressive farmers. Storage, processing and marketing infrastructure needs to be strengthened	▶ Presence of raw materials (minerals and water), existence of few large scale industries. Handloom is a thriving sector with immense growth prospect. Skill development in modern design, branding, packaging and marketing will help the handloom sector.	▶ Shortage of skilled manpower in services sector. Existing training infrastructure is not sufficient for providing training on aspects related to accounting, banking, nursing, teaching, drivers, and other self employment options. Urban sector is slated to expand. Measures needs to be taken accordingly by focusing on creating opportunities and skill development in hospitality, trade, urban, electronic parts servicing and repair, health and education. Skill enhancement especially of the health sector functionaries to help them get the required certification would have an impact on the health services in the district.

Bhadrak	▶ Fisheries is an important sector which would flourish if adequate skill development is done to help people undertake prawn rearing; poultry farming can be further expanded since the district is located strategically and can easily supply poultry to the urban areas in the vicinity.	▶ Glass and ceramics and plastic and rubber are some potential areas where skill development can take place. Currently industrial sector not well developed but there is good potential for this district to become epicenter for industrial development due to its proximity to the mining hubs, good road and rail connectivity.	▶ Good scope for skill development since it is the main contributor the district GDP. Areas like hospitality, transportation, health and education sectors would require skilled human resource
Bolangir	▶ Forest produce and NTFPs, cotton, maize, sunflower, mango litchi and guava has potential for commercial production but require facilities for processing, value addition and marketing. Skill development is required in agriculture and allied sector mainly in modern ways of farming, commercial agriculture etc.	▶ Potential to develop the handloom cluster. Skill development is required in management, designing, and marketing aspects.	▶ Strengthening the basic education and create suitable infrastructure for higher and technical education that provides skill development in Education, Healthcare, IT-ITES and Trade and Hospitality sectors.
Boudh	▶ Agro climatic condition suitable for production of food grains. Onion is a potential commercial crop. Skill development interventions to assist changes in cropping pattern from non remunerative traditional agriculture to commercial agriculture. Fishery has a strong potential- skill required in species diversification and riverine fish catching.	▶ Potential in MSME sector- skill development required in food processing.	▶ The sector is under developed. Investment in infrastructure and skill development is required in provision of basic services- healthcare, education, transportation, communication, storage, trade and hospitality
Cuttack	▶ Skills related to Agriculture (vegetables), Fishery, Dairy and Poultry.	▶ Technical skills for power and metal based industries. Design and marketing skills for handloom industries.	▶ Tremendous opportunity for skill development in this sector. Vocational training to focus on skills related to - repair and servicing, drivers, auto mechanics, hospitality, health care and nursing, teachers, retailers, accountants etc
Deogarh	▶ Significant proportion of population depends on agriculture. Skill development is required to enhance productivity and diversify into allied areas like horticulture, integrated agriculture.	▶ Even though presently there is insignificant presence of industry, skills required for small scale industries are required.	▶ Skill development to provide services associated with daily living are required. Presently there is no ITI s which is catering to the need. The district has great potential for tourism. If promoted, it would create demand in several sectors like hospitality, transportation etc.
Dhenkanal	▶ Skills required for undertaking production, value addition and processing for key potential food crops- Mango, Cashew, mushroom and sunflower in addition to HYV paddy. NTFP is an important sector requiring value addition skills.	▶ High future prospects in mineral and metal based and power industries. The district will require skill sets as per the demand of these industries- mostly technical and mechanical.	▶ Tremendous opportunity. Vocational training to focus on skills related to this sector- repair and servicing, drivers, auto mechanics, hospitality, health care and nursing, teachers, retailers, counselors, accountants etc. There is a need to improve the existing infrastructure in hospitality, trade, healthcare and IT/ ITES sector.

Gajapati	▶ Skill development trainings in agro processing focusing on tamarind, pineapple, cashew nut and NTFP products.	▶ Skills related to Food processing value chain. Advanced level skills in handicrafts sector especially focusing on Horn work, Jaikhadi bag, Cane & Bamboo work, Ganjappa Card & Pattachitra Mukha, Broom work & Siali leaf plate making and Tibetan Woolen Carpet etc	▶ Basic services like healthcare and education along with rural self employment driven services- repair and maintenance of electrical and electronics items, drivers, mechanics etc
Ganjam	▶ Skills required in cashew and Kewda processing. Food processing units to maximize the advantage of the district having high milk and meat production. ▶ Ganjam is the largest fish producer in Odisha and is endowed with natural resources to produce marine, brackish water and fresh water fish.	▶ Skill development for using agriculture as the base for industrial development. ▶ Skills would also be required for demand based industries like manufacturing of brake linings, clutch plates, varnish and plastic materials. Potential downstream industries include ceramic and pottery products, welding electrodes, flooring tiles, abrasive papers, particle board and bromine etc. Handicrafts like brass and bell metal, stone, straw and bamboo crafts require further trainings in modern design along with better forward and backward linkage.	▶ Skills required in the areas like healthcare, transportation, IT&ITeS, hotel, trade and hospitality.
Jharsuguda	▶ While agricultural output is good there is scope for improvement since the growth has remained stagnant for the last few years. Skill enhancement to improve productivity and practice integrated farming, are some options that can be explored	▶ Metal and cement industries are present and likely to expand. This is likely to promote ancillary units, thus creating demand for related skills.	▶ Skills would be needed to support occupations in areas like transportation, education, healthcare, construction, trade, hotels and hospitality sector.
Jagatsinghpur	▶ The per person land holding is fairly good in the district therefore there is potential to start integrated agriculture where horticulture and floriculture are also grown. This would require imparting relevant skills.	▶ Large industries are already present in the district with more coming up. With no Government ITI s in the district there is need to set up institutes for technical training to meet the demand of the district. Further growth in the primary sector can have potential for growth of the food processing industries in the MSME sector	▶ There is ample scope to impart training to people to cater to the requirements of the service sector. Skills would be required for a wide spectrum of areas including transport, construction, health care, education, retail etc. The literacy levels are also better than the state average which would mean that there would be better preparedness to receive the training.
Jajpur	▶ High production of groundnuts but no processing centres to extract groundnut oil. Although paddy, vegetables, pulses, oilseeds and fruits are grown in the district the productivity could be improved through the use of modern farming methods and practising integrated farming to better economic returns.	▶ There are iron and chrome mines, therefore, there is potential to develop industries in these areas. There are fewer MSME industries. There is no Government ITI to meet the requirements of the skilled human resource required. The tussar farms can be supported to increase their capacity and quality and also promote silk weaving.	▶ Increase in urbanization in the district would give rise to demand for the service sector including hospitality, transportation, construction and other areas. Skills would need to be imparted to help people utilize these opportunities by providing quality services.

Kalahandi	▶ Food processing of NTFP and other herbal extracts maybe initiated to provide opportunities for economic development. The recent increase in production of fruits can be used to produce processed items like juices, fruit preserves etc.	▶ Currently limited opportunities. However, when ancillary units for bauxite and graphite come up more skilled human resource would be required for which there are currently limited opportunities for training	▶ In addition to other areas of service delivery, there is a need to develop skills in the area of education and healthcare. Existing large number of masons can be given skill enhancement opportunities.
Kandhamal	▶ Skill development to improve productivity in the agriculture sector. Value addition of forest produce, medicinal plants and turmeric.	▶ Very limited industries present. MSMEs related to food processing can be expanded. Setting up of small enterprises appears more conducive in the current scenario.	▶ Skill development in occupations related to daily lives – masons, electricians, health care workers. Eco tourism, if developed, will throw open several opportunities for employment in the hospitality sector.
Kendrapada	▶ Mostly agrarian population. High production of vegetables and fruits, although productivity needs to improve through appropriate skill development and mentoring. Good potential to develop the fisheries sector.	▶ More food processing units can be set up for value addition of vegetables and fruits grown there.	▶ Health care workers are needed to improve medical services for the population. Besides this other skills needed to provide services concerning daily lives would be useful since currently there are no such facilities in the district. This would include repair work, electrician, computer operators
Keonjhar	▶ Skills to improve agricultural productivity and take up integrated farming	▶ Offers immense scope for skill development at all levels including fitters, welders, electricians. A number of ancillary units would be set up which will require skilled human resource. ▶ Silk production can also be strengthened and handicraft clusters developed to increase opportunities for income generation.	▶ With the growth of industries there would be several opportunities of skill development in the service sector – drivers (HMV), banking services, construction, repair and servicing etc.
Khurda	▶ Training in food processing and modern agriculture practices focusing on demand based crops- vegetables, dairy products, fish and meat. Cashew nut processing related training will help in strengthening the cashew processing sector.	▶ Training in real estate and infrastructure value chain- mason, bar benders, architects, interior designers, electricians, plumbers etc. ▶ In addition, training in handicrafts and handloom sector focusing on terracotta, straw craft; Embroidery work, wood carving, appliqué, spinning and polishing etc.	▶ Most important sector. Focus on skill development/up gradation in IT and ITes, Business Process Outsourcing, hospitality management, healthcare and nursing, teachers and trainers, Retail management, courier Service, security service, home delivery service, banking and Insurance sector services, customer relations and sales etc
Koraput	▶ Training and mentoring to improve productivity and crop diversification, Food processing to get better economic returns.	▶ Setting up of more MSMEs would create demand for relevant skills. At present food processing and glass/ceramics are predominant MSMEs in the district.	▶ Short term modular training programmes like mobile repairing, vehicle repair, masonry, driving that will promote employment/self employment. Other areas for which skill development can take place are hospitality, health care and education services.
Malkangiri	▶ Skill development in integrated farming to help increase economic returns to the families.	▶ Food processing especially to promote organic farming products which have a great demand.	▶ Vocational courses in diverse areas to help the youth realize their potential. Human resource in the area of banking and financial services.

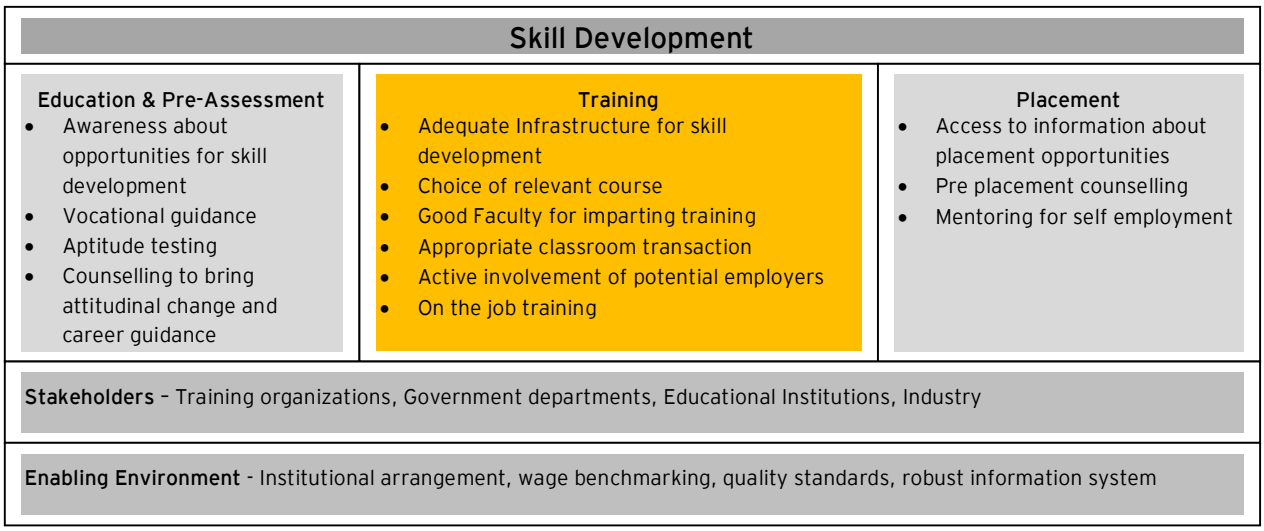
Mayurbhanj	▶ Skill development to encourage integrated farming and get greater benefits from its mango production, which is of good quality.	▶ With limited industry in the district, skill development may be geared towards meeting the demands of skills required by the industry in the adjoining district of Balasore. Associated skills with the food processing industry maybe provided.	▶ There is scope for developing skills in areas like hospitality, transportation, construction and tourism.
Nabarangpur	▶ Skill development to promote integrated farming and improve fisheries would help to promote the primary sector	▶ At present there is a need to set up food processing industries especially to reap the benefits of high production of maize in the district. Training maybe given to the farmers to undertake pre processing such as sorting and grading of maize before it is sent for processing. ▶ The existing handicraft clusters require support in terms of a facilitation centre which will provide services like design inputs, credit facilities and buy back of products made by them.	▶ Skills required in areas like repair work, IT related occupations, banking and financial services, education and health care.
Nayagarh	▶ Food processing related skills; modern commercial farming especially introduction of HYV pulses.	▶ Training in industrial trades will provide employment opportunities in nearby Khurda and Cuttack district. ▶ Handicrafts skills especially brass and bell metal- value addition, design and marketing	▶ Tourism and hospitality management, business correspondents, health care- doctors and nursing, repair and servicing.
Nuapada	▶ Low agricultural productivity indicates a strong need for creating skills focusing on technological adoption. Skill development required in food processing and marketing techniques. The skill development initiatives need to be backed up with supporting infrastructure like storage, communication and marketing facilities.	▶ Industrial sector is under developed. Skills related to ancillary industries and food processing industries (machine operators, automobile repair, electrical and electronics mechanics)	▶ Skills in tourism and hospitality management, health care and education, servicing and repair and banking correspondents etc
Puri	▶ Well endowed for fresh water, brackish water and marine fishery. Skill development in fishery sector focusing on commercial production, value addition, packaging and marketing. In addition, skill development in dairy, mushroom cultivation and processing of fruits and vegetables	▶ Handicraft is a thriving sector with immense growth opportunity. Skill development to focus on commercial design, packaging and marketing skills. Coir industry can grow if skills are developed in modern technology of production.	▶ Skill development in tourism and hospitality is required. Skills- both technical and soft skills required for the entire value chain of the tourism and hospitality industry including support services like health care, travel operators, auto mechanics and drivers.
Rayagada	▶ Skill development training in food processing industries especially related to processing of pulses, fruits (especially pineapple) and cashew processing.	▶ Proximity to Vizag and presence of few small and medium scale industries has created the need for skill development in repair work and servicing, metal based engineering, textiles, electrical and electronic and Glass and ceramic based industry. Mason, plumbers and electricians are in high demand	▶ Hospitality, laundry, mobile repairing and two wheeler servicing etc.

Sambalpur	▶ Skill Development required in the area of technical farming. There is shortage of technical staff in the area of horticulture and Pisciculture also. Further skill can be upgraded for value addition of forest products and horticultural products, setting up nursery, producing ayurvedic medicines from medicinal plants.	▶ Skill up gradation needed in the area of handicraft, garments and textile which includes brass and bell metal, Dhokra casting, Terracotta and Bamboo craft, sarees, and bed linen. ▶ Skill development training can be provided for automobile mechanic, engineers, pump mechanic, diesel mechanic, refrigeration and AC, motor mechanic, machinist, turner and welder, metallurgists, geologists, mine managers, boiler attendant.	▶ Skill manpower like Doctors, Nurse, ANM, bed side attendant, lab technician, housekeeping, chef, waiter, accountants, civil engineers, mason, plumber would be required on a large scale ▶ Chartered Accountants and Cost Accountants in a demand.
Sonepur	▶ Skill development for food processing and commercial agriculture. Paddy processing and betel wine are the key potential sectors	▶ Known for Sambalpuri Sarees- Sericulture is an important for skill development along with advanced design and marketing skills for textile and handloom products	▶ Potential for growing the tourism sector- requires skills upgradation in tourism value chain along with key services like repairing services, healthcare, banking etc.
Sundargadh	▶ Skills for undertaking value addition for agro and forest based produces	▶ Technical skills with focus on apprenticeship with industries/ advanced skills pertaining to fabrication, welding, and industrial plumbing.	▶ Tourism and hospitality sector related trainings; automobile repair, drivers, mason, healthcare and education

9. Recommendations

The state government of Odisha is taking several progressive steps to boost industrial development which will lead to greater demand for skilled human resource both for the industry and the service sector. This study carried out in all the districts of the State showed some patterns both on the demand and supply side. Identification of areas for skill development may be seen from two viewpoints. First, how much is the contribution of each sector to the State GDP. The other from the perspective of people. Although industry and service sectors are showing greater growth in terms of contribution to the economy, it is also a fact that a large majority of population of Odisha depends on agriculture and allied areas. Unless their concerns are taken into account, economic development will not be inclusive. The recommendations have been made keeping in mind both demand for skill development for all sectors (primary, secondary and service) and the existing gaps in training programmes.

1. **Recommendation : The State should address all stages of Skill development in a comprehensive manner**. In order to make a sustainable impact in the arena of skill development it is very important to develop the eco system for skill development. Broadly speaking, skill development has three distinct stages. These are the preparatory stage where individuals get the required education levels and pre assessment is undertaken to ascertain their potential and aptitude for a particular skill. The second phase is the training phase which is usually given maximum emphasis. Different models of training related to pre employment training, in-service training are used to impart training. This phase is significant since focus is required on varied fronts – relevance, course content, infrastructure, quality of training (pedagogy, soft skills, practical training). The third phase is the placement phase where focus is on an individual either for employment or self employment. Here addressing issues related to wages, working conditions, safe migration, financing and mentoring for self employment are essential elements. The impact of skill development can be achieved only if programmes related to each stage are strengthened. Although different departments are implementing programmes related to the three areas, the impact would be greater if different stakeholders are involved in planning for all three stages in a coordinated manner.



2. **Scope of Niyukti Mission should be increased to provide a better enabling environment**

for skill development : Odisha state government has set up Niyukti Mission to make an institutional arrangement for skill development. It is already coordinating with various departments as well as district officials to streamline skill development initiatives. Some specific initiatives which can be taken up by the Mission to further streamline its activities are as follows :

- Develop a robust system of information collection and dissemination. At the time of visits, the study team found that there was no system of updating the information with regard to the employment of human resource for the industries. In the absence of relevant data it is difficult to ascertain need for specific skill requirement and plan for the same.
- In a similar way, although training is being imparted by different government departments, there is no one-stop shop for accessing information with regard to the training capacities through the schemes for each district. Nabarangpur is developing an interactive website that provides information from various departments. This may be replicated in other districts also.
- Strengthening of an institutional mechanism to develop new and existing programmes related to the three stages. Especially focus on strengthening the Directorate of Vocational Guidance and the Employment Exchange. The Directorate of Vocational Guidance has a vital role to play in creating awareness about different opportunities for students with different levels of education and also conduct school level activities to inculcate respect for different occupations, especially those related to the primary sector. Similarly, the scope of work of the Employment Exchanges can be enhanced by equipping them to have better interface with the industry, improving their counseling programmes and using technology to provide better access to information.
- Set up a portal should be where information can be accessed by both job seekers and job providers and it provides details of training programmes offered by different departments.
- Identify target population for skill development and use different models for skill development and skill enhancement through existing government schemes for skill training and private training providers.
- Advocacy in areas like wage benchmarking, regulation of placement agencies to contain risk to exploitation of employment seekers within and outside the State.

3. **Provide incentives to Small and Medium Industries** to set up industries in areas where there is abundance of certain crops. Odisha has the advantage of being the significant producer of some crops but it is not deriving an advantage by developing agro based industries in these areas. For example Nabarangpur is the biggest producer of maize in Asia but there are hardly any food processing industries to build on this resource. Some other similar examples are given below:
    i. There is a surplus production of Mango in Angul and Dhenkanal districts, but due to lack of processing industries, the fruits are sold without any value addition at a throw away price.
    ii. Ganjam district is a significant producer of Kewda. There are few Kewda clusters in the district but this has not been explored at a commercial scale.
    iii. Cashew is an important crop with surplus production in many districts; however there are very few processing units for maximizing commercial utilisation of this product.
    iv. Kandhamal is known for production of organic turmeric of very high quality which has not been commercially utilized.

v. Although a surplus State in terms of Marine fish and prawn cultivation, value addition, processing and marketing of fish products remains limited.

The State Government should have a policy to provide incentives to the relevant industries to have a set up in these areas. These industries would be keen to impart relevant trainings to the local people for their own advantage as well as create a value chain.

4. **Identify different areas for skill development related to the primary sector that help in improving livelihood opportunities** : The study team found that although majority of the populace is engaged in the primary sector, opportunities for training are largely through the government schemes. In the absence of better economic returns, many individuals engaged in agriculture and allied areas are giving up their occupation and moving to unfamiliar areas, very often reluctantly. The study team was able to identify some areas where skill development can impact a large number of people :
   - It was widely shared that integrated farming would help to improve the economic status of people. The existing training opportunities in this area appear to be inadequate. There is a lot of scope to introduce modular courses for the youth as well as women. The existing infrastructure of ITIs and other educational institutions can be utilized for this purpose.
   - Services related to agriculture and animal husbandry are needed in rural areas. There is a lot of scope to impart training to the youth in areas like para vets, para agriculturists, grass root agronomists who can seek self employment. By acquiring such skills there are better chances of more individuals taking advantage of schemes being offered through APICOL. Agri based companies may also be invited to undertake skill development in this area as part of their CSR/skill development initiatives.
   - An indicative list of possible areas of skill development is given below.

Areas for skill development	Skills required	Districts
Food processing	Agro product making; fruit and vegetable processing, cereal, pulses and oilseed processing (milling and baking)	Angul, Bargarh, Bolangir, Dhenkanal, Gajapati, Jagatsinghpur, Jajpur, Kalahandi, Kandhmal, Kendrapara, Malkangiri, Nabrangpur, Nayagarh, Nuapada, Puri, Sonepur, Sundargarh
Agriculture	Repair, maintenance and operation of tillage/irrigation/farming/ threshing/harvesting/post harvesting /processing equipment	All districts mentioned above
Fisheries	Operation, maintenance of fishing boat engines, crab culture, fish feed preparation, fish processing, value added seafood product	Ganjam, Balasore, Bhadrak, Boudh, Cuttack, Puri.
Animal husbandry	Dairy development, entrepreneurship for dairy development, poultry	Boudh, Bargarh, Bhadrak, Kendrapara, Khurda, Puri,

	dressing, meat processing, vaccinator, artificial insemination.	Sonepur
Integrated farming	Beehive manufacturing, honey collection and producing, bee wax production Landscaping and floriculture	Deogarh, Malkangiri, Keonjhar, Jharsugura, Jagatsinghpur, Mayurbhanj,
Others (Fragrance – Kewra)	Distillation unit processor, solvent extraction operator	Ganjam

5. **Review and identify success factors of placement linked training programme to maximize its benefit** : The state government has **introduced placement linked training programmes** in a number of districts. This has received a good response. Many of these are imparting high quality training to the participants after screening them for their aptitude. Although the scheme was not examined in detail, but interaction with people showed a mixed response. Many of these training programmes help the trainees get employment in other states. Often, though not always, there is reluctance to shift base to other states especially when the exposure level has been limited. It is suggested that the scheme be reviewed and success elements identified which can be replicated. It is also suggested that the agencies identify the local requirements and impart relevant trainings. For instance during the study in many districts it was found that there were several vacancies of para medical workers. Some of them shared that even though they had taken training from some private institution they were not getting employment since their certificate was not recognized. This leads to a situation that despite availability of funds through schemes like NRHM, there is insufficient availability of relevant human resource. The training agencies can consider conducting training of such people so that they acquire skills that are suited to their job description. This would not only provide employment opportunities for a number of individuals within the district but it will also make a positive impact on the health services. It may initially be piloted in Bhadrak and Kendrapara where our team observed a heavy shortage of health workers at the PHC level.

6. **Greater involvement of the Industry Associations to facilitate skill development by the industries**: It is increasingly being recognized that industry is a very significant stakeholder as far as skill development is concerned. Barring a few sporadic examples, their role in developing need based courses is still at a nascent stage. Sector Skill Councils (SSCs) are being set up to play an important role in defining skill development requirements and lay down quality standards. In addition, as part of the Vocational Training Improvement Programme, there is provision for active participation of the industry at the ITI level by way of the Industrial Management Associations (IMCs). Industrial Associations would need to ensure effective participation of industries in these spaces provided for the industries to get involved. They can also play a more active role in creating opportunities for apprenticeship even for the graduates from ITI s.

7. There are some districts where despite best efforts; it is not possible to get skilled human resource since there is scarcity of institutions for higher education. Malkangiri is one such

district. There is shortage of trained persons in a number of fields – education, agriculture, financial experts - because there are very few or no institutes within the district to develop this resource. The district has to depend on other districts for filling up these vacancies whereas there are a number of interested youth waiting to get opportunities to get educated. We recommend that institutions for higher education should be set up on priority in these districts and the appointments for the vacancies are put on fast track.

NSDC can play a vital role in facilitating the implementation of some of these recommendations. These are outlined below:

Actionable points for NSDC :

	Programmes for support by NSDC
SHORT TERM	▶ Support organizations to impart training to potential youth in few districts in areas related to primary sector to enhance their capacity for self employment e.g. **para agriculturists, para vets**. The training should be designed in a manner that it includes elements of theory, practical, mentoring, soft skills like motivation. This cadre would provide the vital linkage between the farmer and the government schemes. Some possible districts this could be done (to begin with) are Bargarh, Sonepur, and Boudh. Some potential organizations for partnership for skill development in this area are BAIF, MS Swaminathan Foundation. ▶ Develop a **tool for identification of local requirements of courses for the ITI s** from the point of view of local industry and service sector.
LONG TERM	▶ **Pilot some non conventional courses** e.g. agro based courses in some ITIs across districts especially to enhance their capacity to create a value chain; training of ANMs to bring them up to a level where they can be employed at the PHCs. ▶ Develop a **centre of excellence** to support the tourism sector. This COE should provide comprehensive training in areas like – housekeeping, front office, and interpreters. This maybe piloted in Puri district where tourism is well developed. ▶ Take proactive measures to facilitate active participation of representatives in different **Sector Skill Councils** in relevant districts. ▶ Facilitate creation of at least one **rural hub** in the state by providing complementary skills to the local people and linking them with the state/national level organizations. To begin with NSDC may explore possibilities of creating rural hub in the following areas/districts ▶ Support/promote growth of Handloom sector in Cuttack district through rural hub: The district has a thriving handloom sector which has seen growth although the number of looms in other parts of the State has shown a decline. A visit to the Athgarh cluster however showed that the weavers lack skills related to their design, dye making. Most of them still depend on the private master weavers and were not able to negotiate wage related issues. Sonepur is another district that maybe considered for creating a rural hub since it is known for the traditional Sambalpuri sarees the weave of which maybe used to diversify products. NSDC through its partners and design institutes can promote this sector through structured training programs and developing strong marketing linkages to sustain the skill development initiative. Some leading design institutes in India are – Indian Institute

of Craft & Design (IICD) Jaipur, National Institute of Design (NID) Ahmedabad, National Institute of Fashion Technology (NIFT), Srishti School of Art Bangalore; Symbiosis Institute of Design. The hub may offer the following services

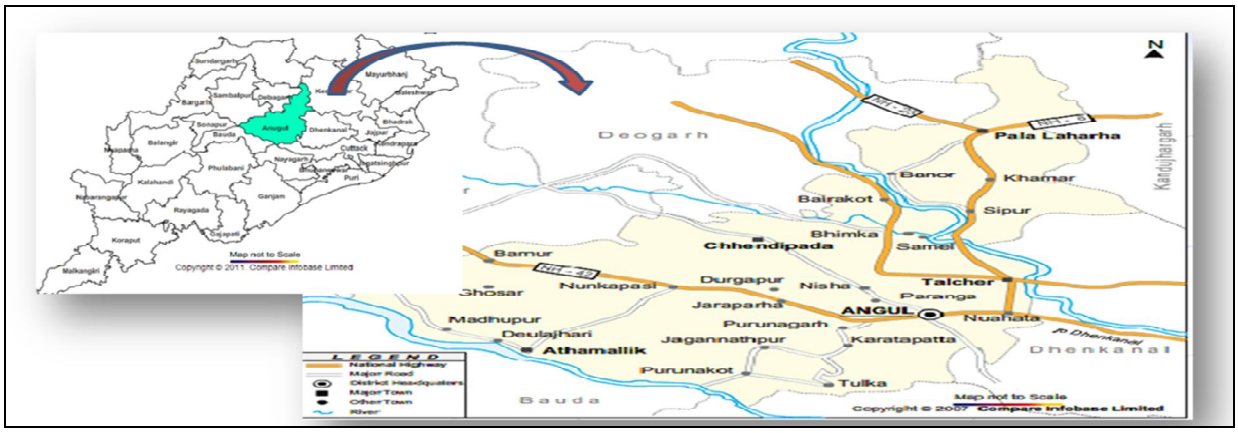
- Improvement of technology, skills, quality, market access, access to capital
- Set up common facilities for training, raw material distribution, quality control, design and product development, complementing production processes.

- Ganjam district is one of the important agrarian centers in the State. The district is a leading producer of food grains, dairy product, meat and eggs and is the highest producer of inland and marine fishery. Rural hub in the district could promote modern systems and techniques of production with value addition, processing & packaging techniques and create linkages with food processing industries and organized retail chains.

10. District wise skill gap assessment

10.1 Angul

Angul District is spread over an area of 6375 Sq Km which forms approximately 4.1 percent of the total geographical area of the State. Administratively, the district is divided into 4 subdivisions (Angul, Talcher, Athamalik and Pallahara), 8 blocks and 1661 villages. Angul is surrounded by Sundargadh and Keonjhar districts in the north, Dhenkanal in the east, Sambalpur in the west and Cuttack in south.



District Information	Angul	Odisha	Source
Area (in Sq Km)	6375	**155,707**	Census 2011 provisional figures
percent share of State Geographical area (Ranking)	4.09% (11)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	8	**309**	Census 2001
No of GPs	209	**6234**	Census 2001
Total no of inhabited villages	1661	**47529**	Census 2001
Forest area as percent of total geographic area	42.63%	**37.66**	Census 2001

Figure 8: District Map of Angul

10.1.1 Demography

As per the provisional census figures for 2011, total population of Angul is 12.72 lakhs, constituting 3.03 percent of the State's total population. The urban population is 13.95 percent of the total population making Angul the 8th most urbanized district in the State. With population density of 199, Angul is amongst the least densely populated districts in the State, much below the state's average of 269 persons per sq km. It ranks 28th in terms of sex ratio (942 females per 1000 males). With 59 percent of the population in the working age (15-59 years), the worker participation rate is 39.80 percent.

Performance of the district is however good in terms of human development indicators. The district ranks 6th on the HDI. Per capita district domestic product for year 2004-05 at current prices was Rs. 55,937, the highest in the State and the district is ranked 12th in terms of food security output index.

Population	Angul	Odisha	Source
Total population (in lakh)	12.72	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	6.55	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	6.17	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	3.03% (16)	**NA**	Census 2011 provisional figures
Density of population	199	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	11.55%	**13.97%**	Census 2011 provisional figures
Urban population %	13.95%	**14.99%**	Census 2001
SC population %	17.19%	**16.53**	Census 2001
ST population %	11.67%	**22.13**	Census 2001
Sex ratio	942	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	59.08%	**58.38%**	Census 2001
Worker participation rate	39.80%	**40.03%**	Census 2001
Share of primary sector to total workers	58.37%	**64**	Census 2001
Proportion of agriculture laborer in workforce	27.97%	**34.53**	Census 2001
Human Development Indicators	**Angul**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.663 (6)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.637 (4)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	55937 (1)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.485 (12)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 12: Angul - Socio economic Indicators

10.1.2 State of education

The literacy rate of Angul has been marginally better than the State's average both in the 2001 and 2011 census. Average literacy rate of Angul in 2011 (as per provision census figures) is 78.96 percent compared to 68.8 percent in 2001. Gender wise male and female literacy is 87.06 percent and 70.44 percent respectively. For 2001 census, same figures stood at 81.4 and 55.4 showing an increase in literacy level for men by just over 5 percent whereas the literacy rate of women has risen by over 15 percent since 2001. There has been steady improvement in basic education scenario. Out of the total number of children in school going age, 4.02 percent children were out of school in 2009. The drop out rate has shown an improvement both at the primary and upper primary school levels. At primary level it showed an improvement from 10 percent (2006-7) to 3.43 percent (2010-11) whereas the corresponding figures for upper primary level school are 21.14 percent and 6.7 percent.

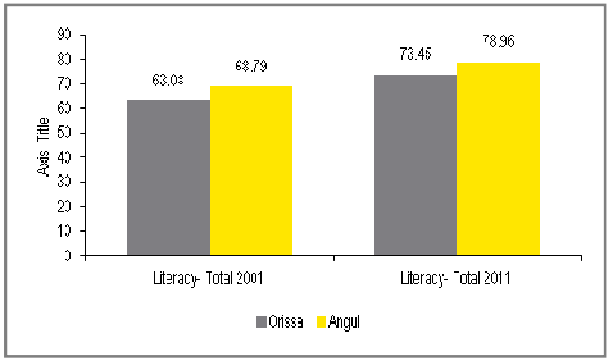


Figure 9: Literacy Rates for Angul District

For higher education, there are 37 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. The total sanctioned strengths in each of these streams were 5312, 3072 and 640 respectively. Data on admissions for the year 2011-12 suggests that approximately 19 percent of the seats were vacant. In terms of streams, there is higher vacancy in commerce stream (48 percent) followed by science (25 percent). The number of students pursuing Arts is the highest. At the degree level, there are 22 colleges which mainly offer engineering courses. The Directorate of Higher Education (DHE) is in the process of collecting data on year wise enrolment into these colleges. Data published on DHE website however suggests that maximum enrolment is in Arts followed by science and commerce courses.

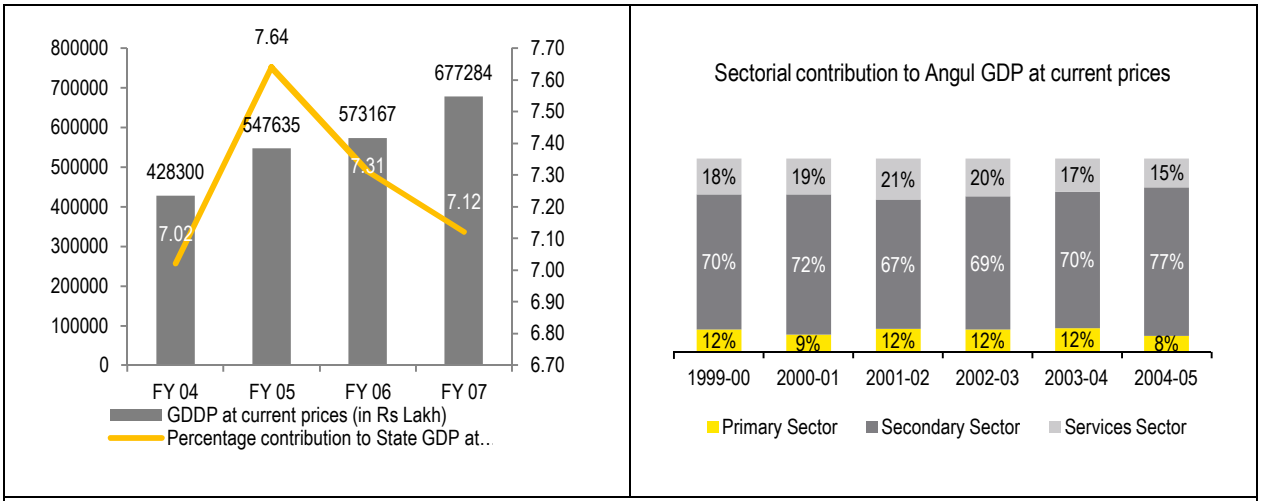
On the technical front, Angul district does not have any degree engineering college. There are however two degree colleges in its vicinity in the Dhenkanal district, and Bhubaneswar, the hub for technical education is located at a distance of 160 Km. There are 4 polytechnic institutes offering engineering and other diploma courses. Total intake capacity in these polytechnic institutes is approximately 1414 students per year. Major courses offered are electrical, civil, mechanical, metallurgy and mining engineering. Angul has one pharmacy college that has the intake capacity of 60 seats.

Angul district has a Government ITI located in *Talcher*, which is also a centre for excellence (CoE) offering courses in production and manufacturing sector. In addition to CoE, the ITI offers courses in 8 trade including stenographer (English), electrician and fitter. Total annual intake capacity of the ITI is 301. The ITI also offers hostel facility with a capacity to house 86 students that attracts students other nearby districts as well. In addition to the sole government ITI, there are 32 private ITCs spread across 7 out of the 8 blocks of Angul District. Kishorenagar is the only block in the district which currently does not have any vocational training institution. The private ITCs include a state of the art ITC run by OP Jindal group. The ITC opened by Jindal offers courses to land displaced families with some seats reserved for Angul city residents. Overall the private ITCs offer training in 17 trades with an annual intake capacity of 4700 students and primacy to electrician, fitter and data entry operator courses.

10.1.3 Economic profile

As per the Economic Survey 2010-11, Angul is among the top five districts in the State with an Average annual growth rate of 9.9 percent for the period 2000-01 to 2006-07. Angul also reports the highest per capita district income. As per the data published by the planning commission, in 2004-05 (current prices), Angul was the highest contributor to the State Domestic Product. Per capita income of Angul in 2004-05 was Rs. 55,937, much above that of the State's per capita income of Rs.18,636/-.

The chart below shows the growth in gross district domestic product over the years at current prices. The chart also shows that the share of GDDP to state has been above 7 percent throughout reaching a peak in 2005 and stabilizing at 7.12 percent in 2007. Sectoral contribution to Angul district GDP for year 1999-00 to 2004-05 shows that the industries sector has been the highest contributor to the district GDP.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 10: Gross District Domestic Product (at current prices) of Angul

Agriculture

Although in terms of share of total workers, agriculture sector employs almost 58 percent of the total workers, the sector has not progressed much. The contribution of agriculture to the district GDP shows a decreasing trend. In 2003-04 the contribution of agriculture to district GDP (at current prices) was 12 percent, which reduced to 8 percent in 2004-05. As per Odisha agriculture statistics report 2008-09, forty eight percent of the total geographical area or almost 216 thousand hectares of land was brought under cultivation in the District. Paddy is the primary crop with a gross cropped area of 98.9 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruits.

As per the more recent data (2010-11) shared by the District Agriculture office (DAO), 32 percent of the total geographical area in the District is cultivable. While paddy remains the major crop across the district constituting approximately 42 percent of the total cultivable area, the production is not commercial and is done for subsistence purpose only. In terms of yield of paddy, the district is ranked 24th with a yield of 1679 Kg per hectare. Considering that highest proportion of cultivable land in Angul district is high land (58 percent of cultivable land) followed by medium land (26 percent) and low land (16 percent), diversification of crops to increase the area of cultivation under non paddy crops including maize, groundnuts and vegetables may be considered an option. Chendipada block is already considered an agriculture potential block with a large area under vegetable cultivation. Since a large part of the District is already covered under forest (43 percent) and the remaining area progressively being acquired for mining and industrial purpose, cultivable area is likely to reduce in the coming years.

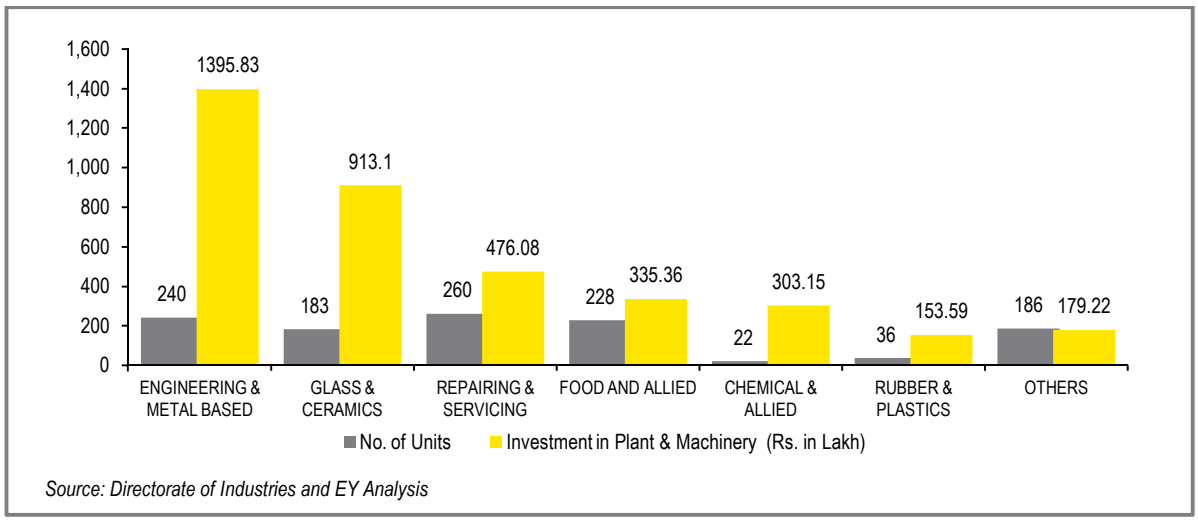
As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 14th with a per capita agricultural output of 1275.Vegetables contribute highest to the total agricultural output of Angul with a value of 362.96 (2008-2009), followed by food grains (186.16) and other cereals with (138.83) (all figures in thousand metric tonnes). With an average landholding of 1.16 hectare, landholding pattern in the District is appreciable with majority (more than 59 percent) of the farmers having more than a hectare of land holding.

Industries

Angul District is one of the most industrialized districts in the State of Odisha. Angul is one of the few districts in which both large and small scale industries co-exist and provide considerable contribution towards the GDDP. In terms of factor endowment, the district is located strategically on the Bhubaneswar-Chowdwar-Rourkela Industrial Corridor and is well connected to Bhubaneswar and Cuttack, the Paradeep port and all the major Industrial and mining hubs of Odisha through a good network of national and State highways and railways. With the State's largest concentration of coal and Rivers Mahanadi and Brahmani flowing through the District, Angul is one of the hotspots for large scale industries especially steel and power majors. Industry in this district contributes to a total of 76 percent of the GDDP.

In terms of Investments into large and medium scale industries, Angul is currently ranked 8th in the State, with an investment of Rs. 68 billion by 2010 and which constitutes 7.1 percent of the total investment in large and medium scale industries. The progress of Angul district during last 10-15 years has been significant in terms of growth of Industries. In addition to NALCO, NTPC and MCL, several large scale industries including Jindal, Monnet and Essar have started operations in the District. Many others including SSL Energy Ltd, Mahanadi Aban Power Co. GMR Energy etc have signed MoU with the Government of Odisha and are in various stage of establishment.

In terms of attracting investments and setting up Micro and small scale industries, Angul is ranked 5th in the State. MSME investment in Angul was 2.8 percent of the total investments made in the State till March 2010.



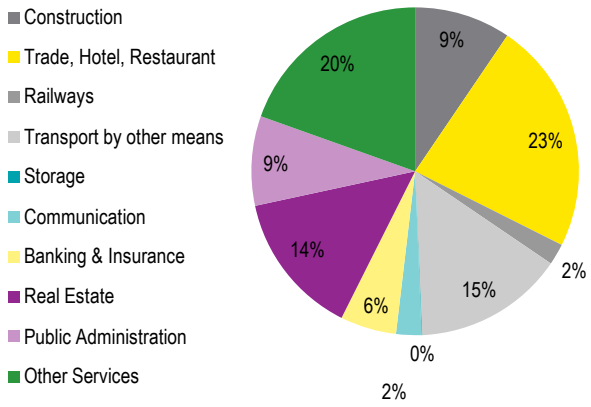
Source: Directorate of Industries and EY Analysis

Figure 11: MSME Investments in Angul till 2010

The ancillary industries working in the engineering and metal space has clearly the highest investment followed by glass and ceramics. Food and allied based industries does not feature prominently in the MSME space for Angul. Others include Paper products and Textile industries which has a low concentration.

Services

The growth in the services sector has been quite slow in Angul District. In a contrast to the state average where contribution of the services industries has been above 50 percent in 2004-05, the contribution of services sector to Angul GDP has been 15 percent in the same year. The composition of service sector at current prices for year 2004-05 is shown below.



Within the services sector, Trade, Hotel and Restaurant is the leading contributor to the service sector (23 percent) followed by other Services (20 percent), Transport by other means (15 percent) and Real Estate (14 percent).

Source: Planning Commission, Government of India (sourced from planning commission website)

Figure 12: Composition of Service Sector- Angul 2004-05

10.1.4 Skill Gap Assessment for Angul

The total workforce demand for skilled jobs in Angul district is expected to grow from a level 2.2 lakhs in 2011 to reach 2.9 lakhs in 2026. Around 58 percent of this total workforce demand is expected to come from the secondary sector, followed by tertiary sector (26 percent) and primary sector (16 percent). The major sectors which are expected to create a demand for skilled jobs in 2026 are: unorganized sector (including tobacco industry) – 1 lakh; Agriculture – 0.5 lakh; and Construction Materials & Building Hardware (including metals) – 0.4 lakh.

Over the period 2011-2026, the proportion of **skilled** workers in the gap is expected to grow on a continuous basis, while that of **semi-skilled** workers is expected to reduce during the same period. The CMIE Capex database and secondary research indicates relatively higher number of capital projects being announced for power generation and transmission during past two years. As a result, demand for labor for this sector is expected to rise significantly in the next 15 years.

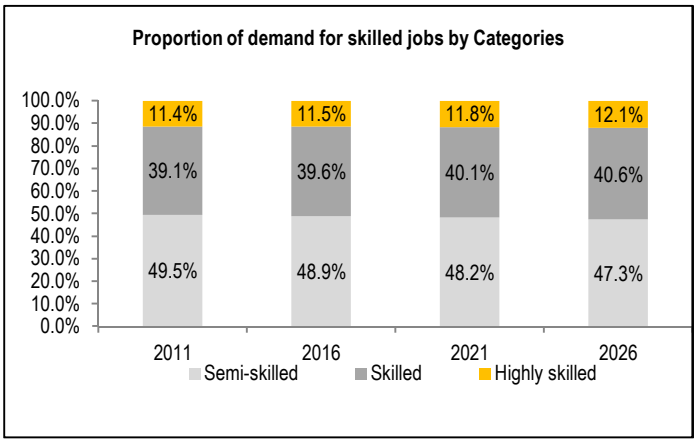


Figure 13: Proportion of demand for skilled jobs by skill categories- Angul

	2011	2016	2021	2026	Percent of total demand for skilled jobs in 2026
Unorganized sector:					
Semi-skilled	48,236	51,854	55,743	59,925	
Skilled	30,147	32,409	34,840	37,453	
Highly skilled	6,029	6,482	6,968	7,491	
Total demand for skilled jobs	84,412	90,745	97,551	104,869	36
Agriculture:					
Semi-skilled	24,552	24,123	23,702	23,288	
Skilled	16,368	16,082	15,801	15,525	
Highly skilled	8,184	8,041	7,901	7,763	
Total demand for skilled jobs	49,104	48,246	47,404	46,576	16
Construction materials & building hardware					
Semi-skilled	10,654	12,124	13,796	15,699	
Skilled	13,386	15,233	17,334	19,725	
Highly skilled	2,459	2,798	3,184	3,623	
Total demand for skilled jobs	26,499	30,155	34,134	39,047	14
All sectors:					
Semi-skilled	106,478	115,064	125,117	136,991	
Skilled	84,013	93,225	104,114	117,396	
Highly skilled	24,541	27,162	30,546	35,051	
Total demand for skilled jobs	215,032	235,451	259,777	289,438	100

Source: EY Analysis

Table 13: Skill-wise demand for sectors where high demand is foreseen- Angul

On the supply aspect, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

During the period 2011-2026, the demand supply gap of the district is expected to narrow down by 0.2 lakh in totality (assuming that the current levels of available educational infrastructure and utilization remain the same). However, the district is expected to create additional requirement of approximately ~12,300 semi-skilled and ~10,500 high skilled jobs during the next 15 years.

A major proportion of the need for this incremental job requirement for skilled labor is expected to come from the unorganized sector (21 percent); construction materials, building & hardware (19 percent); education & skill development (14 percent) and healthcare (14 percent) sector.

As far as the highly skilled workforce is concerned, the highest requirement is expected in case of banking, financial services & insurance jobs (42 percent) and IT & ITeS (12 percent).

The secondary research on the district also indicates power companies' announcement to set up ITCs in the district creating semi-skilled workers. The district is expected to have a surplus semi-skilled human resource indicating an increasing concentration of available semi-skilled labor in this district of Odisha.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	560	346	156	1,062
Auto & Auto Components	(42)	(34)	(24)	(100)
Chemical & Pharmaceuticals	(93)	(68)	(38)	(199)
Construction materials & building hardware	(1,856)	(1,184)	(374)	(3,414)
Electronics & IT Hardware	(202)	(137)	(60)	(399)
Food Processing	176	115	144	435
Furniture & Furnishings	(272)	(200)	(127)	(599)
Leather & Leather Goods	1	2	3	6
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	(378)	(297)	(216)	(891)
Unorganized sector	(5,505)	(4,047)	(2,518)	(12,070)
Banking, Financial Services & Insurance	210	628	1,379	2,217
Building, Construction & Real Estate Services	(81)	(63)	(45)	(189)
Education & Skill Development	410	713	1,160	2,283
Healthcare	131	403	818	1,352
IT & ITES industry	32	289	679	1,000
Media & Entertainment	(802)	(651)	(400)	(1,853)
Tourism, travel, hospitality & trade	(2,178)	(1,882)	(1,370)	(5,430)
Transportation, logistics, warehousing & packaging	(677)	(590)	(490)	(1,757)
Total	(10,565)	(6,656)	(1,322)	(18,543)

Source: EY Analysis

Table 14: Total incremental demand supply gap for skilled jobs by sectors- Angul

10.1.5 Development potential and Stakeholder perception

As discussed earlier, Angul District is one of the better performing districts in Odisha both in terms of socio-economic and human development indicators. Presence of high quality coal and some large scale public sector industries has propelled growth which is reflected through its high per capita income and human development index.

The agriculture sector while not a major contributor to the GDP of Angul is still the main source of livelihood as almost 58 percent of the population directly depends on it. The slow progress of agriculture sector is a concern area. Statistics shows that while paddy is the main crop, it is not grown at a commercial scale. The proportion of high land is increasing and considering that almost 43 percent of the geographical area is under forest, with growth in area under mining and industries, there is a need for improving the productivity and adopting a progressive cropping pattern. Skill development in agriculture has been a neglected area. While the department provides various training and extension services through *Krishi Vigyan Kendra*, it is still insignificant in terms of total requirement. Moreover, the educated youth do not prefer working in agriculture and as a result there is always a shortage of skilled human resource. In order to change the perception of the population on agriculture and reap the benefits of development, it is important to develop the sector in a holistic way.

In order to improve agriculture there is a need to improve the cropping pattern making the selection of crops more demand responsive and create adequate skills and infrastructure to improve productivity. Creating forward and backward linkages is essential to the growth of primary sector in the District. Access to modern technology and skills, improved seeds and fertilizers and credit network is important. Availability of cold storage, food processing units and marketing network is essential to promote agriculture based business. Angul has surplus production in some areas but is not able to take the benefit at a commercial scale. Groundnut produced in the District is used as seed in the coastal areas. There is a surplus production of Mango, which due to lack of proper cold storage facilities and marketing linkages are sold locally at cheaper rates. Cashew, lemon and banana are other important crops which are not exploited commercially. Growth of industries will create additional demand for food grain, vegetables, dairy products, eggs, fish & meat product and fruits. This presents a huge opportunity for the district to invest in primary sector and promote food processing and agriculture based industries.

The situation in Angul is peculiar. While there are parts of the district which are totally industrial and mining belt, there is another part of the district which is totally forested and tribal dominated. The divergence is present in almost every aspect including literacy rates and other developmental indicators. In terms of employment, the industry sector consisting of manufacturing- organized and unorganized, contributes to the largest proportion of skilled man power demand in next 15 years. While the industrial progress in the district has created huge demand for human resource, interactions with industry representatives suggests that there is a clear skill gap in terms of demand and supply. It was reported that while local people are good in undertaking maintenance jobs, they are not skilled enough to do quality fabrication. It was also stated that there is a need to develop other courses including soft skills- receptionist, office secretary, data operators etc in addition to training in advanced plumbing, welding and automation and semi automation skills. Interactions with students showed that they prefer working in the public sector as the salary is good compared to private sector companies. In the private sector, most of the jobs are outsourced to the contractors, who pay very less and hire as and when required on short term assignments.

With large scale industries setting up there is a huge potential and requirements for setting up ancillary and downstream industries. This will require policy guidance and incentives for the entrepreneur to set up downstream/ancillary units. Agencies like IDCO and IPICOL may play a greater role in creating a favorable condition for attracting more investments towards MSME industries especially in food processing and ancillary and downstream industries. The district has 3 handicraft clusters- in terracotta, brass and bell metals and bamboo and cane. While there is a scope, these clusters have not been developed at a commercial scale. In addition to these some parts of *Athamalik* can be developed in handloom owing to their proximity to Sambalpur and availability of local skills. The development of these clusters will require advanced training and technological support with market linkages.

As mentioned earlier in the report, progress in services sector has been quite slow in the district. With growth in industries, it is expected that the urban centers of Angul and Talcher will grow further creating a lot of demand for skilled people in the in hospitality & trade, healthcare and education sector. Angul does not have many quality hotels in spite of the demand created by industries. Hospitality industry may get a boost especially in *Angul, Talcher* and *Chendipada* region. There is a potential for developing *Satkosia* as a major tourist destination. The hotel industry is thus a major area that has a potential. Similarly, with growth in urban population and increase in number of salaried class, there will be demand for private hospitals, educational institutions and retail chains etc.

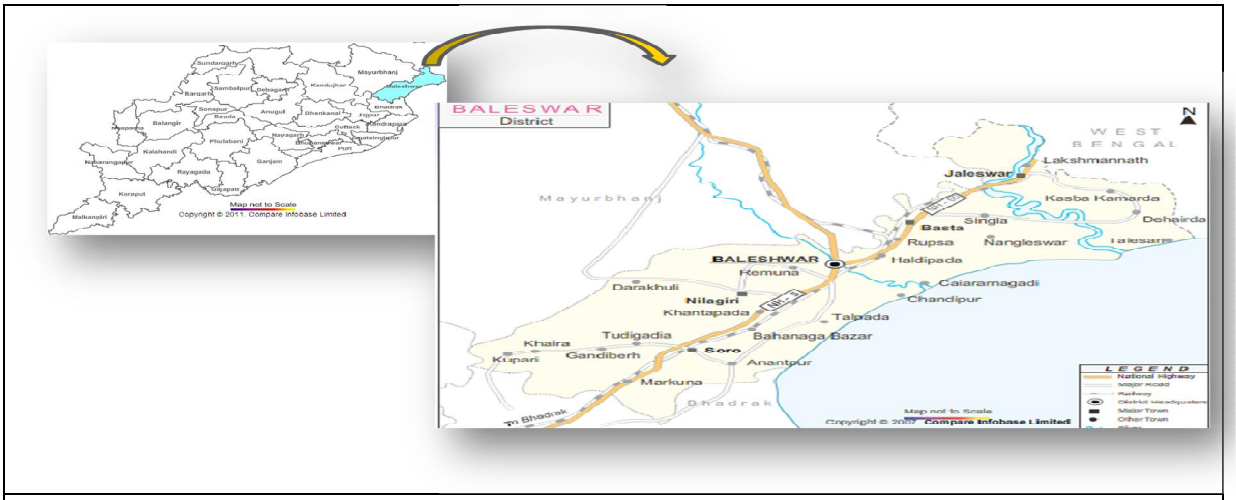
Angul already has a good vocational training infrastructure. The seat utilization rates in private ITCs are very good compared to other districts. There could be various reasons for this but one of the important reasons is absorption of the ITI trained people within the district. In terms of semi skilled human resource, Angul has a surplus unlike most of the districts of the State. In addition to technical courses, there is a good potential of training drivers for heavy as well as light medium vehicles. Considering that hospitality, trade, retail and healthcare industries have a prospect, special focus should be given on these skills. There is huge scope to improve the training infrastructure in the agriculture space. Skill development in agriculture should include training on modern farm equipments, food processing and marketing aspects.

Interaction with the community members in the villages shows that level of awareness is good and people understand the prospects of getting employment in the industries. The awareness does not match the knowledge on means or facilities available on acquiring different skills. ITI education is considered costly without adequate job opportunities. Most of the people mentioned that agricultural area is decreasing and the low lands is being converted into high land so that more of vegetables and cash crop can be grown. There is however lack of processing facilities and market linkages and hence agriculture is not profitable.

- **Primary sector:** Mango, groundnut (used as seeds in coastal districts), banana, cashew, vegetables (in selected blocks) and forest based products. Skill development is required in scientific management and production, value addition and processing along with infrastructure in terms of forward and backward linkages.
- **Secondary sector:** Growth potential in metal, power and mining industries along with downstream and demand based industries. Surplus workforce in the semi skilled category indicating low absorption owing to poor quality of technical skills and limited intake from local industries. Skill development to focus on improving the quality of faculty and equipments, initiate industry responsive courses.
- **Services Sector:** Growth has been slow, but considering the high level of industrial progress, this sector has immense potential in all respect. Development of urban centers of Angul, Talcher and Chendipada; demand for quality health care, education, storage, repair and servicing, hotels, trade, tourism etc will create ample opportunities for skilled job. The existing VT institutions should start focusing on some of these aspects as well.

10.2 Balasore

Balasore district is spread over an area of 3806 Sq Km which forms approximately 2.44 percent of the total geographical area of the State. Topographically, the district has three prominent divisions- hilly terrain on the north-west, the inner alluvial plain and coastal belt on the east measuring 81 Km. Administratively, the district is divided into 3 subdivisions, 12 blocks, 289 Gram Panchayats and 2587 villages. Balasore is surrounded by Paschim Banga in the north, Bay of Bengal in the east, Mayurbhanj and Keonjhar districts in the west and Bhadrak district in south. It has a launch station for rockets at Chandipur which has been operational since 1989.



Map Courtesy: Maps of India

District Information	Balasore	Odisha	Source
Area (in Sq Km)	3,806	**155,707**	Census 2011 provisional figures
percent share of State Geographical area (Ranking)	2.44% (20)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	12	**309**	Census 2001
No of GPs	289	**6234**	Census 2001
Total no of inhabited villages	2587	**47529**	Census 2001
Forest area as percent of total geographic area	8.66%	**37.66**	Census 2001

Figure 14: District Map of Balasore

10.2.1 Demography

In terms of population, the District constitutes 5.52 percent of the total population of the State and is 4th highest. Total population of Balasore as per 2011 census is 23.17 lakhs of which males and females were 11.84 lakhs and 11.33 lakhs respectively. There is a change of 14.47 percent in the total population compared to total population as per 2001 census. The initial provisional data (Census 2011) suggest a population density of 609 in 2011 making Balasore the fourth most densely populated District of Odisha. With regards to sex ratio, the district fares poorly compared to other Districts and the State average. The sex ratio for Balasore as per 2011 provisional census figures is 957 females per 1000 males, much below the State average of 978 females per 1000 males. In terms of social composition of the population, SCs constitute approximately 19 percent of the total population while STs form 11.28 percent of the total population. With about 89 percent rural population, Balasore is predominantly a rural district (as per census 2001).

The population in the working age group constituted 58 percent of the total population. Work participation rate of the district is 31.87 percent. Out of the total workers 75 percent (approx.) are main workers and 25 percent (approx.) are marginal workers. With a human development index (HDI) of 0.559 and Gender development index (GDI) of 0.519 Balasore ranks among the bottom half districts of Odisha.

Population	Balasore	Odisha	Source
Total population (in lakh)	23.17	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	11.84	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	11.33	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	5.52% (4)	**NA**	Census 2011 provisional figures
Density of population	609	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	14.47%	**13.97%**	Census 2011 provisional figures
Urban population %	10.87%	**14.99%**	Census 2001
SC population %	18.84%	**16.53**	Census 2001
ST population %	11.28%	**22.13**	Census 2001
Sex ratio	957	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	57.91%	**58.40%**	Census 2001
Worker participation rate	31.87%	**40.03**	Census 2001
Share of primary sector to total workers	67.00%	**64**	Census 2001
Proportion of agriculture laborer in workforce	33.02%	**34.53**	Census 2001
Human Development Indicators	**Balasore**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.559 (18)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.519 (14)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	14331 (19)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.600 (5)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 15: Balasore - Socio economic indicators

10.2.2 State of education

Over the last 10 years between 2001 and 2011, Balasore has shown good progress in terms of literacy rate. Average literacy rate of Balasore in 2011 (as per provision census figures) is 80.66 percent compared to 60.24 percent in 2001 which is an increase of over 20 percent. Gender wise male and female literacy is 88.06 percent and 72.95 percent respectively. For 2001 census, same figures stood at 81.69 and 58.90. There has been a significant increase in proportion of literate women. The drop-out rates too have been reduced substantially from 12.82 percent in 2006-7 to 3.78 percent in 2010-11 at primary school level and 22.5 percent (2006-7) to 9.65 percent (2010-11).

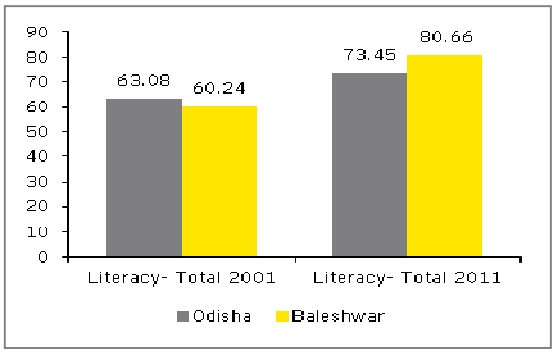


Figure 15: Literacy rate- Balasore

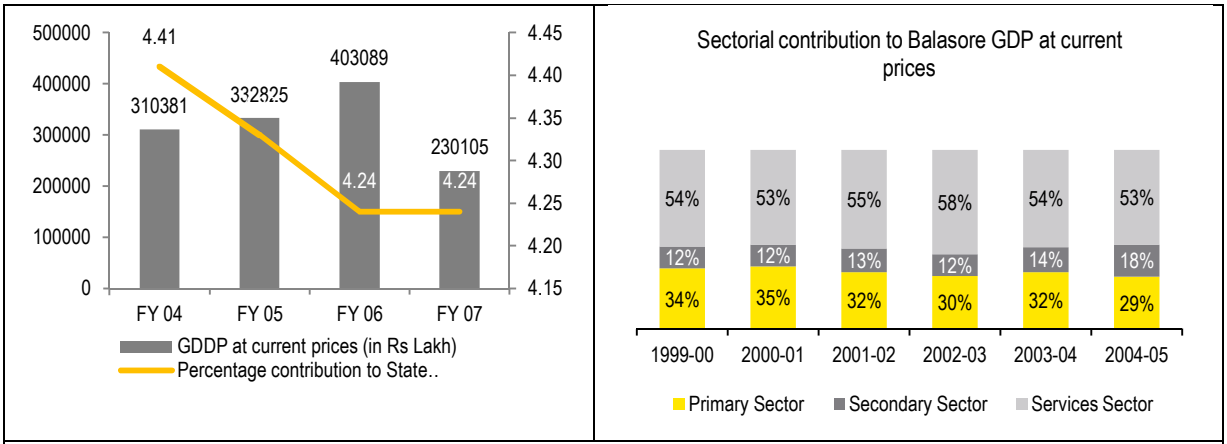
There are 80 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 10976, 5440 and 2336 respectively. At the degree level, there are 40 colleges which offer various courses including some professional courses like engineering and MBA.

For technical education, Balasore has 3 private engineering (degree) colleges. Together, these engineering colleges offer various courses and have a combined intake capacity of approximately 840 students per year. Major courses offered include, electronics & telecom engineering, computer science & engineering among various other areas. In addition to engineering degree colleges, there are 5 polytechnic institutes offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 1560 students per year. Major courses are electrical, mechanical and civil. The district has no government polytechnic institutes. Balasore has 3 pharmacy colleges that have the intake capacity of 160 students.

The only Government ITI at Balasore offers training in 14 courses. The ITI has been upgraded to centre of excellence during the last year and offers courses like stenographer (English), plastic processing operator and fitter etc. Out of 438 seats in 2010, only 204 appeared for examination indicating a high rate of seats under utilization in Government ITI. There are 50 Private ITCs offering 17 courses. Fitter, electrician, data entry operator are the major courses with a high intake capacity.

10.2.3 Economic Profile

As per Economic Survey 2010-11, Balasore is ranked 13th in the State with a CAGR of 6.1 percent for the period 2000-01 to 2006-07. In terms of share in Odisha GDP, Balasore contribution has declined over the period 2004-07. Services sector contributes the bulk of the district GDP. Industry is sector is fast emerging as a growth sector while agriculture is more or less stagnant.



Source: Economic Survey, Odisha: 2010-11

Figure 16: Gross District Domestic Product (at current prices) of Balasore

Agriculture

People of Balasore largely depend upon agriculture as their primary means of livelihood. About 67 percent of total work force is either cultivators or agricultural laborers. Balasore is ranked 17th in the state in terms of number of agricultural laborers, constituting 33 percent (approx.) of total working force.

As per Odisha agriculture statistics report 2008-09, sixty seven percent of the total geographical area or almost 250 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 245.54 thousand hectares. Apart from paddy, other major crops include vegetables, pulses and oilseeds with a total cultivated area of 12.58, 14.94 and 20.70 thousand hectares respectively. In addition, Balasore has 53 hectares of area for cultivation of Marigold flower producing about 4305 quintals of the same annually. These figures stand at 35 hectares and 36.10 quintals for Rose flower.

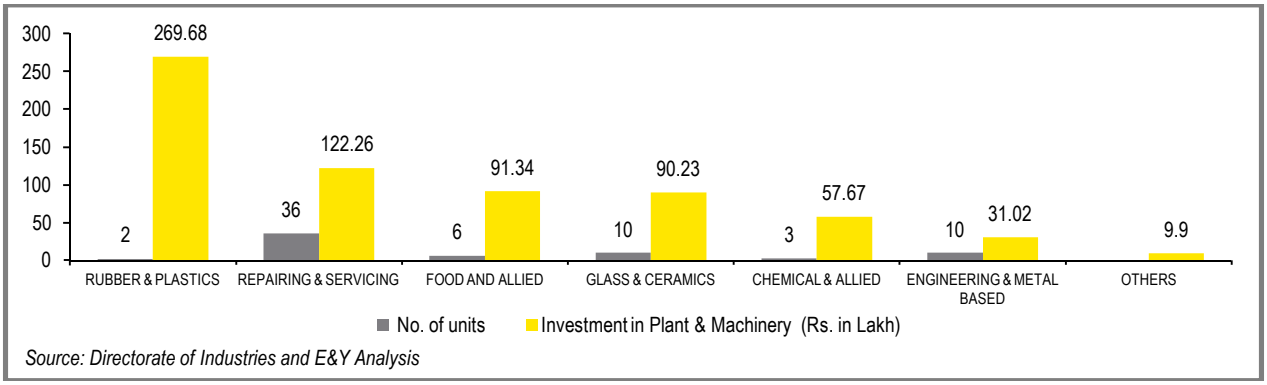
Performance of Balasore district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 27th with a per capita agricultural output of 1081. Vegetables contributed highest to the total agricultural output of Balasore with a value of 350.09 (2008-2009), followed by rice 351.58 and oilseeds with 28.89 (all figures in thousand metric tonnes). With an average landholding of 0.93 hectare, landholding pattern in the District is highly skewed with majority (more than 67 percent) of the farmers have only marginal (less than a hectare) land holding.

Industries

The industry sector is fast emerging as a major growth centre of the district. The district located on the Kolkata-Bhubaneswar corridor and is well connected with all the major cities in India through rail and road network. Proximity to mining district of Keonjhar, Paradeep port and long shoreline in addition to good availability of water and power has helped Balasore emerge as an upcoming growth centre of Odisha.

In terms of Investments into large and medium scale industries, Balasore is currently ranked 12th in the State, with an investment of Rs. 17.7 billion by 2010 and which constitutes 1.92 percent of the total investment in large and medium scale industries. Automobile, tyre and tube industries form the portion of the pie along with calcium silicate industry. Some of major large scale industries include Emami Paper Mills Limited, Balasore Alloys Limited and Birla tyre etc. Some of the upcoming industries include Polar Pharma India Limited, Hyderabad Industries Limited and B&A Multiwall Packaging Limited.

In terms of attracting investments and setting up micro and small scale industries, Balasore is ranked 6th in the State. MSME investment in Balasore was about 4 percent of the total investments made in the State till March 2010. Some of the major industries attracting maximum investments are Rubber and Plastics, repairing and servicing and food and allied.

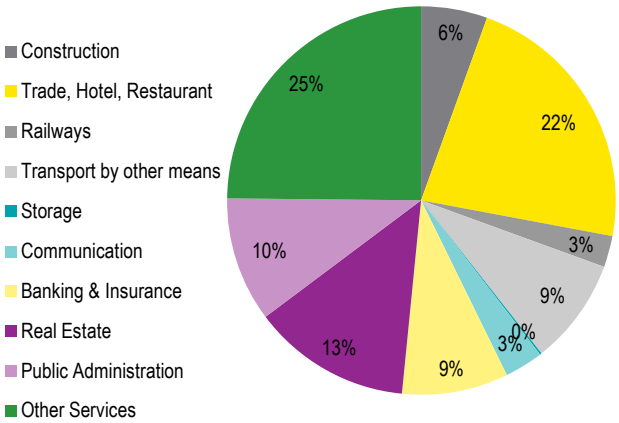


Source: Directorate of Industries and E&Y Analysis

Figure 17: MSME Investments in Balasore till 2010

Services

The services sector includes construction, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, public administration and other services[3]. The composition of service sector at current prices for year 2004-05 is shown below in Figure 19. In terms of contribution to Balasore GDP, the service sector remains the most important contributor constituting 76 percent of the district GDP. The contribution of various sectors to GDDP is shown in the chart below.



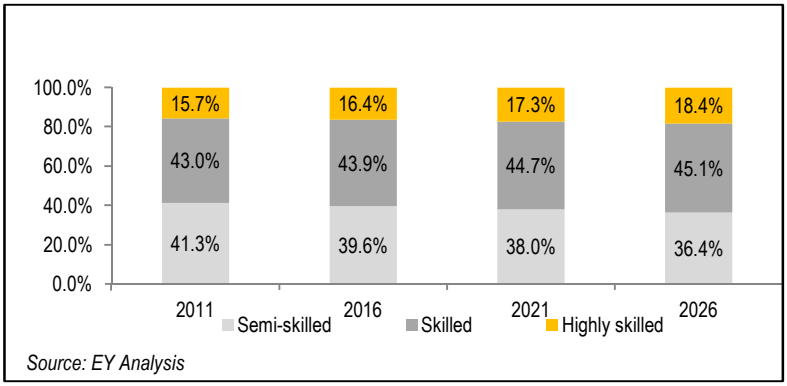
As depicted in the chart, other services are the leading contributor to the service sector (25 percent) followed by trade, hotel and restaurant (22 percent), real estate (13 percent) and public administration (10 percent). Transportation including railways is also an important contributor of GDP of Balasore economy.

Source: Planning Commission, Government of India

Figure 18: Composition of service sector- 2004-05

10.2.4 Skill Gap Assessment for Balasore

Over the next 15 years, the total workforce demand for skilled jobs in Balasore district is expected to grow to 5.9 lakhs in 2026 from present levels of 3.3 lakhs in 2011. The total workforce demand created in 2026 is expected to be dominated by the tertiary sector (77 percent), followed by primary (17 percent) and secondary (6 percent) sectors.



Source: EY Analysis

Figure 19: Proportion of demand for skilled jobs by skill categories- Balasore

The top five sectors expected to create a demand for skilled workforce in 2026 are: agriculture (1 lakh); tourism, travel, hospitality and trade (1 lakh); banking, financial services & insurance (0.9 lakh); education & skill development (0.6 lakh); healthcare (0.6 lakh) and IT & ITeS Industry (0.6 lakh).

[3] Economic Survey report of Odisha-2010-11

As per the CMIEs Capex database and secondary research, major projects have been announced in cement and construction sector during the past two years. Hence, the sector's growth and the respective demand for labor are expected to surge in future.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	52,839	51,916	51,009	50,118	
Skilled	35,226	34,611	34,006	33,412	
Highly skilled	17,613	17,305	17,003	16,706	
Total demand for skilled jobs	105,678	103,832	102,018	100,236	17
Tourism, travel, hospitality & trade:					
Semi-skilled	26,862	34,066	43,203	54,789	
Skilled	17,800	22,574	28,628	36,306	
Highly skilled	2,913	3,694	4,685	5,941	
Total demand for skilled jobs	47,575	60,334	76,516	97,036	17
Banking, Financial Services & Insurance					
Semi-skilled	6,924	10,480	15,863	24,012	
Skilled	3,975	6,016	9,107	13,784	
Highly skilled	14,745	22,319	33,783	51,136	
Total demand for skilled jobs	25,644	38,815	58,753	88,932	15
All sectors:					
Semi-skilled	138,164	156,773	181,178	213,355	
Skilled	143,903	173,818	212,920	264,106	
Highly skilled	52,585	64,941	82,609	107,994	
Total demand for skilled jobs	334,652	395,532	476,707	585,455	100

Table 16: Skill-wise demand for sectors where high demand is foreseen- Balasore

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 1.2 lakh during the period 2011-2026.

While the district is foreseen to witness an incremental oversupply for **semi-skilled workers** during the next 15 years; the district is likely to see an incremental demand of ~90,000 **skilled** and ~55,000 **highly skilled** workers. Within the incremental gap for **skilled** workers, a major portion is expected to come from services sectors like education and skill development (25 percent); healthcare (25 percent); tourism, travel, hospitality & trade (15 percent); and IT & ITeS (15 percent).

Amongst the incremental **highly skilled** workforce requirement, around two-third of this requirement is expected to come from banking, financial services & insurance sector.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	46	(396)	(724)	(1,074)
Auto & Auto Components	(55)	11	77	33
Chemical & Pharmaceuticals	(1)	7	15	21
Construction materials & building hardware	156	565	983	1,704
Electronics & IT Hardware	2	17	32	51
Food Processing	161	190	218	569
Furniture & Furnishings	(66)	24	105	63
Leather & Leather Goods	2	3	4	9
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	(51)	(14)	18	(47)
Unorganised sector	(21)	17	53	49
Banking, Financial Services & Insurance	5,935	11,596	20,610	38,141
Building, Construction & Real Estate Services	(130)	(45)	23	(152)
Education & Skill Development	5,786	8,325	11,632	25,743
Healthcare	4,625	7,173	10,493	22,291
IT & ITES industry	3,744	6,304	9,644	19,692
Media & Entertainment	(279)	1,967	4,776	6,464
Tourism, travel, hospitality & trade	(1,887)	2,013	6,881	7,007
Transportation, logistics, warehousing & packaging	(1,079)	(571)	(80)	(1,730)
Total	16,890	37,184	64,759	118,833

Source: E&Y Analysis

Table 17: Total incremental demand supply gap for skilled jobs by sectors- Balasore

Some of the major sectors where the incremental demand supply gap is expected to widen are banking, financial services and insurance (32 percent), education & skill development (22 percent), healthcare (19 percent) and IT & ITeS (17 percent).

10.2.5 Development potential and Stakeholder perception

Balasore, interchangeably also called Baleshwar is a district with a lot of potential for skill development. It is one of the better developed districts economically with agriculture, industry as well as pisciculture offering a range of employment to people. The district is known for a number of things – plastic hub of the state, pisciculture as an occupation in almost all the blocks and several handicraft clusters.

The infrastructure is well developed to support the industry. Almost 95 percent of its villages are electrified. There is good network of roads. National Highway 5 connects major areas of the district to other States. Road connectivity in rural areas too has increased enabling the small rural traders to connect with the nearby markets. There is presence of large, medium and small industries. It was shared that about 70 percent of the plastic industries of Odisha are located in Balasore. There is a plastic cluster of about 40 industries. There are plans to develop Advanced Plastic Processing Technology Centre to meet the increasing demand for trained personnel in the district. The plastic industries have helped to develop a number of ancillary and downstream units like – adhesive tapes,

polythene sheets, nylon gloves. More such units are likely to develop thus creating greater demand for skilled persons. There are also plans to develop a port at Balasore – *Chaumukh* – which will further give boost to the industrial growth.

The presence of large scale industries in the district, good agro climatic conditions for various agriculture produce throws up opportunities for developing MSMEs. Some MSMEs which have good growth potential have been identified by the district industrial centre are as follows:

- **Food and allied sector** – Fish/Prawn processing, rice mill, ice plant
- **Plastic and polymer** – PVC/HDPE pipes, PVC doors and windows, fishing net
- **Paper and allied** – Offset press, paper bag, laminated paper products
- **IT based** – Software development, multi media centre
- **Mineral based** – Stone crushers, red bricks, fly ash bricks, ferro chrome
- **Forest based** – Bamboo products, Sabal household products
- **Electrical** – Transformer and electrical panels, conductors.

With the upcoming industry, a need for different kinds of services would be generated. Some of the potential services which were mentioned were those in the area of hospitality, driving, masons, electricians, plumbers.

Pisciculture is also a major occupation and in the district with significant growth potential. Sadar and Chandipur blocks are especially known for practising pisciculture. Abundance of water sources makes it a preferred occupation. Black tiger fish was reared in large numbers in few blocks. Prawn is reared in small fresh water hatcheries, which at present, are few in number. It requires huge investment and sophisticated technology. The district has three institutes that provide training in fisheries. There is scope for improving its productivity. Among fisheries related activities, marine fishery occupies a significant place. There are about 285 fishermen villages with population of over 85,000 which depend on marine fisheries alone. This number includes active fishermen, part time fishermen engaged for fishing and other ancillary activities. There are 586 trawlers which are largely owned by businessmen who keep salaried workers. Most of these jobs get passed on down the families and they learn it on the job.

Balasore also has some pockets of handicraft:

- **Stone carving:** Soro, Baulgadia, Nilagiri
- **Terracotta:** Balasore Sadar, Nilagiri, Oupada
- **Lacquer toys:** Balasore Sadar
- **Sabai craft:** Bhograi
- **Coir craft:** Bhograi, Baliapal, Nilagiri, Khaira
- **Bamboo craft:** Soro
- **Golder grass:** Bahanaga

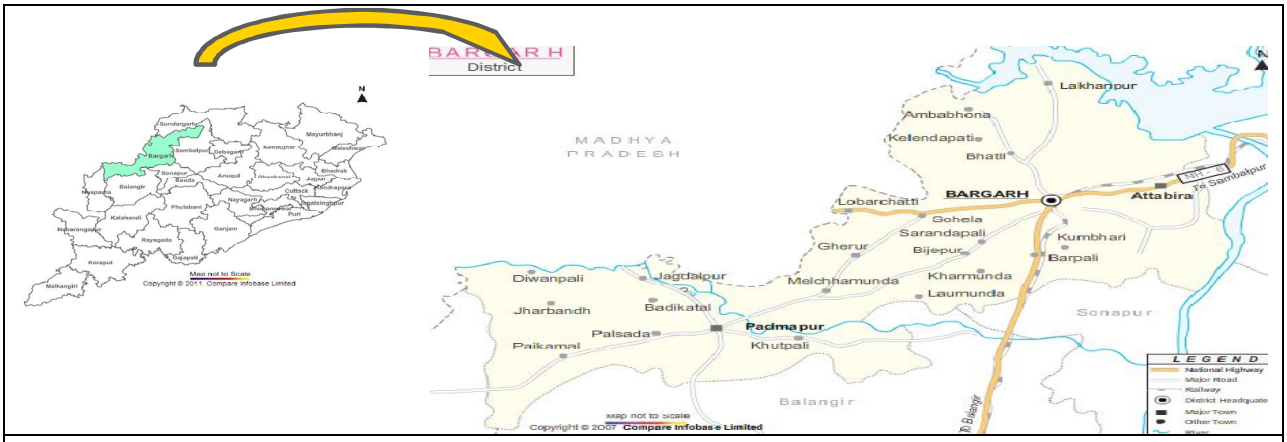
The artisans are following traditional methods which they have learnt from their elders. Three training centres have been set up to impart training in golden grass, stone carving and coir. Recognising the need to expand these training programmes, the State Government is planning to initiate a cluster development programme in this area.

Thus Balasore offers variety of opportunities for people to engage in agriculture, industries, fisheries as well as the service sector. The current training facilities are inadequate to meet the increasing demand for trained workers. The local ITI has not expanded and it provides fixed stream courses. CII has set up a skill centre in collaboration with Balasore Alloys. The centre imparts training in areas like – front desk, retail, and hospitality. This is a good initiative and should be replicated involving other industries also. A lot of flexibility is required to identify the need for such unconventional courses. The employment exchange has Student Information Bureau that provides vocational guidance and career counseling to students. Most of the registered candidates are either school pass outs or graduates. There are very few diploma holders from ITIs who register themselves since they get jobs on their own.

- **Primary sector:** There is potential to improve the fisheries sector by imparting training in pisciculture and semi processing of sea food. The climate is suited for floriculture, therefore capacity building to grow flowers and related marketing linkages would help to increase income levels of local people.
- **Secondary sector:** Ancillary units related to the plastic industry would require associated trainings, development of pockets where traditional crafts are produced through cluster development or development of rural hubs; processing of sea food are useful training programmes to be considered
- **Services Sector:** Tourism, development of industry would give rise to demand for a number of services like hospitality, education, banking and financial services. Other services like masons, repair and servicing work, electricians, drivers would also be in demand. Therefore training programmed maybe organised to develop these skills.

10.3 Bargarh

Bargarh District is spread over an area of 5837 Sq Km which forms approximately 3.8 percent of the total geographical area of the State. Administratively, the district is divided into 3 subdivisions, 12 blocks, 248 Gram Panchayats and 1180 villages. Bargarh is surrounded by Jharsuguda District in the north, Sambalpur in the east, Chhattisgarh in the west and Nuapada and Bolangir in south.



Map Courtesy: Maps of India

District Information	Bargarh	Odisha	Source
Area (in Sq Km)	5,837	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	3.75% (12)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	12	**309**	Census 2001
No of GPs	248	**6,234**	Census 2001
Total no of inhabited villages	1,180	**47,529**	Census 2001
Forest area as % of total geographic area	22.26%	**37.66 %**	Census 2001

Figure 20: District map of Bargarh

10.3.1 Demography Profile

As per Census 2011 (Initial provisional data), Bargarh has a population of 14.79 lakhs of which males and females were 7.48 lakhs and 7.3 lakhs respectively. There is a change of 9.84 percent in the population compared to population as per 2001 census. The District constitutes 3.53 percent of the total population of the State. The initial provisional data (Census 2011) suggests a population density of 253 in 2011 making Bargarh the twelfth most densely populated Districts of Odisha. With regards to sex ratio, the district fares fairly average as compared to other Districts and the State average. The sex ratio for Bargarh as per 2011 provisional census figures is 976 females per 1000 males, slightly below the State average of 978 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 19.37 percent of the total population while STs form 19.36 percent of the total population. With almost 7.73 percent urban population, Bargarh is one of the least urbanized Districts in Odisha (as per census 2001). The population in the working age group constituted 59.6 percent of the total population. The population in the age group 0-4 years constitutes 8.89 percent and 5-14 years comprise 21.54 percent respectively. Work participation rate of the district is 44.8 percent. Out of the total workers 64.82 percent are main workers and 35.18 percent are marginal workers. With a Human Development Index (HDI) of 0.565 with a rank of 17 and Gender Development Index (GDI) of 0.528 and a rank of 13, Bargarh ranks in the lower half of the table.

Population	Bargarh	Odisha	Source
Total population (in lakh)	14.79	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	7.48	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	7.31	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	3.53 % (13)	**NA**	Census 2011 provisional figures
Density of population	253	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	9.84 %	**13.97 %**	Census 2011 provisional figures
Urban population %	7.73 %	**14.99 %**	Census 2001
SC population %	19.37 %	**16.53**	Census 2001
ST population %	19.36 %	**22.13**	Census 2001
Sex ratio	976	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	59.65 %	**58.38 %**	Census 2001
Worker participation rate	44.08 %	**40.03 %**	Census 2001
Share of primary sector to total workers	75.25 %	**64**	Census 2001
Proportion of agriculture laborer in workforce	41.41 %	**34.53**	Census 2001
Human Development Indicators	**Bargarh**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.565 (17)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.528 (13)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	13135 (23)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.410 (21)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 18: Bargarh - socio economic indicators

10.3.2 State of education

Average literacy rate of Bargarh in 2011 (as per provision census figures) is 75.16 percent compared to 63.99 percent in 2001. Gender wise male/female literacy is 84.28 percent and 65.84 percent respectively. For 2001 census, same figures stood at 77.41 and 50.26 showing a proportionate increase in literacy level for all the groups in Bargarh District over last 10 years. Out of the total number of children in school going age, 2.885 percent children were out of school in 2010.

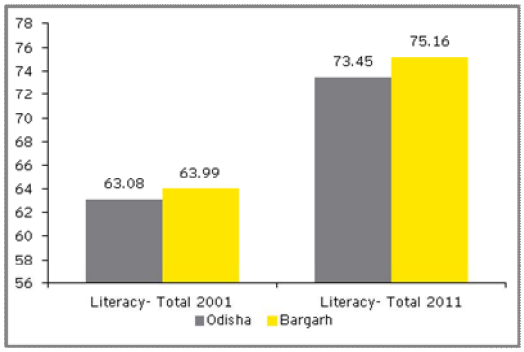


Figure 21: Literacy Rate- Bargarh

There are 48 junior colleges and higher secondary schools 6496 in arts, 2272 seats in science and 416 seats in commerce. At the degree level, there are 25 colleges which offer various courses including some professional courses like law etc.

For technical education, Bargarh has 1 private engineering (degree) college. The college has a combined intake capacity of 270 students per year. Major courses offered include, computer science & engineering, electrical engineering and mechanical engineering. In addition to engineering degree colleges, there is a polytechnic institute offering engineering and other diploma

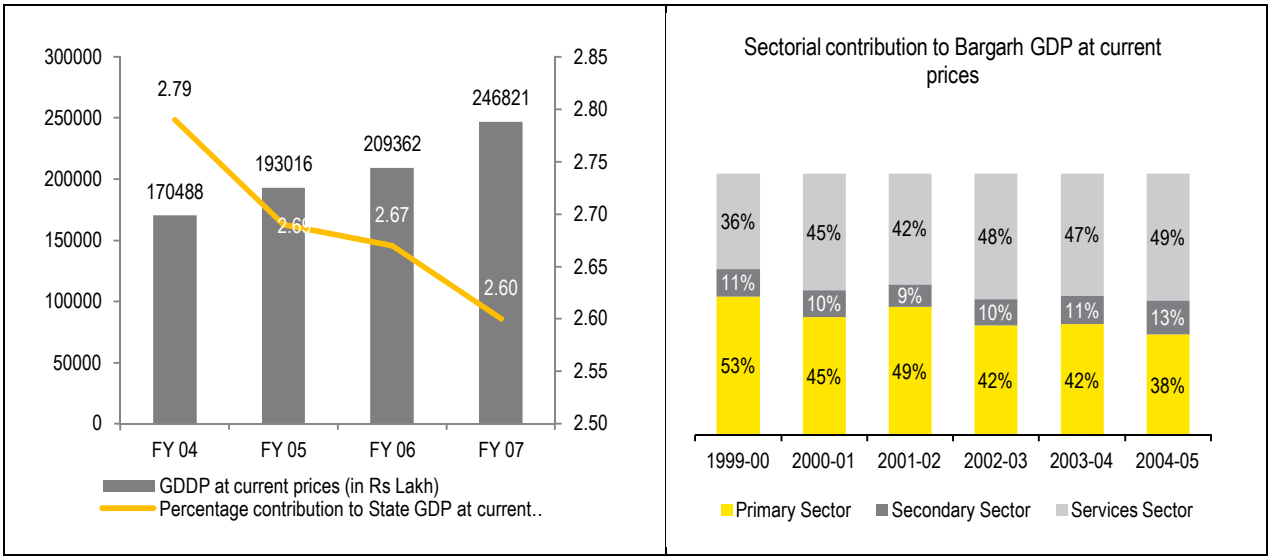
courses. Total intake capacity in polytechnic institutes is approximately 390 students per year. Bargarh has one pharmacy college that has the capacity to intake 40 students. The single ayurvedic college has a capacity of 30 students per year.

The district has a Government ITI offering trainings in 3 trades namely IT&ESM, Electronic Mech Preservation of Fruits and Vegetables. There are10 private ITCs in the district offering courses in fitter, electrician, plumbing and cutting and sewing.

10.3.3 Economic profile

Bargarh District has two distinctly different kinds of scenarios in the field of economic development. The area under the Command Area of *Hirakud* Dam Project has a fairly developed agricultural sector, which contributes to the development of other sectors also. The rain-fed area like Padampur Sub-Division and Bhatli & Ambabhona Blocks of Bargarh Sub-Division are backward with traditional agriculture and lack of development of other sectors as well.

As per economic survey 2010-11, Bargarh ranks among the bottom half of districts in the State with a annual average growth rate of 4.2 percent for the period 2000-01 to 2006-07. Its contribution to State GDP declined from 2.79% to 2.6% during the same periods. In terms of sectoral contribution to the GDP, there has been a slight increase in the contribution of the industry sector while the contribution of agriculture has declined. The services sector remains the top contributor to the district GDP.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 22: Gross District Domestic Product (at current prices) of Bargarh district

Agriculture

People of Bargarh largely depend upon agriculture as their primary means of livelihood. About 75 percent of total work force is either cultivators or agricultural laborers. Bargarh is ranked 8th in the State in terms of number of agricultural laborers, constituting 41.41 percent of total work force.

As per Odisha agriculture statistics report 2008-09, sixty nine percent of the total geographical area or almost 349 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 305.44 thousand hectares. Apart from paddy, other major crops include pulses (*mung, biri* etc), vegetables (potato, onions etc), oilseeds and fruit

crops. Groundnut and sugar cane are other important crops in the district.

Performance of Bargarh district is excellent in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 1st with a per capita agricultural output of 2633. Food grains contribute highest to the total agricultural output of Bargarh with a value of 164.82 (2008-2009), followed by cereals (164.80) (all figures in thousand metric tonnes). With an average landholding of 1.56 hectare, there are around 47.8 percent farmers who have a land holding of more than one hectare.

Industries

The district is located strategically with good road and rail connectivity. Proximity to industrial districts of Sambalpur, Jharsuguda and Sundargadh and Raigarh in Chhatisgarh, abundant availability of water in form of River Mahanadi and its tributaries, good access to power and availability of minerals like lime stones, graphites, china clay, fire clay and mica makes Bargarh an attractive district for industrial investments. The progress of industries in the district has however been slow. In terms of Investments into large and medium scale industries, Bargarh is currently ranked 16th in the State, with an investment of Rs. 17.38 billion by 2010 and which constitute 0.18 percent of the total investment in large and medium scale industries. Some of major large scale industries include ACC cement, Kripal Springs Ltd, Bargarh Co-op sugar mills etc.

In terms of attracting investments and setting up micro and small scale industries, Bargarh is ranked 8th in the State. MSME investment in Bargarh was 2.86 percent of the total investments made in the state till March 2010. Food and allied products have maximum investment Rs. 32.81 crores while textiles has the least amount of investment amounting to Rs. 1.31 crore. Others constitute of paper and paper product, forest and wood based product, miscellaneous manufacturing and electrical and electronics.

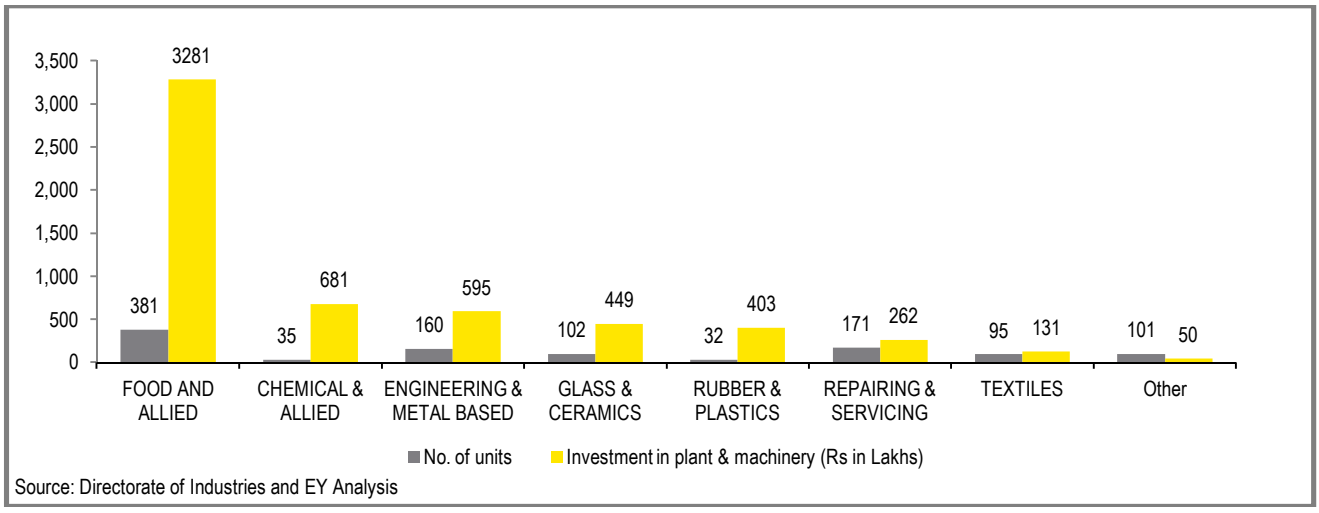
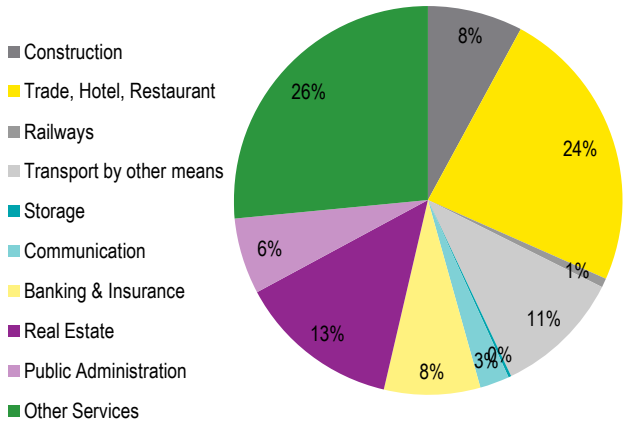


Figure 23: MSME Investments in Bargarh till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below in Figure 26. In terms of contribution to Bargarh GDP, the service sector remains the most important contributor constituting 49 percent of the district GDP.



As depicted in the chart trade hotels is a significant contributors to the GDP of Bargarh followed by real estate (13 percent) and transport by other means (11 percent). There are limited job opportunities in the government sector (6 percent) which is very much sought after by people

Source: Planning Commission, Government of India

Figure 24: Composition of service sector of Bargarh District- 2004-05

10.3.4 Skill Gap Assessment for Bargarh District

Over the next 15 years, the total workforce demand for skilled jobs in Bargarh district is expected to grow from present levels of 3.1 lakhs in 2011 to 5.4 lakhs in 2026. An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon. On a macroeconomic level, the maximum workforce demand in 2026 is expected to be accounted by the tertiary sector (79 percent), followed by primary (15 percent) and secondary sector (6 percent).

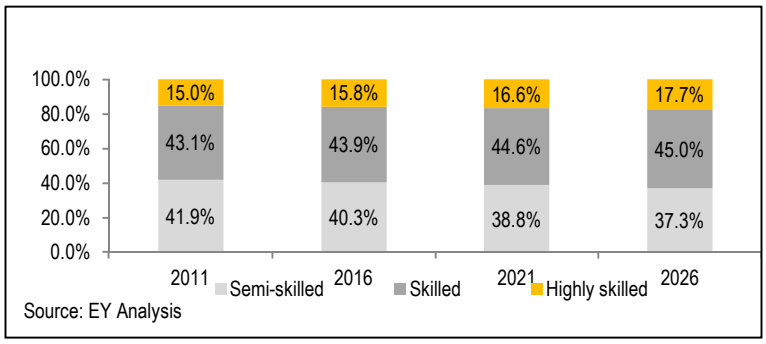


Figure 25: Proportion of demand for skilled jobs by skill categories- Bargarh District

Some of the prominent sectors from which the major demand for skilled workforce is expected in 2026 are: tourism, travel, hospitality & trade (1 lakh); agriculture (0.8 lakh); banking, financial services & insurance (0.8 lakh); education & skill development (0.6 lakh); healthcare (0.6 lakh) and IT & ITes (0.6 lakh).

The CMIEs Capex database and secondary research shows that majority of the capital projects/investments being announced in Bargarh district during the last two years are in the agriculture, food processing and tourism sectors. In light of these findings, suitable growth rates for these sectors have been factored in to arrive at skill-wise demand across the sectors.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	28,004	35,515	45,039	57,118	
Skilled	18,557	23,534	29,845	37,849	
Highly skilled	3,037	3,851	4,884	6,194	
Total demand for skilled jobs	49,598	62,900	79,968	101,161	19
Agriculture					
Semi-skilled	43,692	42,929	42,179	41,442	
Skilled	29,128	28,619	28,119	27,628	
Highly skilled	14,564	14,310	14,060	13,814	
Total demand for skilled jobs	87,384	85,858	84,358	82,884	15
Banking, Financial Services & Insurance					
Semi-skilled	6,139	9,292	14,065	21,290	
Skilled	3,524	5,334	8,074	12,222	
Highly skilled	13,073	19,789	29,954	45,340	
Total demand for skilled jobs	22,736	34,415	52,093	78,852	15
All sectors:					
Semi-skilled	128,149	146,470	170,322	201,555	
Skilled	131,668	159,543	195,900	243,403	
Highly skilled	45,914	57,069	72,988	95,821	
Total demand for skilled jobs	305,731	363,082	439,210	540,779	100
Source: EY Analysis					

Table 19: Skill-wise demand for sectors where high demand is foreseen- Bargarh District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by around 1.9 lakhs during the period 2011-2026.

The major proportion of this widening gap is expected to be of skilled manpower (55 percent), followed by highly skilled jobs (27 percent) and semi-skilled jobs (18 percent).

Within the **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (65 percent) and IT & ITes (15 percent) sectors.

The **skilled** workers' proportion in the incremental gap is expected to surge in case of education & skill development (25 percent), healthcare (24 percent); and tourism, travel, hospitality & trade (17 percent) industries.

The **semi-skilled workers** belonging to the tourism, travel, hospitality & trade (39 percent); banking, financial services & insurance (21 percent); and media & entertainment (18 percent) sectors would form a major part of this incremental gap for semi-skilled workers in 2026.

By sector, the banking, financial services & insurance is expected to account for more than 25 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly skilled workers (68 percent) followed by the skilled (17 percent) and semi-skilled workers (15 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(911)	(1,036)	(1,126)	(3,073)
Auto & Auto Components	18	26	33	77
Chemical & Pharmaceuticals	59	77	98	234
Construction materials & building hardware	767	981	1,212	2,960
Electronics & IT Hardware	61	79	99	239
Food Processing	243	267	292	802
Furniture & Furnishings	28	37	45	110
Leather & Leather Goods	4	4	5	13
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	221	333	451	1,005
Unorganised sector	211	271	328	810
Banking, Financial Services & Insurance	9,071	14,661	23,286	47,018
Building, Construction & Real Estate Services	158	227	286	671
Education & Skill Development	6,826	9,120	12,108	28,054
Healthcare	6,410	8,703	11,692	26,805
IT & ITES industry	5,999	8,295	11,289	25,583
Media & Entertainment	4,008	5,888	8,266	18,162
Tourism, travel, hospitality & trade	7,322	11,046	15,753	34,121
Transportation, logistics, warehousing & packaging	363	656	959	1,978
Total	40,857	59,636	85,075	185,568

Source: EY Analysis

Table 20: Total incremental demand supply gap for skilled jobs by sectors- Bargarh District

The incremental demand supply gap is also expected to widen for tourism, travel, hospitality & trade (18 percent). The incremental human resource gap in this sector largely comprises of need for skilled (52 percent) and semi-skilled human resource (39 percent).

Other notable sectors expected to create a significant incremental requirement are education & skill development (15 percent); healthcare (14 percent) and IT & ITes (14 percent) sectors. A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.3.5 Development potential and Stakeholder perception

Bargarh district of Odisha is another significant hub of handloom and handicrafts of the Sambhalpuri handicrafts fame. Its pride lies in 45 national award winning artisans and many more who continue to keep the handicrafts sector in this district thriving. The district has tributaries of the Mahanadi running through it, and there is well distributed rainfall across the district in the monsoon months. Yet, irrigation remains a problem as only 6 of the 12 blocks are irrigated by the virtue of falling in the Hirakud Command Area.

As mentioned earlier, Bargarh is primarily an agrarian district with 45 percent work force engaged in this sector. As per, per capita agricultural output Bargarh is ranked 1st in the entire state. Paddy is the main contributor to the district's crop production. With 83 rice mills in the district, paddy is one of the most widely produced crops but the problem lies in the value addition and processing part. The food processing industry still has a long way to go in the district as products like chiwda and puffed rice can be further made from rice for incremental gains. In the blocks that aren't irrigated by the Hirakud Command Area, vegetables, ground nut, green and black gram are the major crops. Agricultural experts feel that training should be provided for food processing as there is a lot of scope for it in the district. The presence of OMFED has given a boost to milk and milk based products in the district. Vegetable cultivation is present in peripheral areas which have a strong potential for development. However, cold storage facilities are poor which leads to distress sale.

With presence of rivers like the Mahanadi, Jira and Jhuan the scope for pisciculture in the district is promising. This is evident in the fact that there are 8000 families who earn their livelihood from the capture and culture of the fish. Programmes like NREGA have provided a lot of support to this industry with subsidy upto 50 percent being given to a farmer setting up a new tank. Poultry has scope for development given high returns of investment amidst the challenges in other primary sector ventures. It was noted to be a profitable venture as a person can earn upto Rs. 45000 within 45 days.

The industrial sector in Bargarh is seemingly positive, with the presence of companies like ACC, Kripal spings, sugar mills and 83 rice mills. There is also presence of minerals like Limestone, Graphite, Chinclay, Fireclay, Granite and Mica which point towards a strong scope for industrial growth in the district. However, there has been local resistance towards mining of these resources. For instance there has been agitation in Narsingnath against BALCO setting up a plant there.

In the MSME sector, textile industry portrays a bright future with 45 national awardees for handloom coming from Bargarh. However, it was noted that the youth of today are reluctant to continue with the inter-generational art and aspire to take up upcoming professions like clerical and BPO jobs. Thus there is a need to further promote the handloom and handicraft sector with a comprehensive approach focusing on forward and backward linkages and skill development trainings in design development and marketing at domestic and international level. It was reported that the handloom sector can get further impetus by procuring patent rights for *Sambalpuri* sarees produced here as in the case of *Panch Puli* sarees of Hyderabad. An Indian Institute of Handloom Technology has been set up in the district with the purpose of developing a high degree of skill among the people.

Representatives of the industries expressed concerns over the quality of vocational trainings being provided in the district. Though there is demand for fitters, welders, disel mechanics and electricians, the quality of ITI trained people is considered inferior pointing out to the need for strengthening the existing vocational training facilities.

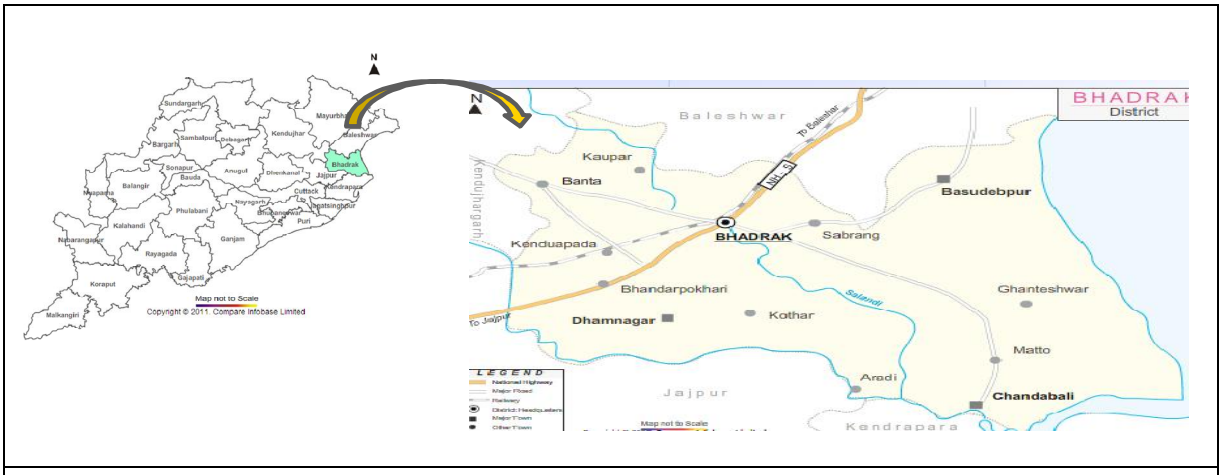
Another promising sector with growth potential in the district is tourism, trade and hospitality. The sector has immence potential considering presence more than 100 ancient temples, Hirakud dam , natural gorges and the thriving handicraft and handloom sector that can spur cultural tourism. In spite of the potential, the sector has remained under developed due to lack of proper advertising and marketing, poor hospitality infrastructure and lack of skilled manpower in the sector.

There has been limited growth in terms of amenities and opportunities in the services sector. Opportunities exist in healthcare, skill development & education, transporation, repair and servicing, professional services, communication and storage infrastructure etc. Utilizing these opportunities will require developing more self employment and entrepreneurial skills among the youth. As in the case of many other districts, there is human resource shortage in all the major sectors. E.g. in the health care sector, there are 31 vacancies of medical officers at the district level which is quite high. Vacancies are also there in other staff positions like Staff nurses, lab technicians, MPHSs, MPHWs, Helpers, Attendants, and Statistical Officers etc. Staff Nurse and ANM recruitment is a challenge given the statutory requirement of registration with the Nursing Council. Students who pass out of private colleges find it difficult to get this registration.

- **Primary sector:** The district ranks #1 in terms of per capita agriculture output. Sugarcane in Mahanadi command zone, vegetables, ground nuts and green & black gram are the potential crops. Potential exists for commercialization of HYV paddy. Skill development is required in undertaking commercial agriculture through scientific technology and entrepreneurial skills among the progressive farmers. Storage, processing and marketing infrastructure needs to be strengthened
- **Secondary sector:** Presence of raw materials (minerals and water), existence of few large scale industries. Handloom is a thriving sector with immense growth prospect. Skill development in modern design, branding, packaging and marketing will help the handloom sector.
- **Services Sector:** Shortage of skilled manpower in services sector. Existing training infrastructure is not sufficient for providing training on aspects related to accounting, banking, nursing, teaching, drivers, and other self employment options. Urban sector is slated to expand and grow. Measures needs to be taken accordingly by focusing on creating opportunities and skill development in hospitality, trade, urban, electronic parts servicing and repair, health and education. Skill enhancement especially of the health sector functionaries tohelp them get the required certification would have an impact on the health services in the district.

10.4 Bhadrak

Bhadrak District is spread over an area of 2505 Sq Km which forms approximately 1.61 percent of the total geographical area of the State. Topographically, the district has two prominent divisions- the salt tracks along the coasts which are not arable and the arable track, which is called the granary of the state. Administratively, the district is divided into one subdivision, 7 blocks, 193 Gram Panchayats and 1243 villages. Bhadrak is surrounded by Baleshwar District in the north, Bay of Bengal in the east, Keonjhar and Jajpur Districts in the west and Jajpur and Kendrapara districts in south. The district of Jajpur surrounds it on the west as well as the south side.



Map Courtesy: Maps of India

District Information	Bhadrak	Odisha	Source
Area (in Sq Km)	2,505	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.61% (27)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	7	**309**	Census 2001
No of GPs	193	**6,234**	Census 2001
Total no of inhabited villages	1,243	**47,529**	Census 2001
Forest area as % of total geographic area	4.00%	**37.66%**	Census 2001

Figure 26: District Map of Bhadrak

10.4.1 Demography

As per Census 2011 (Initial provisional data), Bhadrak has a population of 15.07 lakhs of which males and females were 7.61 lakhs and 7.46 lakhs respectively. There is a change of 13 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 3.6 percent of the total population of the State which is 12th highest. The initial provisional data (Census 2011) suggest a population density of 601 in 2011 making Bhadrak the sixth most densely populated District of Odisha. With regards to sex ratio, the district fares better compared to the State average. The sex ratio for Bhadrak as per 2011 provisional census figures is 981 females per 1000 males, higher than the State average of 978 females per 1000 males. The sex ratio of the district has improved since 2001 and has gone up from 974 to 981 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 21.5 percent of the total population while STs form only 1.88 percent of the total population. The district is predominantly rural with almost 89.42 percent rural population (as per census 2001).

The population in the working age group (15-59 years) constituted 57.25 percent of the total population. The population in the age group 0-4 years constitutes 9.44 percent and 5-14 years comprise 24.65 percent respectively. Work participation rate of the district is 28.87 percent. Out of the total workers 78.31 percent are main workers and 21.7 percent are marginal workers. With a Human Development Index (HDI) of 0.646, Bhadrak is ranked 8th in the State.

Population	Bhadrak	Odisha	Source
Total population (in lakh)	15.07	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	7.61	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	7.46	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	3.59% (12)	**NA**	Census 2011 provisional figures
Density of population	601	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	12.95%	**13.97%**	Census 2011 provisional figures
Urban population %	10.57%	**14.99%**	Census 2001
SC population %	21.50%	**16.53**	Census 2001
ST population %	1.88%	**22.13**	Census 2001
Sex ratio	981	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	57.25%	**58.38%**	Census 2001
Worker participation rate	28.87%	**40.03%**	Census 2001
Share of primary sector to total workers	49.61%	**64**	Census 2001
Proportion of agriculture laborer in workforce	10.39%	**34.53**	Census 2001
Human Development Indicators	**Bhadrak**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.646 (8)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.497 (21)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	12280 (27)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.414 (20)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 21: Bhadrak- Socio-economic indicators

10.4.2 State of Education

The literacy rate in Bhadrak is above State average. Average literacy rate of Bhadrak in 2011 (as per provision census figures) is 83.25 percent compared to 73.86 percent in 2001. The district has the 6th highest literacy rate in the state. Gender wise male and female literacy is 89.92 percent and 76.49 percent respectively. For 2001 census, same figures stood at 84.65 and 62.85 showing a proportionate increase in literacy level for all the groups in Bhadrak District over last 10 years. Out of the total number of children in school going age, 1.887 percent children were out of school in 2010.

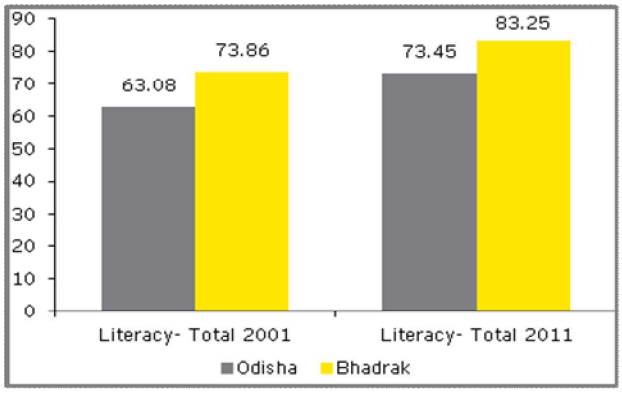


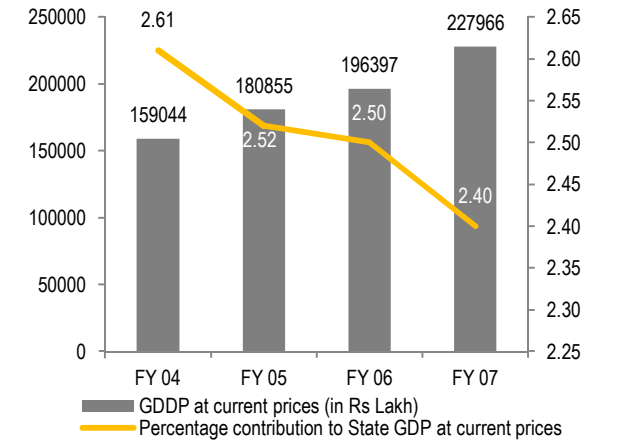
Figure 27: Literacy Rate- Bhadrak

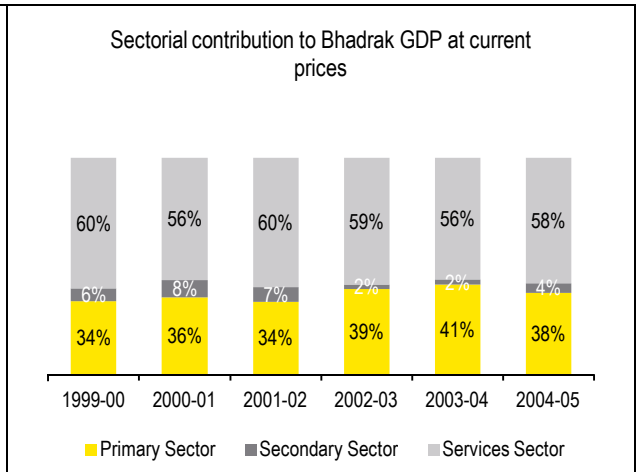
There are 41 junior colleges and higher secondary schools offering courses in Arts, Sciences and Commerce streams. At the degree level, there are 25 colleges. For technical education, Bhadrak has 1 private engineering (degree) college. This college offers various courses and has an intake capacity of approximately 390 students per year. The courses offered include, civil engineering, computer science & engineering, electrical engineering, information technology, mechanical engineering and electronics & telecom engineering. In addition to the engineering degree college, there are 3 polytechnic institutes offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 990 students per year. Major courses are electrical, mechanical and civil.

There is no Government ITI in Bhadrak district. There are 28 private ITCs, offering training in 8 disciplines including fitter, electrician and computer operator and programming assistance.

10.4.3 Economic Profile

As per economic survey 2010-11, Bhadrak is among the top ten districts in the State with an annual average growth rate of 8.1 percent for the period 2000-01 to 2006-07. The economy of the district is highly dependent on its services sector.





Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 28: Gross District Domestic Product of Bhadrak (at current prices)

People of Bhadrak largely depend upon agriculture as their primary means of livelihood. About 50 percent of total work force is either cultivators or agricultural laborers.As per Odisha agriculture statistics report 2008-09, seventy percent of the total geographical area or almost 176 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 179.41 thousand hectares, which is more than 93 percent of the total area under cultivation. Apart from paddy, other major crops include vegetables, oilseeds, pulses and fruit crops, with an area of 31.21, 20.9, 15.53 and 8.78 thousand hectares under cultivation respectively.

Performance of Bhadrak district fares decently in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 15th with a per capita agricultural output of 1264. Rice contributes highest to the total agricultural output of Bhadrak with a value of 344.45 (2008-2009), followed by vegetables (296.3) and pulses with (10.45) (all figures in thousand metric tonnes).

With an average landholding of 0.98 hectare, landholding pattern in the District is highly skewed with majority (more than 65 percent) of the farmers have only marginal (less than a hectare) land holding.

Industries

Bhadrak is largely an agrarian district and has easy access to water sources (Rivers- *Baitarani*, *Salandi* and *Genguti*). The District is well connected with other important cities and industrial centers and ports through a good network of national and state highways. National Highway 5 passes through the district covering about 40 Km. and connecting it to important cities like Kolkata and Chennai. It also connects it to Cuttack, Jajpur, Balasore and Mayurbhanj.

In terms of Investments into large and medium scale industries, Bhadrak is currently ranked 18th in the State, with an investment of Rs. 657 million by 2010 and which constitutes only 0.07 percent of the total investment in large and medium scale industries. It has only one industrial unit which belongs to Ferro Alloys Corporation Limited and is situated at *Randi*.

In terms of investments in Micro and small scale industries, Bhadrak is ranked 20th in the State. MSME investment in Bhadrak was 1.66 percent of the total investments made in the State till March 2010. Some of the major industries attracting maximum investments are Glass and Ceramics, Rubber and Plastics and Food and Allied.

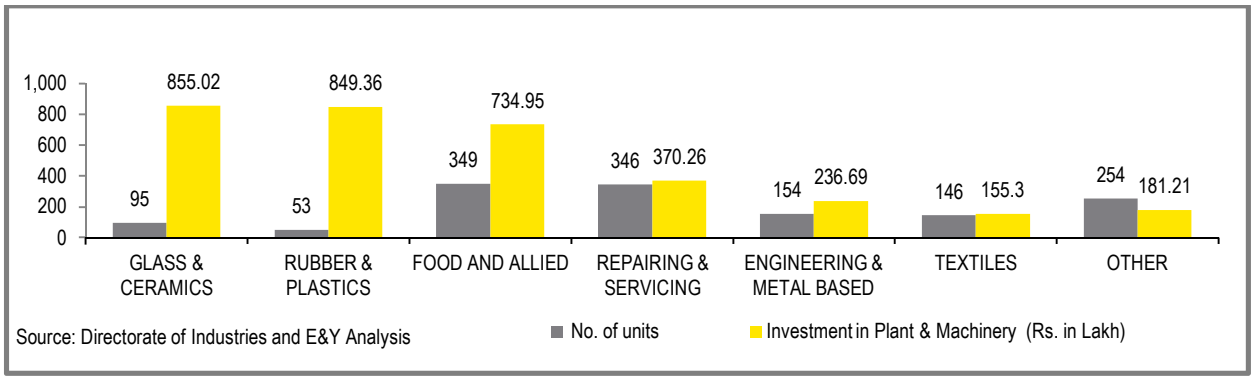
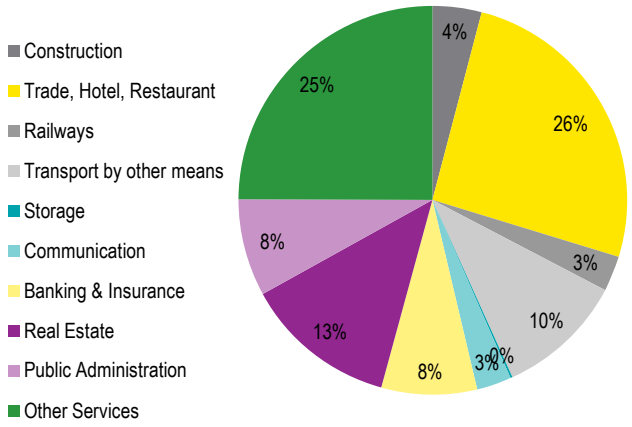


Figure 29: MSME Investments in Bhadrak till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below in Figure 28. In terms of contribution to Bhadrak GDP, the service sector remains the most important contributor constituting 79 percent of the district GDP. The contribution of various sectors to GDDP is shown in the chart below.



As depicted in the chart, the trade, hotel and restaurant (26 percent) is the leading contributor to the service sector followed by other services group (25 percent), real estate (13 percent) transport by other means (10 percent).

Source: Planning Commission, Government of India

Figure 30: Composition of service sector- Bhadrak 2004-05

10.4.4 Skill Gap Assessment for Bhadrak District

During the next 15 years, the total workforce demand for skilled jobs in Bhadrak district is expected to grow to 3.7 lakhs in 2026 from present levels of 2.1 lakhs in 2011. The total workforce demand created in 2026 is expected to be dominated by the tertiary sector (82 percent), followed by primary (17 percent) and secondary (1 percent) sectors.

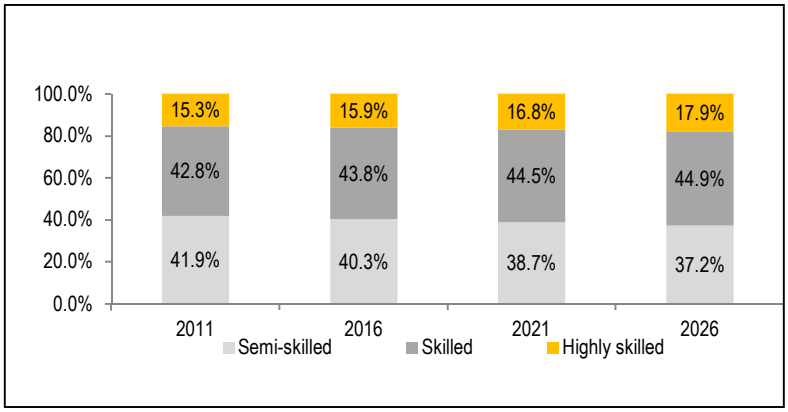


Figure 31 Proportion of demand for skilled jobs by skill categories- Bhadrak District

The major sectors from which the workforce demand for skilled jobs in 2026 is primarily expected comprises tourism, travel, hospitality & trade (0.8 lakh); agriculture (0.6 lakh); banking, financial services & insurance (0.5 lakh); education & skill development (0.4 lakh); healthcare (0.4 lakh) and IT & ITes industry (0.4 lakh).

The secondary research and CMIE's Capex database indicates several projects in agriculture, food processing and energy sector in the offing. The same have been factored in the analysis for estimating skill-wise demand for the sectors.

Sector	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	20,924	26,536	33,653	42,678	
Skilled	13,866	17,584	22,300	28,281	
Highly skilled	2,269	2,877	3,649	4,628	
Total demand for skilled jobs	37,059	46,997	59,602	75,587	20
Agriculture					
Semi-skilled	33,497	32,912	32,337	31,772	
Skilled	22,331	21,941	21,558	21,181	
Highly skilled	11,166	10,971	10,779	10,591	
Total demand for skilled jobs	66,994	65,824	64,674	63,544	17
Banking, financial services & insurance					
Semi-skilled	4,247	6,429	9,731	14,729	
Skilled	2,438	3,691	5,586	8,456	
Highly skilled	9,045	13,691	20,723	31,368	
Total demand for skilled jobs	15,730	23,811	36,040	54,553	15
All sectors:					
Semi-skilled	87,496	99,965	116,314	137,848	
Skilled	89,340	108,458	133,507	166,359	
Highly skilled	31,854	39,496	50,442	66,182	
Total demand for skilled jobs	208,690	247,919	300,263	370,389	100

Source: EY Analysis

Table 22: Skill-wise demand for sectors where demand is foreseen- Bhadrak District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for highly-skilled and skilled manpower is expected to widen by around 0.9 lakhs during the period 2011-2026. At the same time, the gap is expected to contract for semi-skilled workers.

While the district is foreseen to have an over-supply of semi-skilled workers, there is an increasing requirement for **skilled** and **highly skilled** workers.

A major part of the incremental gap for **skilled** workers (~60,000) is expected to come from services sectors like education and skill development (25 percent); healthcare (25 percent); tourism, travel, hospitality and trade (19 percent) and IT & ITes (15 percent) industry.

Amongst the incremental requirement for **highly skilled** workers (~34,000), a higher requirement is foreseen in case of banking, financial services & insurance (65 percent); IT & ITes (16 percent) and tourism, travel, hospitality & trade (7 percent) sectors.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(91)	(341)	(526)	(958)
Auto & Auto Components	(1)	1	4	4
Chemical & Pharmaceuticals	0	3	5	8
Construction materials & building hardware	39	89	141	269
Electronics & IT Hardware	0	1	1	2
Food Processing	55	64	73	192
Furniture & Furnishings	(2)	4	10	12
Leather & Leather Goods	0	0	0	0
Gems & Jewellery	0	0	0	0
Organised Retail	0	0	0	0
Textile	(10)	0	8	(2)
Unorganised sector	(1)	4	8	11
Banking, Financial Services & Insurance	4,020	7,558	13,157	24,735
Building, Construction & Real Estate Services	(92)	(17)	45	(64)
Education & Skill Development	3,864	5,483	7,589	16,936
Healthcare	3,206	4,829	6,941	14,976
IT & ITES industry	2,673	4,304	6,427	13,404
Media & Entertainment	320	1,735	3,501	5,556
Tourism, travel, hospitality & trade	(306)	2,695	6,440	8,829
Transportation, logistics, warehousing & packaging	(670)	(291)	79	(882)
Total	13,005	26,121	43,903	83,029

Source: EY Analysis

Table 23: Total incremental demand supply gap for skilled jobs by sectors- Bhadrak District

Source: E&Y Analysis

Sector-wise, higher incremental demand and supply gap is expected in the banking, financial services & insurance (30 percent); education and skill development (20 percent); healthcare (18 percent); IT & ITes (16 percent) sectors. Except for the banking, financial services and insurance sector (which is foreseen to witness higher requirement of highly skilled workers), a major part of the incremental skill gap requirement in the aforementioned sectors is expected to be for skilled workers.

10.4.5 Development potential and stakeholder perception

Bhadrak is among the more progressive districts of Odisha, ranked 8th in terms of HDI and among the top 8 Districts in terms of average literacy rate. About one fifth of the population consists of SCs and there is only a marginal (less than 2 percent) ST population in the district. . Bhadrak has approximately 170,000 hectares of area under cultivation of which about 150,000 hectares is occupied by paddy in the rainy season. Although the agro climatic conditions are favorable, cultivation is mostly subsistence oriented owing to the prevalence of small and marginal land holding. District level officials reported that though there is a good potential for growing commercial crops like mushrooms, sugarcane, mustard and green vegetables, the farmers find it

difficult to switch from paddy to the commercial crops due to higher susceptibility and poor knowledge & skills on scientific agriculture. The absence of scientific irrigation and drainage is huge constraint to increase agricultural outputs. The way forward according to district officials is to try and sensitize the land holders about the advantages of collaborating together and cultivating cash crops in larger areas, using mass production techniques. NGOs and CBOs could be involved in connecting with the community to ensure more community participation in advocacy of farming best practices.

Being a coastal district, Bhadrak has tremendous potential in terms fish capturing and prawn breeding. A lot of paddy farmers have in the past half a decade moved into prawn breeding as it is considered more profitable and less labor intensive as compared to the paddy farming. Brackish water prawn breeding is relatively more profitable than fresh water prawn breeding and hence practiced more, but the recent increase in incidence of a viral disease "White Spot disease" has led to circumspection among the farmer community. Farmers use antibiotics to treat the prawn, in vain and this has led to huge losses. Moreover the use of antibiotics makes the prawn unfit for export to developed nations leading to further revenue losses. . The Marine Products Export Development Authority (MPEDA) conducts workshops along the coasts to spread awareness among the fish farmers about the sanitation and the importance of drainage. The government has initiated some schemes which provide financial subsidies to the fish farmers. According to the fishery department officials accreditation drives to ensure marine product quality and increasing the knowledge levels of the farmers about schemes and techniques to tackle problems will lead to a reinstallation of confidence in the fish farmers and provide a remunerative employment opportunity.

Another encouraging prospect for the district lies in animal husbandry. Until a few years back, poultry was reared only in the backyards. Recently Suguna Poultry a large player in the poultry industry had tied up with a few individuals in Bhadrak to rear chicken on a large scale. Suguna supplies the chicks to the local population for the purpose of rearing on the condition of buying the broiler chickens back from them. The chicken are transported to surrounding major cities for slaughter and processing as currently there is no presence of value addition mechanisms like cleaning and packaging of slaughtered chicken in Bhadrak. Establishing a food processing and packaging unit would definitely increase the profits and revenue generation for the district. The district officials see this as a potential revenue generating industry as the raw material for the industry is also readily available. Non- availability of grazing land has made dairy farming non profitable according to the district officials.

With good road and rail connectivity and opening of Dhambra port, good education infrastructure and availability of skilled manpower, Bhadrak is well positioned for industrial development. The district lies in close proximity to industrial and mining hub of the State including Jajpur, Jagatsingpur, Keonjhar, Cuttack and Balasore. The Dhamra port has already spurred the formation an Ice factory cluster and there are opportunities for setting up other small and medium scale industries like boat manufacturing and fishing net production units. Ferro Alloys Corporation Ltd. (FACOR) already has a bauxite enrichment unit in the District and is setting up a power plant in the district. Other possible industry includes fly ash brick kilns, rice mills, chuda mills, oil mills and spice grinding units.

In the health sector, there is a shortage 50 of medical officers in the Public Health Centres (PHC). About 90 percent of the PHCs are running without medical officers. Currently there are no refresher training courses for medical professionals and the authorities feel that such courses, if introduced, will be beneficial for the district.

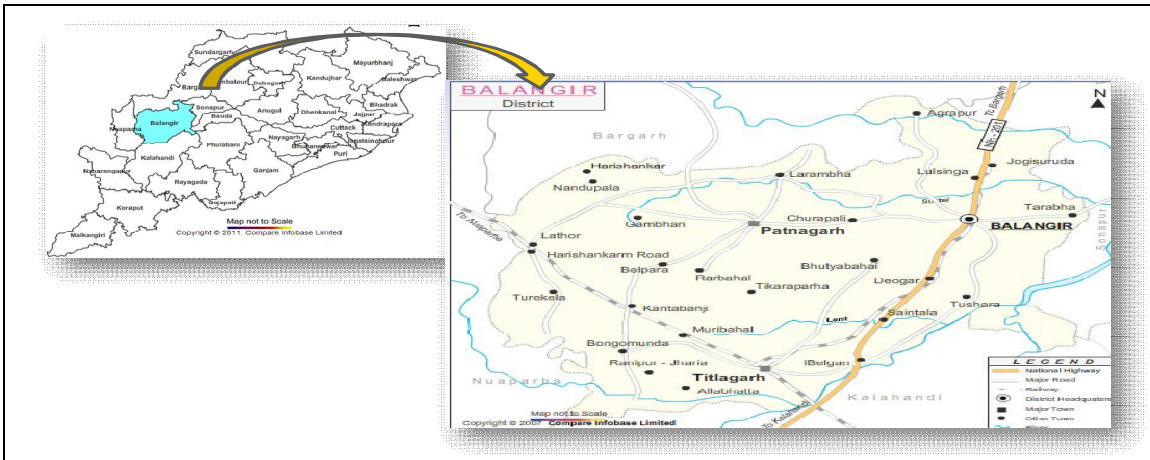
In addition to skill and infrastructure development, access to bank finance emerged as an important constraint for growth in agriculture and fishery in the district. The district officials reported that poor recovery trends and low knowledge and awareness about the procedure for getting loan acts as an impediment to entrepreneurship development.

Most of the youth perceive a need to go out of Bhadrak to cities like Kolkata and Bangalore in search of better paying jobs. There are not enough vacancies in the district to absorb all the ITC and college graduates. There is one engineering college in Bhadrak called the Bhadrak Institute of Engineering and Technology at Barapada. Focus group discussions with the students of the college revealed that 20-30 percent strength comprises of students from Bhadrak while some 70-75 percent comprises of students from other districts of Odisha. Students look for jobs outside the State since they feel there are very few job opportunities within the district. There are no ITIs in the district. An interview with the principal of one of the private ITCs revealed that there is demand for mainly two courses, viz; fitter and electrician. There is not much demand for non-engineering traits because of a general lack of awareness for the same. Awareness campaigns for parents and potential candidates about other courses and specializations will lead to increase interest and demand for such courses.

- **Primary Sector** – Fisheries is an important sector which would flourish if adequate skill development is done to help people undertake prawn rearing; poultry farming can be further expanded since the district is located strategically and can easily supply poultry to the urban areas in the vicinity.
- **Secondary Sector - Glass** and ceramics and plastic and rubber are some potential areas where skill development can take place. Currently industrial sector not well developed but there is good potential for this district to become epicenter for industrial development due to its proximity to the mining hubs, good road and rail connectivity.
- **Tertiary Sector** – Good scope for skill development since it is the main contributor the the district GDP. Areas like hospitality, transportation, health and education sectors would require skilled human resource

10.5 Bolangir

Bolangir district is spread over an area of 6,575 Sq Km which forms approximately 4.22 percent of the total geographical area of the State. Topographically, the district has two prominent divisions- the Gandhamardhan Hills on the north-west and the rock infested Mahanadi in the north-east. The district is situated in the valley of rivers like Ang & Tel. Administratively; the district is divided into 3 subdivisions, 14 blocks, 285 Gram Panchayats and 1764 villages. Bolangir is surrounded by Bargarh and Sonepur Districts in the north, Sonepur, Boudh and Kandhamal districts in the east, Nuapada in the west and Kalahandi in south.



Map Courtesy: Maps of India

District Information	Bolangir	Odisha	Source
Area (in Sq Km)	6,575	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	4.22% (10)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	14	**309**	Census 2001
No of GPs	285	**6234**	Census 2001
Total no of inhabited villages	1764	**47529**	Census 2001
Forest area as % of total geographic area	23.44%	**37.66**	Census 2001

Figure 32: District Map of Bolangir

10.5.1 Demography

With a population of 16.49 lakhs, Bolangir constitute 3.93 percent of the State's population and is the 10th largest district in terms of population as per 2011 provisional census figures. Compared to the State average of 13.97 percent, the change in population between 2001 and 2011 census for Bolangir has been 23.29 percent. Males and females were 8.31 lakhs and 8.17 lakhs respectively. Population density of the district is 251, much in line with the State's average population density. Sex ratio is 983, slightly higher than that of Odisha as a whole. In terms of social composition of the population, SCs constitute approximately 16.92 percent of the total population whereas STs form 20.63 percent of the total population. With almost 88 percent rural population, Bolangir is a predominantly a rural district. As per 2001 census, the population in the working age group constituted 58.09 percent of the total population. Work participation rate of the district is 41.86 percent, slightly higher than the State average. Out of the total workers 62.83 percent are main workers and 37.17 percent are marginal workers.

With a human development index (HDI) of 0.546, Bolangir ranks among the 10 least developed districts in term of HDI. The GDI value is slightly better at 0.518, still less than the State's average.

Population	Bolangir	Odisha	Source
Total population (in lakh)	16.49	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	8.31	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	8.17	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	3.93% (10)	**NA**	Census 2011 provisional figures
Density of population	251	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	23.29%	**13.97%**	Census 2011 provisional figures
Urban population %	9.36%	**14.99%**	Census 2001
SC population %	16.92%	**16.53**	Census 2001
ST population %	20.63%	**22.13**	Census 2001
Sex ratio	983	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	58.09%	**58.40%**	Census 2001
Worker participation rate	41.86%	**40.03**	Census 2001
Share of primary sector to total workers	71.00%	**64**	Census 2001
Proportion of agriculture laborer in workforce	40.00%	**34.53**	Census 2001
Human Development Indicators	**Bolangir**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.546 (21)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.518 (16)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	15981 (13)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.467 (13)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 24Socio Economic indicators of Bolangir

10.5.2 State of Education

The state of education in Bolangir has shown some improvement at the elementary school level although the average literacy rate remained below the State average in 2001 as well as in 2011. In 2011 the male and female literacy is 77.08 percent and 53.77 percent respectively. For 2001 census, same figures stood at 71.67 percent and 39.51 percent indicating a higher proportionate increase in the literacy rate among women during the last 10 years. The drop-out rate at primary level has reduced from 7.29 percent - 0.18 percent from 2006-07 to 2010-11. The corresponding figures for upper primary level are 22.91 percent (2006-07) to 6.57 percent (2010-11).

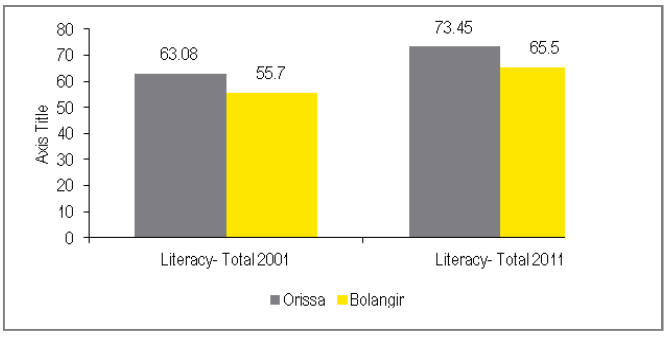


Figure 33: Literacy Rate - Bolangir

For higher Education there are 57 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 7232, 1472 and 720 respectively. The rate of seat utilisation has been good in Bolangir. As per DHE data, only 5 percent of the aggregate

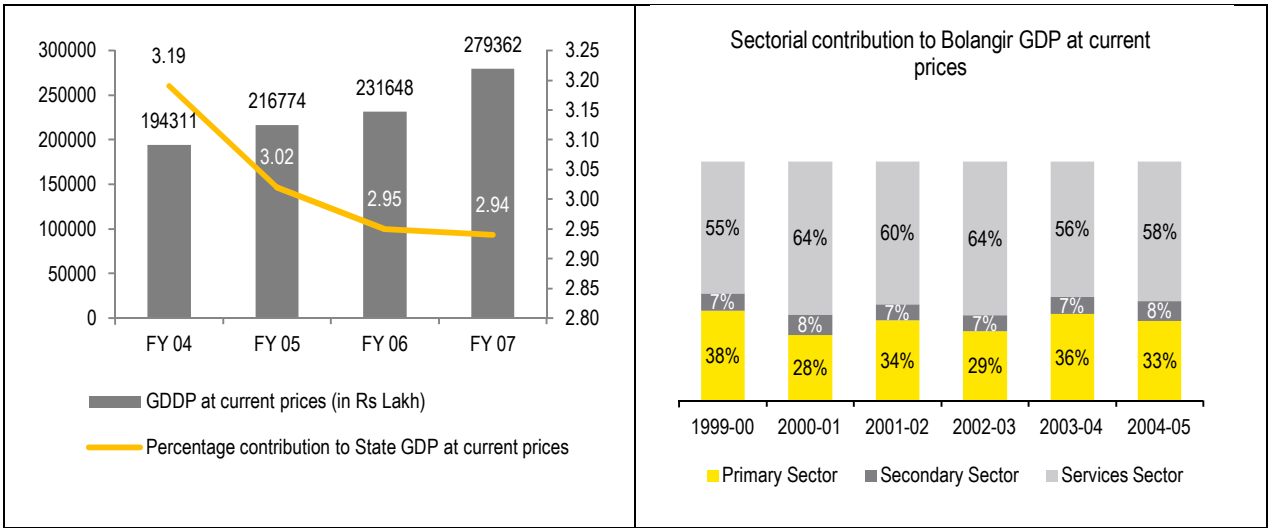
seats remained vacant at the end of the admissions in 2011. At the degree level, there are 26 colleges which offer a range of courses.

Bolangir does not have any degree colleges for technical education. There is one private polytechnic institute offering various engineering diploma courses. Total intake capacity in polytechnic institutes is approximately 390 students per year. As per SC TEVT, in the year 2010, 304 out of the available 390 seats were filled indicating an utilisation of 78 percent only. Major courses offered at the polytechnic institute are mechanical and electrical engineering. There are two nursing colleges offering a B.Sc. and a Diploma in nursing with intake capacity of 20 students per year each. In addition, it also has an ayurvedic college offering BHMS degree with an intake capacity of 30 students per year.

For Vocational training, there is one Government ITI, covering 10 courses, including courses like fitter and electrician. In addition there are 8 private ITCs offering courses like fitter, electrician, welder and plumber. The district has a poor coverage in terms of vocational training institutions. All the ITIs are concentrated in only Bolangir block leaving rest of the 13 blocks without any vocational training infrastructure. Heavy concentration in one block is probably the reason behind the high rate of vacant seats. In 2010, the rate of vacancy in the government ITI was 66 percent, while in the private ITCs it was 49 percent.

10.5.3 Economic Profile

The annual average growth rate of Bolangir district for the period 2000-01 to 2006-07 has been 6.2 percent. In terms of contribution to State GDP, the district's contribution shows a steady decline over the years. In year 2006-07, it stood at 2.94 percent. The services sector forms the bulk of GDDP contribution. Share of industry sector is just 4 percent of the total district GDP.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 34: Gross District Domestic Product (at current prices) of Bolangir

Agriculture

Almost 70 percent of the population depends on agriculture for livelihood. Agriculture is the mainstay of the district economy and *Kharif* Paddy is the principal means of livelihood. As per Odisha agriculture statistics report 2008-09, fifty two percent of the total geographical area or

almost 346 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of about 215 thousand hectares. As drought causes considerable reduction of *Kharif* paddy production, it does not provide adequate livelihood to the majority of the agricultural labourers or cultivating households. Performance of Bolangir district is good in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 8th with a per capita agricultural output of 1679. Vegetables contribute highest to the total agricultural output of Bolangir with a value of 346.43 (2008-2009), followed by rice (311.67) and pulses with (57.26) (all figures in thousand metric tonnes). With an average landholding of 1.45 hectare, about 49 percent of farmers have more than a hectare of land holding.

Industries

Bolangir District is one of the trios of KBK (undivided Kalahandi, Bolangir and Koraput districts) which is the most poor and backward region in Odisha. However, a lot has changed over the years and today; it is also one of the important commercial townships of western Odisha.

In terms of Investments into large and medium scale industries, Bolangir is currently ranked 13th in the State, with an investment of about Rs. 7 billion by 2010 which constitutes only 0.76 percent of the total investment in large and medium scale industries. Some of major large scale industries include Ordnance Factory and GKW Powmax Steels Limited. Some of the upcoming industries include Spa Strawboard Industries Private Limited and Rishabh Mining Private Limited.

In terms of investments in Micro and small scale industries, Bolangir is ranked 4th in the State. MSME investment in Bolangir was 4.23 percent of the total investments made in the State till March 2010. Food and allied based industries tops the MSME investment chart of Bolangir followed by glass and ceramics and engineering and metal based industries. The breakup of this sector is given below.

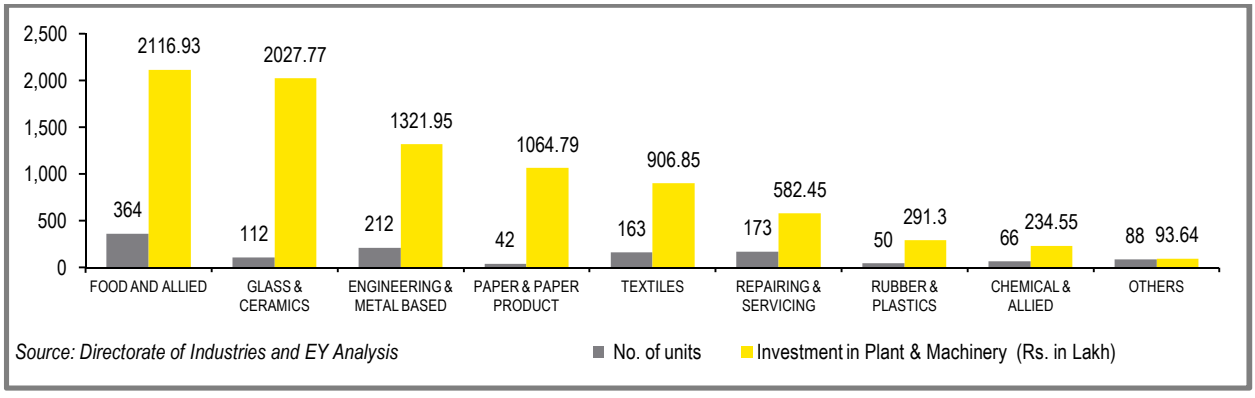
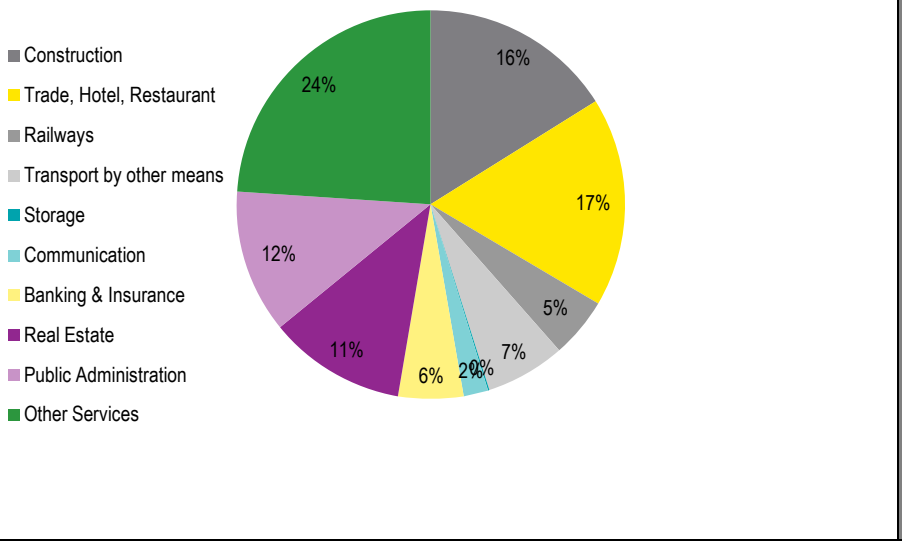


Figure 35: MSME Investments in Bhadrak till 2010

Services

The services sector includes construction, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, public administration and other services[4]. The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Bolangir GDP, the service sector remains the most important contributor constituting 79 percent of the district GDP. The composition of the service sector with regards to contribution to GDDP is shown below.



As depicted in the chart trade, hotel and restaurant (17 percent), construction (16 percent) and public administration (12 percent). Transportation including railways is also an important contributor of GDP of Bolangir economy.

Source: Planning Commission, Government of India

Figure 36: Composition of service sector- Bolangir- 2004-05

10.5.4 Skill Gap Assessment for Bolangir District

Over the next 15 years, the total workforce demand for skilled jobs in Bolangir district is expected to grow from the present levels of 3.3 lakhs in 2011 to 6 lakhs in 2026. An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon.

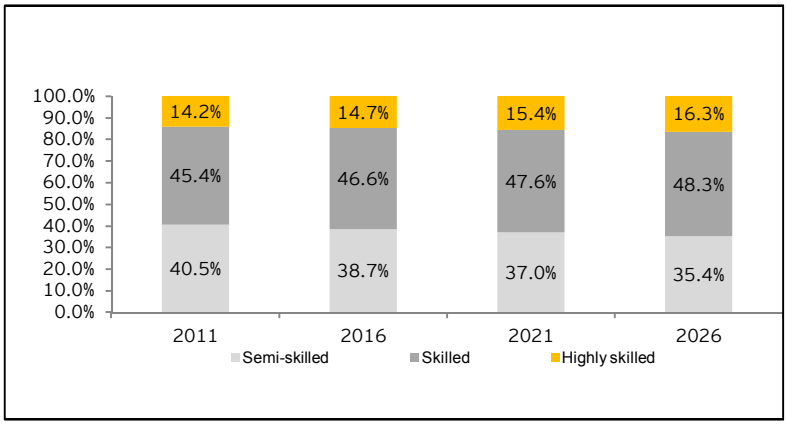


Figure 37: Proportion of demand for skilled jobs by skill category- Bolangir District

Some of the prominent sectors from which the workforce demand for skilled jobs in 2026 is primarily expected include travel, hospitality and trade (1 lakh); agriculture (0.8 lakh); education & skill development (0.8 lakh); healthcare (0.8 lakh) and IT & ITes Industry (0.8 lakh).

[4] Economic Survey report of Odisha-2010-11

The secondary research on the KBK district of Bolangir indicates thermal power plants being announced in the district.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	26,381	33,456	42,428	53,807	
Skilled	17,481	22,169	28,115	35,655	
Highly skilled	2,861	3,628	4,601	5,834	
Total demand for skilled jobs	46,723	59,253	75,144	95,296	16
Agriculture					
Semi-skilled	40,902	40,188	39,486	38,796	
Skilled	27,268	26,792	26,324	25,864	
Highly skilled	13,634	13,396	13,162	12,932	
Total demand for skilled jobs	81,804	80,376	78,972	77,592	13
All sectors:					
Semi-skilled	135,223	154,635	179,805	212,608	
Skilled	151,657	186,342	231,562	290,575	
Highly skilled	47,365	58,897	75,134	98,111	
Total demand for skilled jobs	334,245	399,874	486,501	601,294	100

Source: EY Analysis

Table 25: *Skill-wise demand for sectors where high demand is foreseen- Bolangir District*

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc. for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 2.2 lakhs during the period 2011-2026.

It is expected that a major proportion of this widening gap would be accounted by skilled human resource (60 percent), followed by highly skilled jobs (23 percent) and semi-skilled jobs (17 percent). Within the **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (56 percent) and IT & ITeS (21 percent) sectors.

The **skilled** workers would be increasingly required in case of education & skill development (27 percent), healthcare (27 percent); and IT & ITeS (17 percent) industries. The **semi-skilled workers** belonging to the tourism, travel, hospitality & trade (35 percent) and media & entertainment (23 percent) sectors would form a major part of this incremental gap in 2026.

By sector, the Banking, Financial Services & Insurance Sector is expected to account for 19 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly skilled workers (66 percent) followed by the skilled workers (17 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(937)	(1,032)	(1,099)	(3,068)
Auto & Auto Components	2	3	4	9
Chemical & Pharmaceuticals	7	9	11	28
Construction materials & building hardware	867	1,078	1,308	3,253
Electronics & IT Hardware	18	23	28	69
Food Processing	83	87	90	260
Furniture & Furnishings	23	29	35	87
Leather & Leather Goods	2	2	3	7
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	74	97	119	290
Unorganized sector	14	17	20	51
Banking, Financial Services & Insurance	8,334	13,261	20,840	42,435
Building, Construction & Real Estate Services	190	250	300	740
Education & Skill Development	9,971	13,127	17,236	40,334
Healthcare	9,435	12,588	16,697	38,720
IT & ITES industry	8,800	11,950	16,060	36,810
Media & Entertainment	6,081	8,642	11,884	26,607
Tourism, travel, hospitality & trade	7,691	11,158	15,547	34,396
Transportation, logistics, warehousing & packaging	592	953	1,327	2,872
Total	51,247	72,244	100,411	2,23,902

Source: E&Y Analysis

Table 26: Total incremental demand supply gap for skilled jobs by sectors- Bolangir

The incremental demand supply gap is also expected to widen for education & skill development sector (18 percent). The incremental human resource gap in this sector largely comprises of need for skilled (90 percent) and highly skilled work force (10 percent).

Significant incremental requirement is also expected to be witnessed in services like Healthcare (17 percent); IT and ITeS (16 percent) and tourism, travel, hospitality & trade (15 percent) sectors. A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.5.5 Development potential and Stakeholder perception

Bolangir is not very well connected with the rest of the state which is why the development of industries has been tardy. The upcoming Khurda-Bolangir railway line and highway would make a difference. It is largely known for its forest reserves and forest produce including non timber and timber produces. Bolangir has production of paddy, cotton, maize and sunflower. Fruits like mangoes, litchi and guava are grown in substantial amounts but marketing and processing of these food items remains weak for lack of infrastructure. It was shared with the research team that majority of the households in the district do not possess large pieces of land which impedes development of horticulture since most schemes have a minimum requirement of an acre to make the beneficiaries of these schemes. This excludes a large number of families from the benefits of the scheme. Even those who own larger pieces of land are reluctant to engage in horticulture since marketing linkages are not very strong at present.

Although it is a rainfed area there are a number of small ponds which are conducive for fishery. About 7500 individuals are engaged in fisheries in the district. Local fish from Bolangir has a lot of demand and fetches a good price.

Recurring crop failures in the past few years have forced a number of people to migrate to other cities. A number of families go for seasonal migration to brick kilns in Andhra Pradesh in search of work. Needless to say the education of their children is compromised since there are language issues to be addressed. Some initiatives have been taken by the government and NGOs but the underlying problem is that there is lack of employment opportunities in the district. For the unskilled workers, schemes like MGNREGA provide some person days of work.

The district is famous for the *bhulias* and *kastias* master craftsmen who weave exquisite motifs on cotton and *tussar*. The sarees and woven material is considered exquisite and has a lot of demand. Although the area has the potential to develop as a rural hub, it has not emerged as one. Since cotton is also grown in the district, complementary skills can be developed to increase the capacity of the weavers to work collectively and increase business opportunities. High dependence on middle men does not give them the returns they can get.

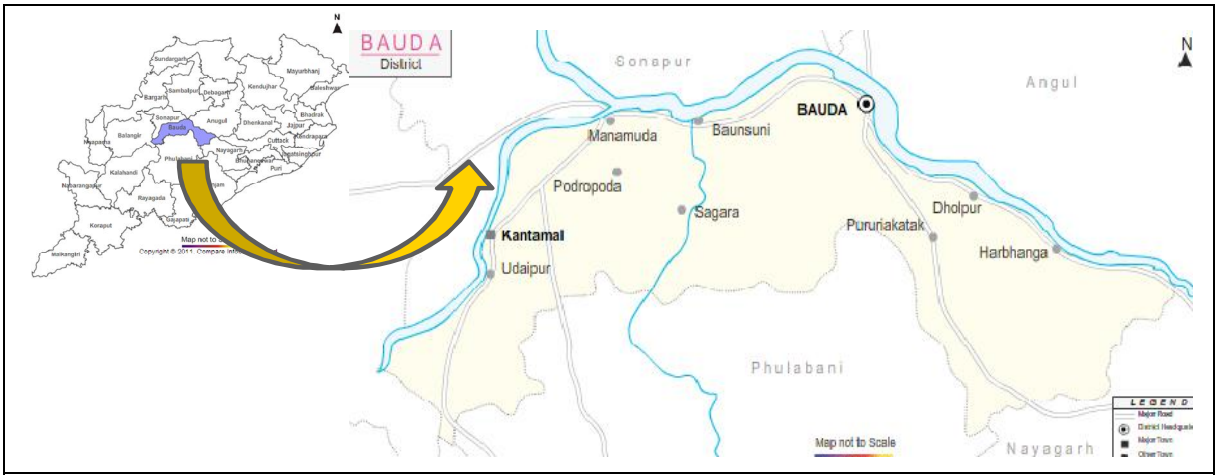
The youth are of the opinion that the district needs to have medium and large scale industries to address the gigantic problem of unemployment. Members from the industries feel that the quality of training being imparted through the existing training institutions is not up to the mark.

The technical and vocational training infrastructure in Bolangir is inadequate in terms of coverage. Data shows that barring one polytechnic institute there are no other technical institution in the District. As mentioned earlier, the entire vocational training institutes are concentrated in just one block of the district and even there the seats are not utilized- a high rate of vacant seats has been observed. Skill development will therefore be a critical aspect as the demand and incremental demand-supply gap as per our analysis will more in the services sector like trade, hospitality, banking, IT and ITES, education and healthcare sectors. Lack of industries and low industrial potentials indicate that absorption of industrially trained students will be very less. Considering all these factors and the overall literacy rate which is lower than the State average, it would be prudent that the district focuses on strengthening the basic education and create suitable infrastructure for higher and technical education that provides skill development in education, healthcare, IT-ITES and trade and hospitality sectors along with creating skill development centers for agriculture.

- **Primary sector:** Forest produce and NTFPs, cotton, maize, sunflower, mango litchi and guava has potential for commercial production but require facilities for processing, value addition and marketing. Skill development is required in agriculture and allied sector mainly in modern ways of farming, commercial agriculture etc.
- **Secondary sector:** Potential to develop the handloom cluster. Skill development is required in management, designing, and marketing aspects.
- **Services Sector:** strengthening the basic education and create suitable infrastructure for higher and technical education that provides skill development in Education, Healthcare, IT-ITES and Trade and Hospitality sectors.

10.6 Boudh

Boudh District is spread over an area of 3098 Sq Km which forms approximately 1.99 percent of the total geographical area of the State. Administratively, the district is divided into 3 blocks, 63 Gram Panchayats and 1115 villages. Boudh is surrounded by Angul District in the north, Nayagarh in the east, Sonepur in the west and Khandamal in the south.



Map Courtesy: Maps of India

District Information	Boudh	Odisha	Source
Area (in Sq Km)	3,098	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.99% (22)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	3	**309**	Census 2001
No of GPs	63	**6,234**	Census 2001
Total no of inhabited villages	1,115	**47,529**	Census 2001
Forest area as % of total geographic area	41.29%	**37.66%**	Census 2001

Figure 38: District Map of Boudh

10.6.1 Demography

As per Census 2011 (Initial provisional data), Boudh has a population of 4.4 lakhs of which males and females were 2.21 lakhs and 2.19 lakhs respectively. There is a change of 17.82 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 1.05 percent of the total population of the State and is 2nd lowest in Odisha. The initial provisional data (Census 2011) suggest a population density of 142 in 2011 making Boudh the sixth least densely populated District of Odisha. With regards to sex ratio, the district fares well compared to other districts and the state average. The sex ratio for Boudh as per 2011 provisional census figures is 991 females per 1000 males, slightly higher than the State average of 978 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 21.9 percent of the total population while STs forms 12.47 percent of the total population. With only 4.83 percent urban population, Boudh is one of the least urbanized districts in Odisha (as per census 2001).

As per 2001 census, the population in the working age group constituted about 58 percent of the total population. The population in the age group 0-4 years constitutes 9.72 percent and 5-14 years comprise 19.27 percent respectively. Boudh can boast a high work participation rate of the

district is 45.73 percent. Out of the total workers 61.95 percent are main workers and 38.05 percent are marginal workers. With a Human Development Index (HDI) of 0.536 and Gender Development Index (GDI) of 0.509, the Boudh ranks in the bottom half of the districts in Odisha.

Population	Boudh	Odisha	Source
Total population (in lakh)	4.40	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	2.21	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	2.19	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	1.05% (29)	**NA**	Census 2011 provisional figures
Density of population	142	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	17.82%	**13.97%**	Census 2011 provisional figures
Urban population %	4.83%	**14.99%**	Census 2001
SC population %	21.88%	**16.53**	Census 2001
ST population %	12.47%	**22.13**	Census 2001
Sex ratio	991	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	57.72%	**58.38%**	Census 2001
Worker participation rate	45.73%	**40.03%**	Census 2001
Share of primary sector to total workers	78.36%	**64**	Census 2001
Proportion of agriculture laborer in workforce	39.77%	**34.53**	Census 2001
Human Development Indicators	**Boudh**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.536 (23)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.509 (19)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	14467 (18)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.402 (22)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 27: Socioeconomic Indicators- Boudh District

10.6.2 State of Education

Average literacy rate of Boudh in 2011 (as per provision census figures) is 72.51 percent compared to 57.73 percent in 2001. Gender wise male and female literacy is 84.49 percent and 60.44 percent respectively. For 2001 census, same figures stood at 76.23 and 39.02 showing a proportionate increase in literacy level for in Boudh District over last 10 years.

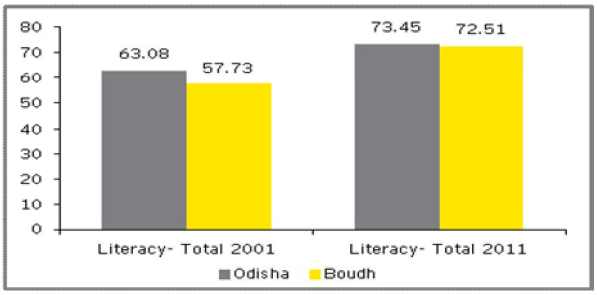


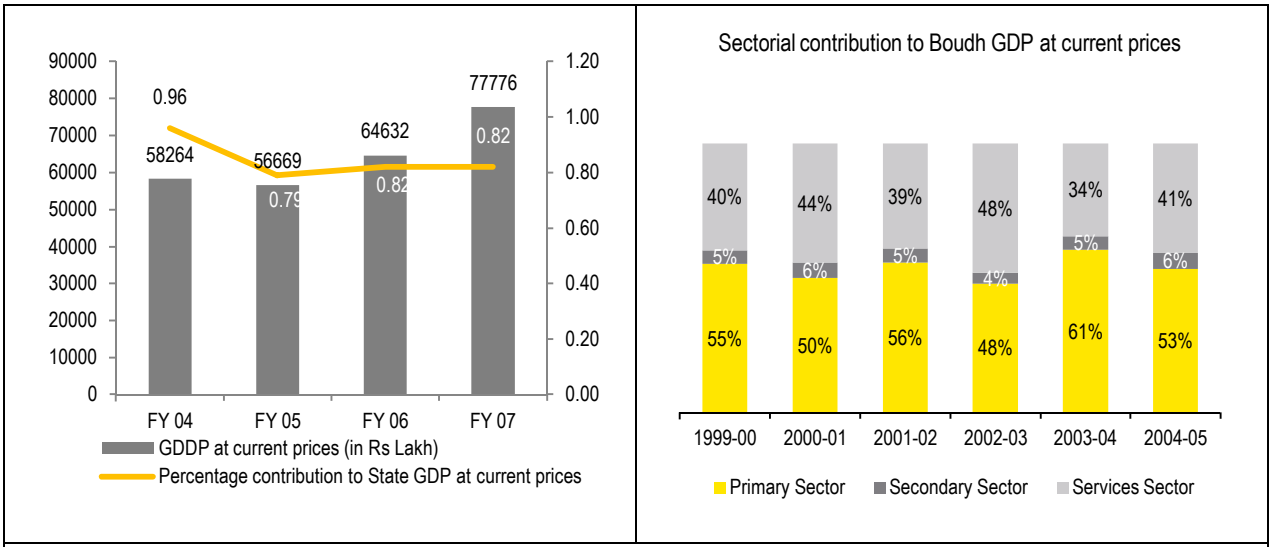
Figure 39: Literacy Rate- Boudh District

Most notably though is the rise in literacy rates in the female population of 20 percent. Out of the total number of children in school going age, 3.17 percent children were out of school in 2010.

There are 10 junior colleges and a government degree college offering courses in Arts and Science. The district does not have any engineering or polytechnic institution or medical or professional education facilities. There is a government ITI offering courses in three trades in addition to a private ITC. The seat utilisation rate of the government ITI was found to be quite poor as per the SCVET data.

10.6.3 Economic Profile

As per the Economic Survey 2010-11, the average annual growth rate of Boudh district has been 6.2 percent for the period 2000-01 to 2006-07. In terms of overall contribution to the State GDP, Boudh is among the poorest performing distroicts contributing just 0.82% of the State GDP. As in the case of other underdeveloped districts, share of agriculture is the highest in the GDDP followed by services sector. The industry sector is grossly underdeveloped. The proportionate contribution of various sectors to District GDP of Boudh at current prices (2004-05) is shown below:



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 40: Gross District Domestic Product (at current prices) of Boudh

Agriculture

As evident from the high contribution of the primary sector to the GDDP, the economy of Boudh is predominantly agriculture and forest dependent. More than 75 percent of the total main work force is either cultivators or agricultural laborers.

As per Odisha agriculture statistics report 2008-09, 28.7 percent of the total geographical area or almost 89 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 71 thousand hectares. Apart from paddy, other major crops include pulses and oil seeds.Performance of Boudh district is rich in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 6th with a per capita agricultural output of 1084. Vegetables contribute highest to the total agricultural output of Boudh with a value of 202.30 (2008-2009), followed by food grains (114.64) and cereals with (95.45) (all figures in thousand metric tonnes).

The average landholding by farmers is of 1.5 hectare, which does not portray the correct image as around 46 percent of the farmers still have only marginal (less than a hectare) land holding.

Industries

Boudh does not have any large or medium scale industries and is in a very early stage of industrial development. Though the district is centrally located and is in close proximity to other industrially developed districts like Angul, Jharsuguda, Sambalpur and Sundargarh, poor transportation network and infrastructure development acts as major hindrance to industrial development. In

terms of investments in MSME's, Boudhs ranks among the bottom five districts with only 0.41 percent of the total MSME investment in the state. Within MSME sector a large portion of the investment (Rs. 856 lakhs), has been in the food and allied industry (Rs. 566 lakhs), followed by glass & ceramics (Rs. 193.52 lakhs). The MSME investment in the district can be seen in the chart below:

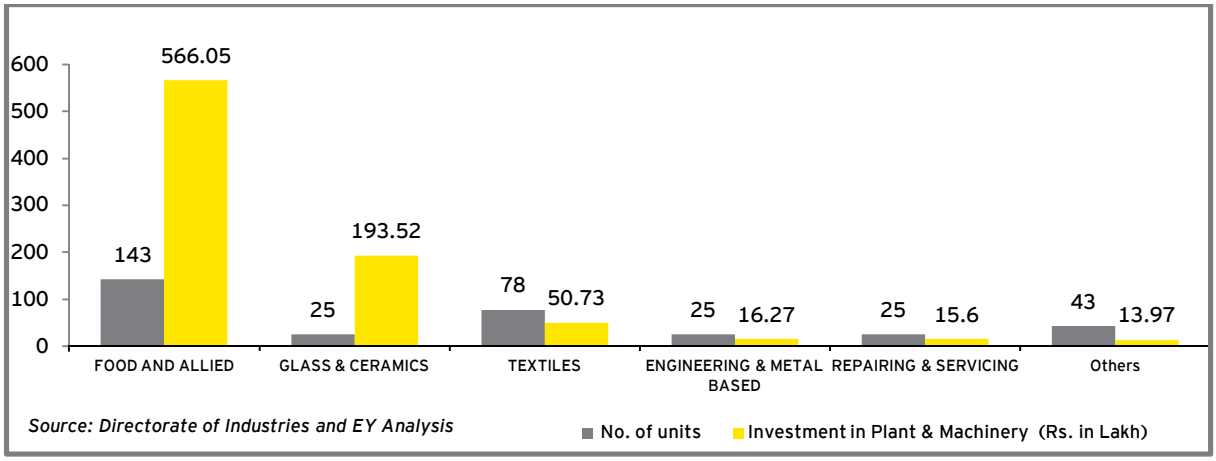
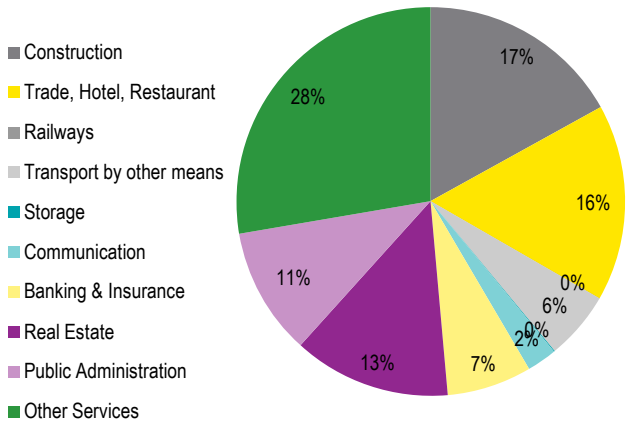


Figure 41: MSME Investments in Boudh till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Boudh GDP, the service sector remains the most important contributor constituting approximately 40 percent of the district GDP in year 2005-06. The contribution of various sectors to GDDP is shown in chart below:



Overall the largest contributors to the GDDP are other services which contribute 28 percent to the district service sector economy. Construction contributes the second highest (17 percent), then trade, hotel and restaurant (16 percent), real estate (13 percent) and public administration (11 percent).

Source: Planning Commission, Government of India

Figure 42: Composition of service sector- Boudh District-2004-05

10.6.4 Skill Gap Assessment for Boudh

Over the next 15 years, the total workforce demand for skilled jobs in Boudh district is expected to grow to 1.7 lakhs in 2026 from the present levels of 1 lakh in 2011. The total workforce demand created in 2026 is expected to be dominated by the tertiary sector (83 percent), followed by primary (15 percent) and secondary (2 percent) sectors.

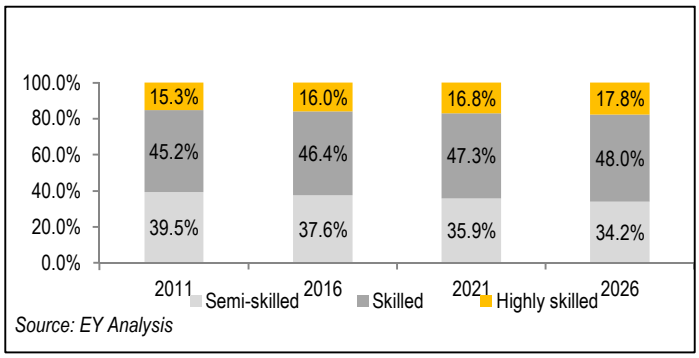


Figure 43: Proportion of demand for skilled jobs by skill categories- Boudh District

The top five sectors expected to create a demand for skilled workforce in 2026 are: agriculture (0.3 lakh); banking, financial services & insurance (0.2 lakhs); tourism, travel, hospitality and trade (0.2 lakh); education & skill development (0.2 lakhs); healthcare (0.2 lakhs) and IT & ITes industry (0.2 lakhs).

As per the CMIEs Capex database and secondary research, major projects have been announced in the power sector during the past two years.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	13,520	13,284	13,052	12,824	
Skilled	9,013	8,856	8,701	8,549	
Highly skilled	4,507	4,428	4,351	4,275	
Total demand for skilled jobs	27,040	26,568	26,104	25,648	15
Banking, Financial Services & Insurance					
Semi-skilled	6,559	8,319	10,549	13,379	
Skilled	4,347	5,512	6,991	8,865	
Highly skilled	711	902	1,144	1,451	
Total demand for skilled jobs	11,617	14,733	18,684	23,695	14
Tourism, travel, hospitality & trade:					
Semi-skilled	1,841	2,787	4,219	6,386	
Skilled	1,057	1,600	2,422	3,666	
Highly skilled	3,921	5,936	8,984	13,599	
Total demand for skilled jobs	6,819	10,323	15,625	23,651	14
All sectors:					
Semi-skilled	37,570	42,709	49,462	58,381	
Skilled	42,946	52,608	65,256	81,829	
Highly skilled	14,537	18,111	23,191	30,446	
Total demand for skilled jobs	95,053	113,428	137,909	170,656	100
Source: E&Y Analysis					

Table 28: Skill-wise demand for sectors where high demand is foreseen- Boudh District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by around 0.7 lakhs during the period 2011-2026.

The district is foreseen to witness an incremental demand of ~39,000 **skilled,** ~16,000 **highly skilled** and ~14,000 **semi-skilled** workers.

Within the incremental gap for **skilled** workers, a major portion is expected to come from services sectors like education and skill development (28 percent); healthcare (27 percent); and IT & ITes (17 percent) industries.

Amongst the incremental **highly skilled** workforce requirement, around three-fifth of this requirement is expected to come from banking, financial services & insurance sector.

The **semi-skilled workers** belonging to the tourism, travel, hospitality & trade (33 percent); media & entertainment (25 percent); banking, financial services & insurance (22 percent) sectors would form a major part of this incremental gap for semi-skilled workers in 2026.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(372)	(389)	(400)	(1,161)
Auto & Auto Components	4	5	6	15
Chemical & Pharmaceuticals	0	0	0	0
Construction materials & building hardware	91	108	128	327
Electronics & IT Hardware	2	3	3	8
Food Processing	14	15	15	44
Furniture & Furnishings	14	16	18	48
Leather & Leather Goods	0	0	0	0
Gems & Jewellery	0	0	0	0
Organised Retail	0	0	0	0
Textile	55	65	74	194
Unorganised sector	1	2	2	5
Banking, Financial Services & Insurance	3,106	4,845	7,502	15,453
Building, Construction & Real Estate Services	129	151	171	451
Education & Skill Development	2,976	3,875	5,045	11,896
Healthcare	2,876	3,776	4,947	11,599
IT & ITES industry	2,726	3,627	4,800	11,153
Media & Entertainment	2,087	2,816	3,736	8,639
Tourism, travel, hospitality & trade	2,375	3,236	4,324	9,935
Transportation, logistics, warehousing & packaging	127	168	212	507
Total	16,213	22,319	30,585	69,117
Source: EY Analysis				

Table 29: Total incremental demand supply gap for skilled jobs by sectors

Some of the major sectors where the incremental demand supply gap is expected to widen are banking, financial services and insurance (22 percent), education & skill development (17 percent), healthcare (17 percent) and IT & ITes (16 percent) sectors.

10.6.5 Development Opportunities and Stakeholders Perceptions

Located along the banks of rivers Mahanadi, Boudh is a flood and drought prone district with almost half of its area categorized as forests and uplands and the other half as low land and flood plains. The district has a definitive geographical advantage in terms of its central location, proximity to the district head quarters of all neighboring districts- few of them industrially developed and connectivity through National Highway. In spite of these locational advantages the district has remained backward in terms of socioeconomic development and industrial progress. It is among the bottom few districts in terms of human development indices, less than half of its villages are still without electricity and a large of part of the district become inaccessible after monsoon.

The cropping pattern of Boudh district is heavily loaded in favor of paddy and pulses. Commercial crops like onion and maize have shown good prospects and are being slowly adopted by increased number of farmers. Change of cropping pattern to high yielding paddy and new remunerative crops is however slow, resulting in stagnation in production and value realization. The agro-climatic conditions of Boudh district offer excellent scope for development of food crops, plantation and horticulture crops. The horticultural crops grown are tuberose, Mango, Banana, Jackfruit, pineapple and citrus etc. There is excellent opportunity for bee keeping as well as mushroom cultivation. In view of the thrust given by the Government for agro based processing industries capable of providing employment directly and indirectly, this sector needs to be encouraged in a greater way. Boudh and Harbhanga blocks are suitable for cultivation of flowers like gladiolus and Jasmine. Paddy straw mushroom and oyster mushroom are grown under natural conditions. The demand for mushroom in the district has increased substantially and several unemployed youths, marginal and small farmers have taken these as profitable ventures.

Along with food crops and horticulture, the district has strong potential in piciculture.The water area in the district is suitable for crab culture, fresh water prawn culture in a limited scale and cat fish culture. Boudh fish farm is the largest in the State and supplies spurns to more than 10 districts. This opportunity needs to be leveraged by creation of sound fishing infrastructure and skill development initiatives. The skills that require further strengthening includes more scientific approaches to riverine fish capture, species diversification and prawn and carp culture. The traditional species could be replaced with more remunerative species like *Magur*, *Pungatia*, *Zalanga* etc. Additional skills for value addition, packaging and marketing are required in order make fishery a more viable enterprise in the district. As reported by department officials, in terms of infrastructure, there is a requirement of an ice factory of atleast 5 MT capacity at District head quarter and 3-4 fish selling yards with proper sanitation facilities.

The district is deficient in terms of milk production. It was reported that people prefer rearing small ruminants rather than larger livestocks. Goatery, sheep rearing and piggery are some of the probable ventures that can be taken up at a larger scale if supported by sound infrastructure and scientific rearing skills. The district officials reported that there is heavy demand for eggs in the district which is not met. In terms of demand poultry and dairy does have immence scope for development, but will require a lot of inputs in terms of awareness and skills overtime.

The District is industrially backward with no large or medium scale industries. The industrial economy of the district is closely associated with the demand and supply of the neighboring districts. Close proximity to the district headquarters of all the neighboring districts, passing of national high way through the district and availability of state owned land for industrial purpose makes Boudh an attractive destination for setting up industries from geographical point of view. With almost half of the geographical area covered by forest, there is potential to develop forest based MSMEs like saw mills, wooden furniture making units, bamboo and broom making, sal leaves cup and plate making etc. In addition food processing industries like rice mills, jack fruit processing, tamarind, mango and other fruit pickle, jam and squash, potato chips, chilli and turmeric powder and other agro processing plants has huge potential for development considering availability of raw material and local skills. Growth of these industries will require skill development on scientific processing, management and marketing along with creation of storage and processing infrastructure with backward and forward linkages.

The district has a number of traditional artisans who run their units of bamboo/cane crafts, pottery, carpentary and tribal jwellery products etc. In addition there are more than 6000 weavers having expertise in traditional Sambalpuri designs. These crafts need to be promoted at cluster level with training in modern design and forward and backward linkages. While the demand based industries are likely to face stiff competition from other industrially advanced neighboring districts, some of the MSMEs that has growth potential includes motor winding, pumpset repairing, iron grill making, brick kiln, servicing of domestic appliances, tailoring and ready made garments to some extent and utensils etc can be developed in the district.

It was reported that approximately 2500 acres of government land is available in marjakud, a riverine island located at a height in the Mahanadi River and not affected by floods. The island requires connectivity and infrastructure but can be used for developing industrial complex to house ancillary and other industries that can be used by the large scale industries based in Sundargardh, Angul, Jharsuguda, Sambalpur and Keonjhar.

Stagnant primary sector and under developed industrial sector has impacted the services sector aswell. Even after two decades of formation of the district, the urban infrastructure of Boudh is highly underdeveloped. The district lags behind in terms of infrastructure development, trade, communication, education, hospitality and healthcare. There is a good prospect of developing tourism, given its scenic beauty, located on the banks of river Mahanadi and presence of a Sanctuary. Unlike its neighboring district of Kandhamal, the district does not have naxal or any other law and order problems.

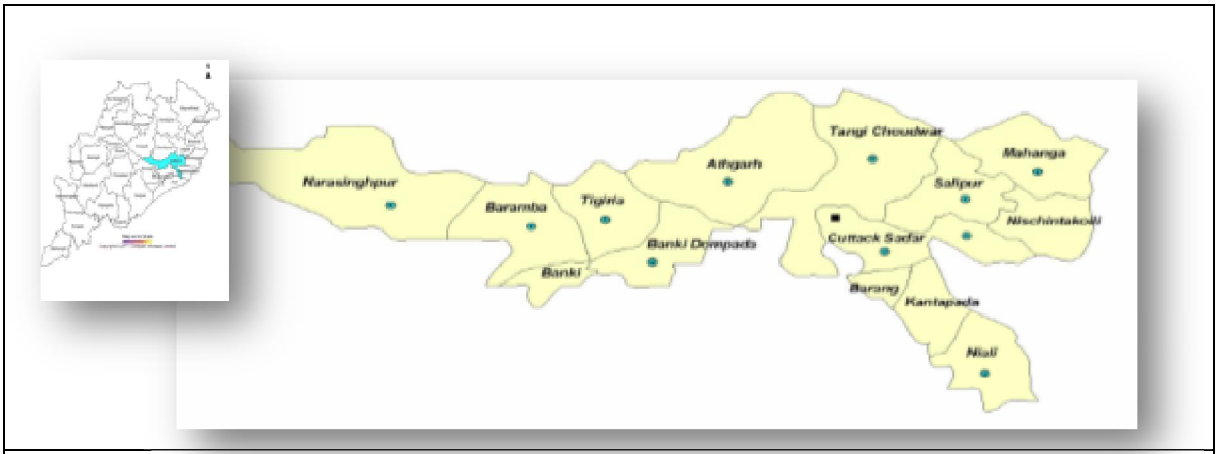
One of the most important aspects that require greater focus is improving the state of basic education and healthcare facilities. Student needs to be properly oriented about career options during secondary and higher secondary education level. Interaction with the youth groups suggests that while access to mass media has created greater awareness, orientation on means and measures to pursue a possible career option is not available. There are vacant seats in almost all of the government departments as well as institutions. It was reported that District requires quality teachers- reliance on para teachers will not serve the purpose of quality education. Similarly there is a dearth of qualified doctors and trained nurses. Poor basic amenities, transportation and infrastructure are the key cause for skilled people from outside not willing to accept posting in the district. In order to improve the quality of service delivery and attract quality inputs, there is a urgent requirement to work on these issues.

Lastly, the vocational training infrastructure was found to be in a sorry state. There is only two industrial training institutions. The Government ITI currently do not have a full time principal and is being managed by the principal of ITI in *Hijilicut*, Ganjam. The ITI do not full time trainers- all the staffs are working on contractual basis. As per the SCVET data, the seat utilization rate of the ITI is quite poor. The private ITI is located approximately 30 KM from the District HQ. The instititution provides training in electrical and fitter trade and operates in two shifts.

- **Primary sector:** Agro climatic condition suitable for production of food grains. Onion is a potential commercial crop. Skill development interventions to assist changes in cropping pattern from non remunerative traditional agriculture to commercial agriculture. Fishery has a strong potential- skill required in species diversification and riverine fish catching.
- **Secondary sector:** Potential in MSME sector- skill development required in food processing and skill based industries.
- **Services Sector:** The sector is under developed. Investment in infrastructure and skill development is required in provision of basic services- healthcare, education, transportation, communication, storage, trade and hospitality

10.7 Cuttack

Cuttack District is spread over an area of 3932 Sq Km which forms approximately 2.52 percent of the total geographical area of the State. Topographically, the district has two prominent divisions- hilly terrain on the west and Mahanadi delta on the east. Administratively, the district is divided into 3 subdivisions, 14 blocks, 342 Gram Panchayats and 1856 villages. Cuttack is surrounded by Jajpur and Dhenkanal Districts in the north, Kendrapara and Jagatsinghpur in the east, Angul and Nayagarh in the west and Khurda in south.



Map Courtesy: ***Maps of India***

District Information	Cuttack	Odisha	Source
Area (in Sq Km)	3,932	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	2.52% (17)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	14	**309**	Census 2001
No of GPs	342	**6234**	Census 2001
Total no of inhabited villages	1856	**47529**	Census 2001
Forest area as % of total geographic area	20.10%	**37.66**	Census 2001

Figure 44: District Map of Cuttack

10.7.1 Demography

As per Census 2011 (Initial provisional data), Cuttack has a population of 26.19 lakhs of which males and females were 13.39 lakhs and 12.80 lakhs respectively. There is a change of 11.86 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 6.24 percent of the total population of the State and is 2nd highest, next only to Ganjam District. The initial provisional data (Census 2011) suggest a population density of 666 in 2011 making Cuttack the third most densely populated District of Odisha. With regards to sex ratio, the district fares poorly compared to other Districts and the State average. The sex ratio for Cuttack as per 2011 provisional census figures is 955 females per 1000 males, much below the State average of 978 females per 1000 males. In terms of social composition of the population, SCs constitute approximately 19 percent of the total population while STs forms only 4 percent of the total population. With almost 27 percent urban population, Cuttack is the fourth most urbanized District in Odisha (as per census 2001). The population in the working age group constituted 61 percent of the total population. Work participation rate of the district is 33.92 percent. Out of the total workers 77.31 percent are main workers and 22.69 percent are marginal workers.

With a human development index (HDI) of 0.695 and Gender development index (GDI) of 0.618, the Cuttack ranks among the top five district of Odisha.

Population	Cuttack	Odisha	Source
Total population (in lakh)	26.19	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	13.39	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	12.80	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	6.24% (2)	**NA**	Census 2011 provisional figures
Density of population	666	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	11.87%	**13.97%**	Census 2011 provisional figures
Urban population %	27.38%	**14.99%**	Census 2001
SC population %	19.00%	**16.53**	Census 2001
ST population %	4.00%	**22.13**	Census 2001
Sex ratio	955	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	60.85%	**58.38%**	Census 2001
Worker participation rate	33.92%	**40.03%**	Census 2001
Share of primary sector to total workers	43.20%	**64**	Census 2001
Proportion of agriculture laborer in workforce	22.92%	**34.53**	Census 2001
Human Development Indicators	**Cuttack**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.695 (3)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.618 (7)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	20335 (10)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.692 (3)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 30: Socio Economic Indicators- Cuttack District

10.7.2 State of Education

Average literacy rate of Cuttack in 2011 (as per provision census figures) is 84.20 percent compared to 76.66 percent in 2001. Gender wise male and female literacy is 90.51 percent and 77.64 percent respectively. For 2001 census, same figures stood at 85.82 and 66.89 showing a proportionate increase in literacy level for all the groups in Cuttack District over last 10 years. However, unlike most other districts there has been an increase in drop out rates at both primary and upper primary school levels. At primary level the drop out rate increased from 4.62 percent in 2006-07 to 7.07 percent in 2010-11. Similarly at the upper primary level the drop out rate increased from 11 percent in 2006-07 to 16.64 percent in 2010-11.

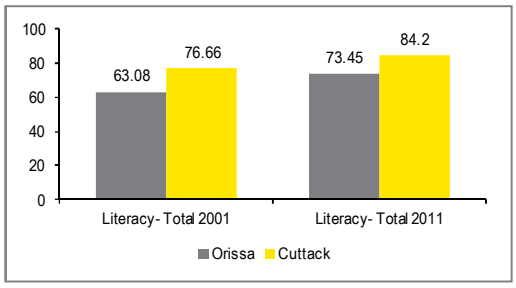


Figure 45: Literacy Rate- Cuttack District

Cuttack is an important educational centre in the state of Odisha. There are 86 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 13877, 4895 and 3484 respectively. The statistics on utilisation of seats shows that in 2011,

22 percent seats in arts, 55 percent in science and 43 percent in commerce remained vacant. At the degree level, there are 70 colleges which offer various courses including some professional courses like engineering and MBA. The utilisation rates are much better at the degree level.

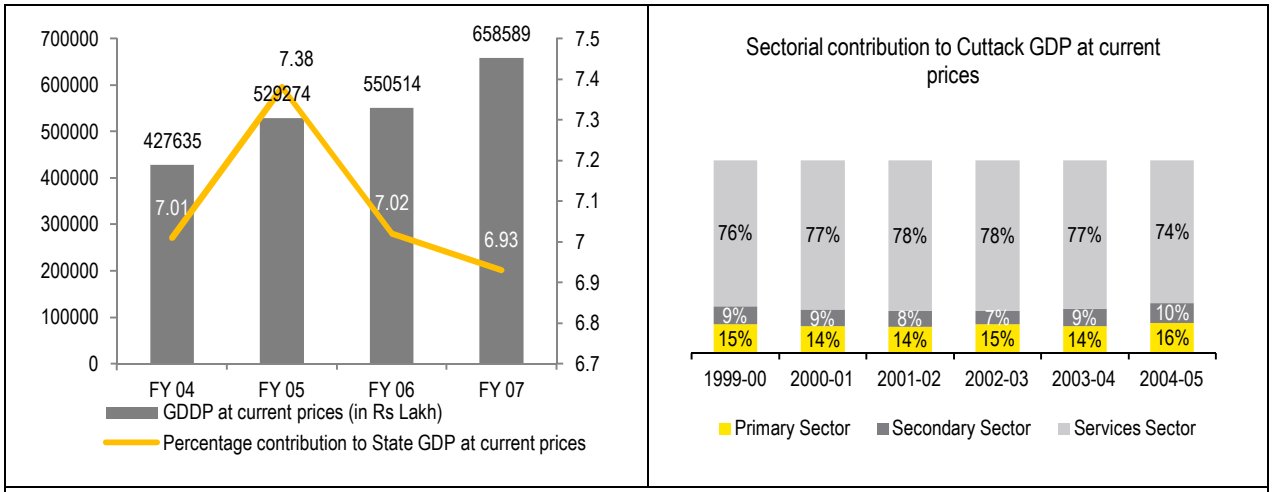
For technical education, Cuttack has 3 private engineering (degree) colleges. Together, these Engineering colleges offer various courses and have a combined intake capacity of approximately 1200 students per year. Major courses offered include, electronics & telecom engineering, computer science & engineering, electrical engineering and various other areas. In addition to engineering degree colleges, there are 7 polytechnic institutes including one government polytechnic centre offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 2300 students per year. Major courses are electrical and mechanical and civil.

Cuttack has one medical college that has the capacity to intake 150 MBBS and 20 BDS students. The pharmacy college has an intake capacity of 280. There are 3 nursing colleges and a homeopathy college with intake capacity of 140 and 30 students respectively per year.

With regard to Vocational Training, there are 2 Government ITI centers and 51 private ITCs. The Government ITI s offer about 20 courses to about 750 students. On the other hand the private ITCs reach out to over 6000 students by offering about 30 courses. The courses being offered by the private ITI s are heavily skewed to courses like fitter, electrician, data entry operator. One of the Government ITI s has been converted into a Centre of Excellence. Seat utilisation is good (almost 80 percent) in the Government ITIs but in the private institutions, it is only 60 percent.

10.7.3 Economic Profile

As per economic survey 2010-11, Cuttack is among the top ten districts in the State with an annual growth rate of 7.9 percent for the period 2000-01 to 2006-07. Cuttack derives its gross domestic products from agriculture, industry and services. The proportionate contribution of various sectors to District GDP of Cuttack at current prices (2004-05) is shown below:



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 46: Gross District Domestic Product of Cuttack

In terms of Human Development Indicators, the district is amongst the top few districts in Odisha and has one of the largest concentrations of schools and higher education institutes. While agriculture remains the backbone of Cuttack economy, the industry sector is still lagging behind in terms of

contribution to district GDP. The service sector is the major contributor to the district GDP.

Agriculture

People of Cuttack largely depend upon agriculture as their primary means of livelihood. More than 40 percent of total work force is either cultivators or agricultural laborers. Cuttack is ranked 28th in the State in terms of number of agricultural laborers, constituting 22.92 percent of total working force.

As per Odisha agriculture statistics report 2008-09, forty eight percent of the total geographical area or almost 188 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 133 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops.

Performance of Cuttack district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 28th with a per capita agricultural output of 1022. Vegetables contribute highest to the total agricultural output of Cuttack with a value of 326.25 (2008-2009), followed by food grains (249.47) and other cereals with (191.82) (all figures in thousand metric tonnes). With an average landholding of 0.94 hectare, landholding pattern in the District is highly skewed with majority (more than 67 percent) of the farmers have only marginal (less than a hectare) land holding.

Industries

Cuttack District has a huge potential for development of Industries because of its strategic location, proximity to State capital, easy access to water sources (Rivers- *Mahanadi, Kathjodi, Chitropala, Birupa*, and *Kuakhai*) and adequate supply of power[5]. The District is located on the Howrah-Chennai Railway corridor and is well connected with all the major parts of the country for transportation of Industrial cargo as well as passenger services. The District is well connected with other important cities and industrial centers and ports through a good network of national and state highways. There are 8 Industrial Estates in the District spread over an area of 900 acres. The District is rich in fire clay and is well placed for coal, chromite and iron ore based industries.

In terms of Investments into large and medium scale industries, Cuttack is currently ranked 9th in the State, with an investment of 57 billion by 2010 and which constitute 6.4percent of the total investment in large and medium scale industries. Some of major large scale industries include Aarti Steel Limited, IMFA (ICCL), and OCL India Limited etc. Some of the upcoming industries include Nilachal Power, Tata Power, Visa Power and Sunrise sponge Iron and Steels Private limited.

In terms of attracting investments and setting up Micro and small scale industries, Cuttack is ranked 3rd in the State. MSME investment in Cuttack was 9.8 percent of the total investments made in the State till March 2010.

[5] Annual Action Plan- 2011-12; DIC Cuttack

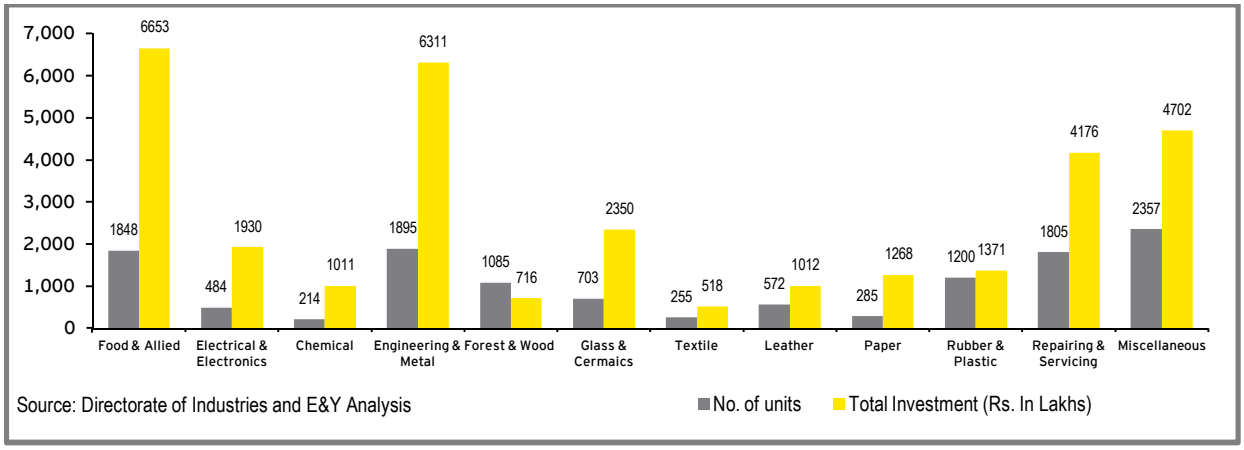
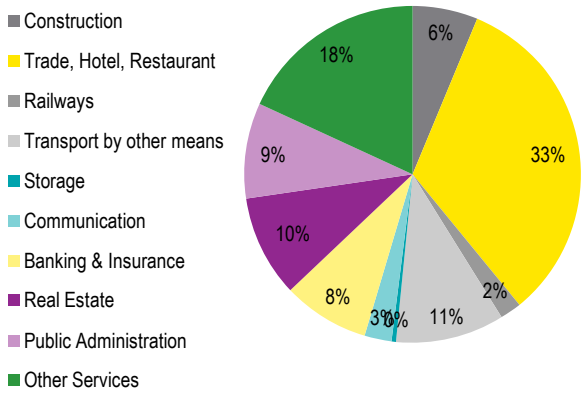


Figure 47: MSME Investments in Cuttack till 2010

Services

The services sector includes construction, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, public administration and other services[6]. The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Cuttack GDP, the service sector remains the most important contributor constituting 74 percent of the district GDP. The contribution of various sectors to GDDP is shown below.



As depicted in the chart, trade, hotel and restaurant is the leading contributor to the service sector (33 percent) followed by other services (18 percent), real estate (10 percent) and public administration (9 percent). Transportation including railways is a significantr contributor of GDP of Cuttack economy

Source: Planning Commission, Government of India

Figure 48: Composition of service sector-Cuttack District- 2004-05

6 Economic Survey report of Odisha-2010-11

10.7.4 Skill Gap Assessment for Cuttack District

Over the next 15 years, the total workforce demand for skilled jobs in Cuttack district is expected to grow to 9.4 lakhs in 2026 from present levels of 4.8 lakhs in 2011. On a macroeconomic level, the tertiary sector is expected to account for 89 percent of the total workforce demand, followed by primary sector (8 percent) and secondary sector (3 percent).

The major sectors from which the workforce demand for skilled jobs in 2026 is primarily expected includes tourism, travel, hospitality and trade (2.7 lakhs); banking, financial services and insurance (1.6 lakhs); education & skill development (0.9 lakhs); healthcare (0.9 lakhs) and IT & ITeS industry (0.9 lakhs).

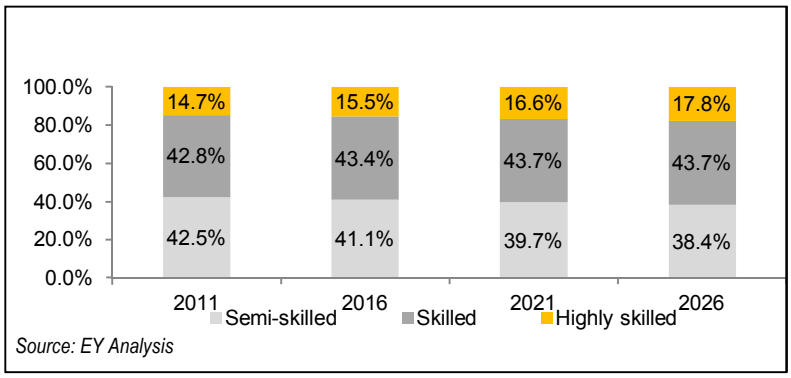


Figure 49: Proportion of demand for skilled jobs by skill categories- Cuttack District

As per the CMIEs Capex database and secondary research, the Cuttack district is witnessing increased investor interest to undertake capital projects in the state. Major capital projects are likely to come in aviation, automobile ancillaries, energy and infrastructure (shipping infrastructure, cement and road transport) sectors. Hence, these sectors are expected to grow at a relatively rapid pace, creating a higher demand for skilled workforce.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade:					
Semi-skilled	74,646	94,664	120,052	152,249	
Skilled	49,464	62,729	79,553	100,888	
Highly skilled	8,094	10,265	13,018	16,509	
Total demand for skilled jobs	132,204	167,658	212,623	269,646	29
Banking, Financial Services & Insurance					
Semi-skilled	12,274	18,579	28,122	42,567	
Skilled	7,046	10,666	16,144	24,437	
Highly skilled	26,139	39,566	59,890	90,653	
Total demand for skilled jobs	45,459	68,811	104,156	157,657	17
All sectors:					
Semi-skilled	204,725	243,603	294,102	360,095	
Skilled	206,327	256,982	323,069	409,460	
Highly skilled	70,684	92,170	122,894	167,072	
Total demand for skilled jobs	481,736	592,755	740,065	936,627	100

Source: E&Y Analysis

Table 31: Skill-wise demand for sectors where high demand is foreseen- Cuttack District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 2.9 lakhs during the period 2011-2026.

For Cuttack, the proportion of skilled human resource is expected to account for 53 percent of this widening gap, followed by highly skilled jobs (31 percent) and semi-skilled jobs (16 percent).

Amongst the **highly skilled** jobs, a higher requirement is expected in case of banking, financial services & insurance jobs (67 percent) and IT & ITeS (13 percent).

The major proportion of incremental gap for **skilled** workers is expected to come from sectors like tourism, travel, hospitality & trade (25 percent); education and skill development (22 percent); healthcare (22 percent) and IT & ITeS (13 percent) industry.

The **semi-skilled** workers would be increasingly required in case of tourism, travel, hospitality & trade (49 percent); banking, financial services & insurance (21 percent); and media & entertainment (14 percent).

The incremental demand supply gap for the skilled **jobs varies by economic activity**. The banking, financial services & insurance sector are expected to account for 28 percent of this incremental demand supply gap. The incremental gap in this sector is primarily expected to come from highly skilled workers (72 percent) and skilled workers (16 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(582)	(755)	(883)	(2,220)
Auto & Auto Components	10	18	26	54
Chemical & Pharmaceuticals	37	56	76	169
Construction materials & building hardware	499	720	954	2,173
Electronics & IT Hardware	40	59	78	177
Food Processing	83	94	104	281
Furniture & Furnishings	36	55	73	164
Leather & Leather Goods	3	3	4	10
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	49	92	130	271
Unorganized sector	127	193	254	574
Banking, Financial Services & Insurance	15,131	25,918	42,735	83,784
Building, Construction & Real Estate Services	116	237	340	693
Education & Skill Development	8,745	12,499	17,388	38,632
Healthcare	7,981	11,725	16,609	36,315
IT & ITES industry	7,671	11,434	16,342	35,447

Sector	2012-16	2017-21	2022-26	2012-26
Media & Entertainment	4,522	7,640	11,574	23,736
Tourism, travel, hospitality & trade	12,855	22,933	35,659	71,447
Transportation, logistics, warehousing & packaging	247	941	1,649	2,837
Total	57,568	93,860	143,111	2,94,539

Source: E&Y Analysis

Table 32: Total incremental demand supply gap for skilled jobs by sectors- Cuttack District

The incremental demand supply gap is also expected to widen significantly for tourism, travel, hospitality & trade sector (24 percent). The incremental human resource gap in this sector largely comprises of need for skilled (55 percent) and semi-skilled human resource (34 percent).

Significant incremental requirement is also expected to be witnessed in services like education & skill development (13 percent); healthcare (12 percent) and IT & ITeS (12 percent) sectors. A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.7.5 Development potential and Stakeholder perception

Cuttack being rich in terms of factor endowments has a lot of potential to generate employment. Its proximity to the State Capital is an advantage which can be put to optimum use. Our analysis shows that the five areas which would generate maximum demand for skills would require interventions at different levels. Some of these would require support from the State or even the Centre. Tourism is one such area where there is a potential to develop it further and develop it as a tourist destination. In addition to the temples and river banks providing picturesque locations, there are other unexplored areas which may be developed. For instance according to local people the fort of *Barabati* has historical importance which has not been sufficiently explored. Besides, being close to the state Capital which already has several hotels and travelers, there is a lot of scope to develop appropriate skills. However, when one looks at the courses being offered at present, none of the ITIs or even the private institutes is offering any courses related to tourism.

The district is an important hub for education. It has a number of colleges offering different professional courses and attracts students from across the State and even neighboring States. Even the government ITIs account for almost 10 percent of the total number of seats in the entire state. A visit to the ITIs showed that there was acute shortage of faculty members. Similarly there is a demand for teachers for schools which is likely to increase when the Right to Education is implemented. The institutions of higher education can be geared to develop the skills of faculty which will benefit the entire state.

A significant area which requires attention is the agriculture sector. Out of its 11 blocks, about half of them are agro based where vegetable cultivation is done to a large extent. There are a number of possibilities to develop skills that will support the agriculture sector and generate employment. Food processing industry has a lot of potential to develop in the district which can help in value addition of the agricultural produce. As an example tamarind being a major forest produce, is found in abundance in the state. However there is only one processing centre in the entire state and that is located in Cuttack, therefore all the processed tamarind is used for export. It is not even attempting to look into the demand nationally. Similarly the vegetables produced in the district can get much better returns for the farmers if they have access to better technology that helps in storage and food processing. This sector requires skills at different levels ranging from semi food

processing which can be done even by the unskilled people with short term training. On the other hand it can have high end food processing units. There is a need to reach out to people to create awareness about these possibilities.

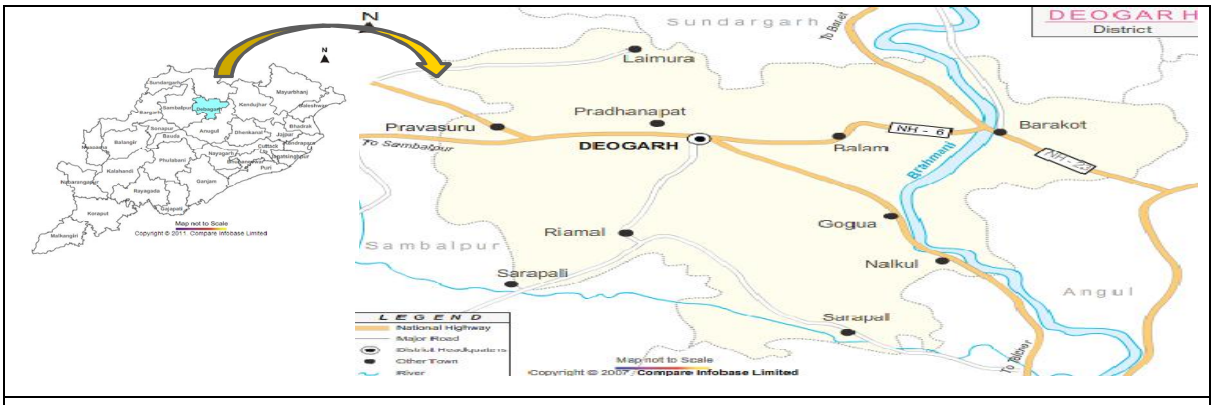
Among other potential areas for development is the handloom sector. Despite a decrease in the number of looms across the state, there has been increase in their numbers in the district. This maybe due to the cluster development programme undertaken by UNIDO and later on by the Department of Handloom and Handicraft. Business enterprises like FabIndia too have a presence in the district. All these factors have contributed to evoke interest among women to learn weaving and associated skills like tailoring. A visit to the *Aathgarh* cluster showed that the weavers lacked skills related to their design, dye making. Most of them still depended on the private master weavers and were not able to negotiate wage related issues.

Finally, interactions with people showed that their thoughts are guided by the developments around them or the popular discourse, which was towards IT related trainings and jobs. The youth looks at IT education as futuristic and an area which will give those jobs. While it is important to have knowledge about IT but to look at it as a standalone employment generating sector may not be appropriate. This shows that there is a need to create awareness among people to inform them about various employment as well as self employment opportunities.

- **Primary sector:** Skills related to Agriculture (vegetables), Fishery, Dairy and Poultry. .
- **Secondary sector:** Technical skills for power and metal based industries. Design and marketing skills for handloom industries.
- **Services Sector:** Tremendous opportunity for skill development in this sector. Vocational training to focus on skills related to - repair and servicing, drivers, auto mechanics, hospitality, health care and nursing, teachers, retailers, accountants etc

10.8 Deogarh

Deogarh District is spread over an area of 2940 Sq Km which forms approximately 1.88 percent of the total geographical area of the State. Administratively, the district is divided into one subdivision, 3 blocks, 60 Gram Panchayats and 711 villages. Deogarh is surrounded by Sundargadh district in the north, Angul in the east and Sambalpur in the west.



Map Courtesy: Maps of India

District Information	Deogarh	Odisha	Source
Area (in Sq Km)	2,940	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.89% (23)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	3	**309**	Census 2001
No of GPs	60	**6,234**	Census 2001
Total no of inhabited villages	711	**47,529**	Census 2001
Forest area as % of total geographic area	53.06%	**37.66%**	Census 2001

Figure 50: District Map of Deogarh

10.8.1 Demography

As per Census 2011 (Initial provisional data), Deogarh has a population of 3.12 lakhs of which males and females were 1.58 lakhs and 1.54 lakhs respectively. There is a change of 13.88 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 0.744 percent of the total population of the State .The initial provisional data (Census 2011) suggest a population density of 106 in 2011 making Deogarh the second least densely populated District of Odisha. The sex ratio for Deogarh as per 2011 provisional census figures is 976 females per 1000 males, slightly below the state average of 978 females per 1000 males. In terms of social composition of the population, SCs constitute approximately 15.37 percent of the total population while STs form only 33.6 percent of the total population

As per 2001 census, the population in the working age group constituted 57.54 percent of the total population. The population in the age group 0-4 years constitutes 10.45 percent and 5-14 years comprise 23.84 percent respectively. Work participation rate of the district is 46.06 percent. Out of the total workers 55.30 percent are main workers and 44.70 percent are marginal workers. With a Human Development Index (HDI) of 0.669 and a rank 5 and Gender Development Index (GDI) of 0.647 and a rank 3, Deogarh ranks among the top five districts of Odisha.

Population	Deogarh	Odisha	Source
Total population (in lakh)	3.12	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	1.58	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	1.54	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	0.74% (30)	**NA**	Census 2011 provisional figures
Density of population	106	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	13.88%	**13.97%**	Census 2011 provisional figures
Urban population %	7.30%	**14.99%**	Census 2001
SC population %	15.37%	**16.53**	Census 2001
ST population %	33.60%	**22.13**	Census 2001
Sex ratio	976	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	57.54%	**58.38%**	Census 2001
Worker participation rate	46.06%	**40.03%**	Census 2001
Share of primary sector to total workers	78.57%	**64**	Census 2001
Proportion of agriculture laborer in workforce	43.65%	**34.53**	Census 2001
Human Development Indicators	**Deogarh**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.669 (5)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.647 (3)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	13947 (20)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.504 (11)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 33: Socioeconomic indicators- Deogarh District

10.8.2 State of education

The literacy figures of Deogarh resemble closely with the State's average. Literacy rate of Deogarh in 2011 (as per provisional census figures) is 73.07 percent compared to 60.36 percent in 2001. Gender wise male and female literacy is 82.62 percent and 63.36 percent respectively. For 2001 census, same figures stood at 73.33 and 47.18 showing a proportionate increase in literacy level for all the groups in Deogarh.

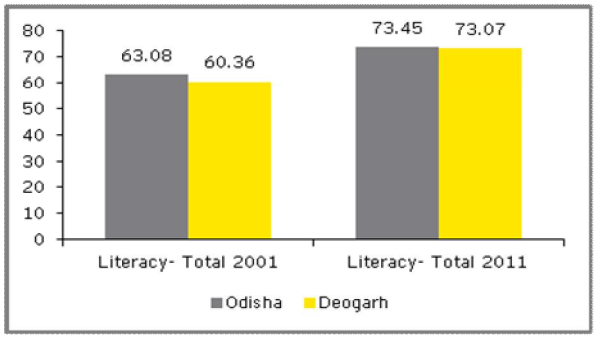


Figure 51: Literacy Rate- Deogarh District

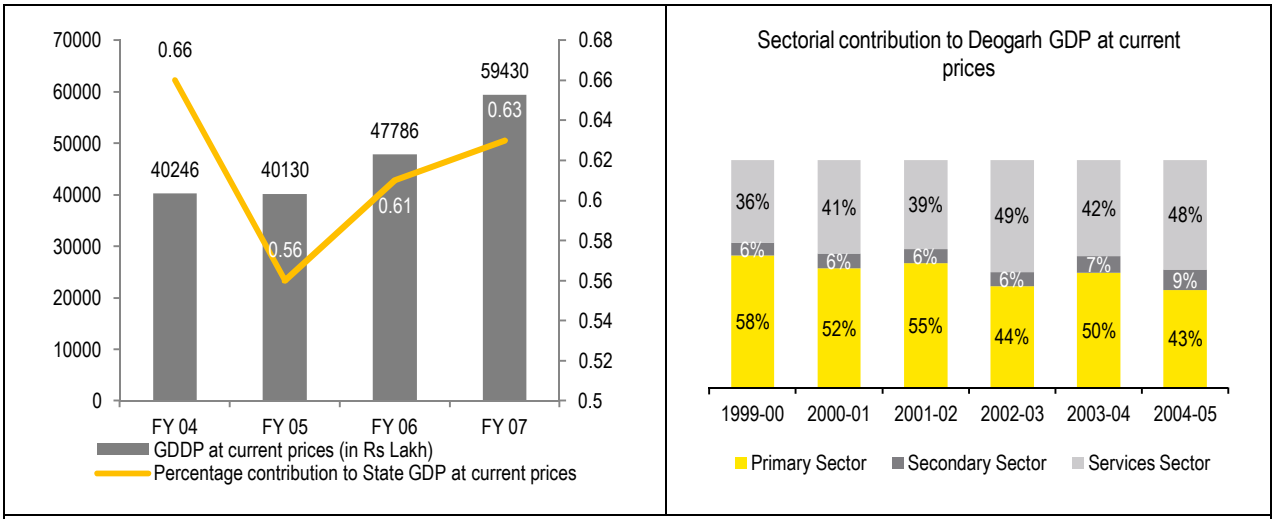
Out of the total number of children in school going age, 3.819 percent children were out of school in 2010.

For higher Education there are 12 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 1440, 480 and 64 respectively. At the degree level there are 7 colleges including a women's college. Deogarh does not have any technical or professional colleges.

The vocational training infrastructure of the district is quite poor. Even though the district shares its border with Sundargadh and Angul, and is in close proximity to Keonjhar- the industrial hubs of Odisha, there is no Government ITI in the district. The private ITI offers courses in fitter and electrician trades but lacks support in terms of placements and infrastructure.

10.8.3 Economic profile

Deogarh is a small district and does not have any significant role to play in the State's economy. Its contribution to the State's GDP was 0.63% in 2007. The district recorded annual average growth rate of 4.1 percent for the period 2000-01 to 2006-07, which is quite dismal. Agriculture forms the back bone of the economy along with the services sector.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 52: Gross District Domestic Product (at current prices) of Deogarh

Agriculture

People of Deogarh largely depend upon agriculture as their primary means of livelihood. About 79 percent of total work force is either cultivators or agricultural laborers. Deogarh is ranked 7th in the State in terms of number of agricultural laborers, constituting 43.65 percent of total working force.

As per Odisha agriculture statistics report 2008-09, twenty three percent of the total geographical area or almost 67 thousand hectares of land was brought under cultivation in District. Food grains are the primary crop with a gross cropped area of 71.71 thousand hectares. Apart from food grains, other major crops include rice, pulses (*mung, biri* etc), vegetables (potato, onions etc), oilseeds and fruit crops. Performance of Deogarh district is relatively good in terms of per capita agricultural output.

As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 10th with a per capita agricultural output of 1555. Food grains contribute highest to the total agricultural output of Deogarh with a value of 70.84 (2008-2009), cereals 60.62 , followed by rice (58.21) (all figures in thousand metric tonnes).

With an average landholding of 1.33 hectare, landholding pattern in the District is highly appreciable with majority (more than 52.23 percent) of the farmers having more than a hectare of land holding.

Industries

With no major industries existing in Deogarh the people are mainly dependent on agriculture. National Highway No.6 passes through the district acts as the main artery of inter-regional trade and other links. *Kurudkut* is one of the earliest locations where hydroelectricity was generated in Asia. As per the data published by the directorate of industries, Odisha, Deogarh has only one large

and medium scale industry Attitute Alloy (P) ltd. with an investment of Rs. 735 crores.

In terms of attracting investments and setting up Micro and small scale industries, Deogarh ranks at the bottom in the State. MSME investment in Deogarh was 0.31 percent of the total investments made in the State till March 2010. Engineering and metal based products have maximum investment of Rs. 231 million while others, which includes chemicals, textiles, forests, livestock etc , have the least investment of Rs. 22.35 million.

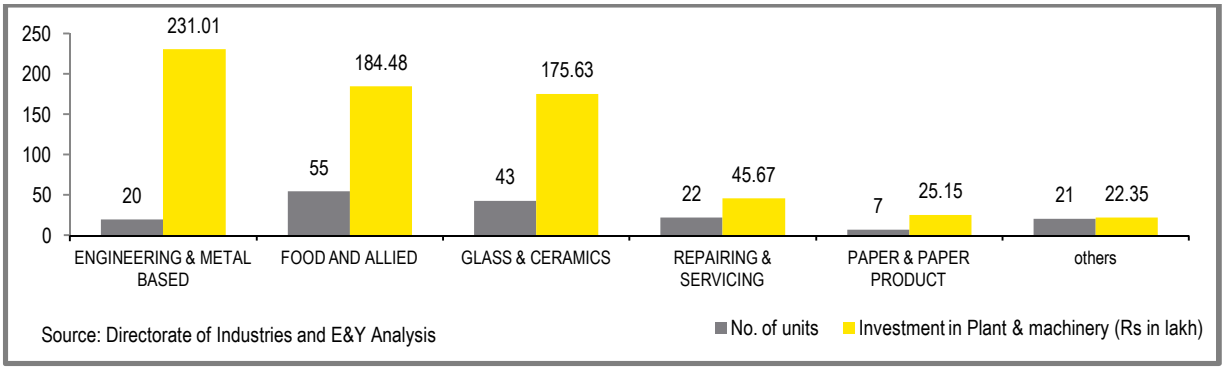


Figure 53: MSME Investments in Deogarh till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below below. In terms of contribution to Deogarh GDP, the service sector remains the most important contributor constituting 48 percent of the district GDP. The contribution of various sectors to GDDP is shown below.

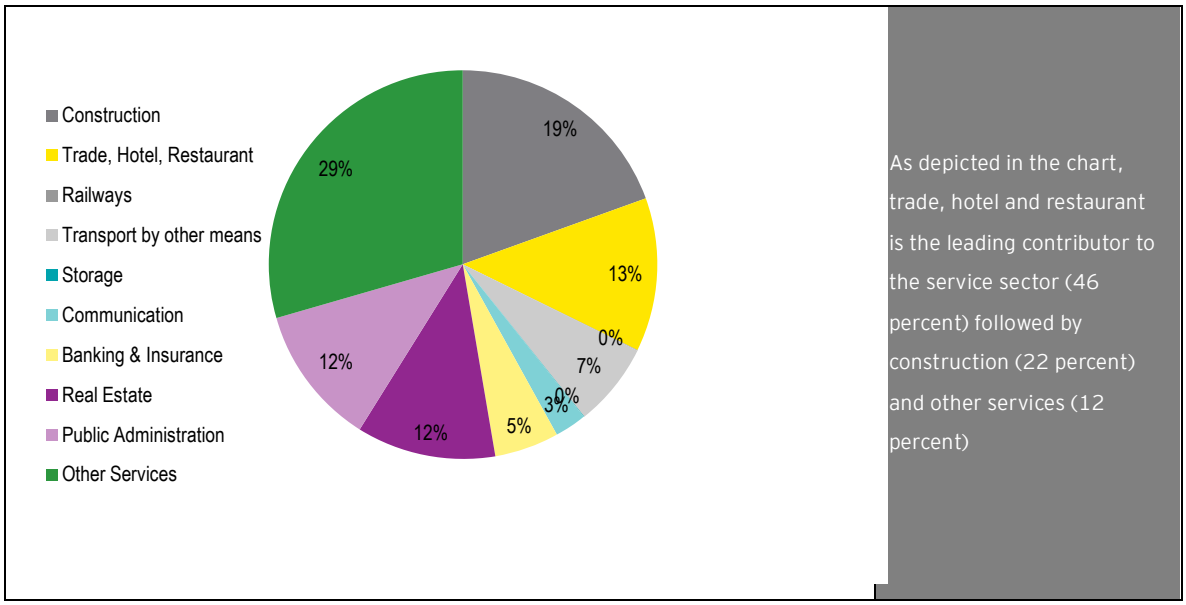


Figure 54: Composition of service sector-Deogarh- 2004-05

10.8.4 Skill Gap Assessment for Deogarh District

Over the next 15 years, the total workforce demand for skilled jobs in Deogarh district is expected to grow from present levels of 0.7 lakh in 2011 to 1.3 lakhs in 2026. An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon. Looking at the total expected workforce demand created in 2026, the tertiary sector would account for 81 percent,

while the primary and secondary sectors would account for 12 percent and 7 percent respectively.

Some of the prominent sectors from which the workforce demand for skilled jobs in 2026 is primarily expected include education & skill development (0.2 lakh); healthcare (0.2 lakh); IT & ITes industry (0.2 lakhs); media & entertainment (0.2 lakh); and agriculture (0.2 lakh).

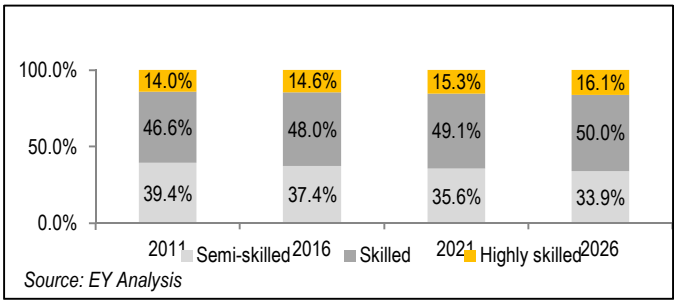


Figure 55: Proportion of demand for skilled jobs by skill categories- Deogarh District

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Education & Skill Development					
Semi-skilled	-	-	-	-	
Skilled	7,353	9,572	12,462	16,225	
Highly skilled	788	1,026	1,336	1,740	
Total demand for skilled jobs	8,141	10,598	13,798	17,965	14
Healthcare					
Semi-skilled	651	848	1,104	1,437	
Skilled	7,246	9,433	12,281	15,988	
Highly skilled	244	318	414	539	
Total demand for skilled jobs	8,141	10,599	13,799	17,964	14
IT & ITES industry					
Semi-skilled	1,628	2,120	2,760	3,593	
Skilled	4,478	5,829	7,589	9,880	
Highly skilled	2,035	2,650	3,450	4,491	
Total demand for skilled jobs	8,141	10,599	13,799	17,964	14
Semi-skilled	4,071	5,162	6,547	8,302	
Skilled	3,175	4,027	5,106	6,476	
Highly skilled	896	1,136	1,440	1,827	
Total demand for skilled jobs	8,142	10,325	13,093	16,605	13
All sectors:					
Semi-skilled	28,808	32,707	37,735	44,261	
Skilled	34,139	41,917	52,036	65,220	
Highly skilled	10,274	12,746	16,204	21,071	
Total demand for skilled jobs	73,221	87,370	105,975	130,552	100

Source: EY Analysis

Table 34: Skill-wise demand for sectors where high demand is foreseen- Deogarh District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.5 lakhs during the period 2011-2026.

A major proportion of this widening gap is expected to be accounted by skilled manpower (58 percent), followed by semi-skilled jobs (22 percent) and highly skilled jobs (20 percent).

Within the **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (53 percent) and IT & ITes (23 percent) sectors.

The proportion of **skilled** workers in the incremental gap would be increasingly required in case of education & skill development (29 percent), healthcare (28 percent); and IT & ITes (17 percent) industries.

The **semi-skilled workers** belonging to the media & entertainment (27 percent); tourism, travel, hospitality & trade (27 percent); and banking, financial services & insurance (17 percent) sectors would form a major part of this gap in 2026.

By sector, the education & skill development sector is expected to account for more than 18 percent of this incremental demand supply gap. The incremental gap in this sector is primarily expected to come from highly skilled workers (90 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(240)	(247)	(251)	(738)
Auto & Auto Components	0	1	1	2
Chemical & Pharmaceuticals	1	1	1	3
Construction materials & building hardware	96	113	132	341
Electronics & IT Hardware	4	5	6	15
Food Processing	19	20	21	60
Furniture & Furnishings	12	13	15	40
Leather & Leather Goods	0	0	0	0
Gems & Jewellery	0	0	0	0
Organised Retail	0	0	0	0
Textile	8	9	10	27
Unorganised sector	342	388	433	1,163
Banking, Financial Services & Insurance	1,868	2,890	4,450	9,208
Building, Construction & Real Estate Services	114	129	142	385
Education & Skill Development	2,458	3,200	4,166	9,824
Healthcare	2,392	3,133	4,099	9,624
IT & ITES industry	2,293	3,034	3,999	9,326
Media & Entertainment	1,818	2,410	3,161	7,390
Tourism, travel, hospitality & trade	1,521	2,029	2,675	6,225
Transportation, logistics, warehousing & packaging	138	174	212	524
Total	12,845	17,302	23,273	53,420

Source: E&Y Analysis

Table 35: Total incremental demand supply gap for skilled jobs by sectors- Deograh District

The incremental demand supply gap is also expected to widen for healthcare (18 percent). The incremental human resource gap in this sector largely comprises of need for skilled (91 percent) work force. Significant incremental requirement is also expected to be witnessed in services like IT & ITeS (17 percent) and banking, financial services & insurance (17 percent) sectors.

10.8.5 Development potential and Stakeholder perception

Deogarh has several locational advantages – well connected to National Highway 6, close proximity to industrial and trade centers of Keonjhar, Rourkela and Sambalpur and easy access to the railway line from *Talcher* to *Bimlagarh*. Deogarh has deposits of black sand, graphite and gems. However, irregularity and scanty volume of these minerals makes it unviable for commercial exploration. Deogarh is one of the poor performing districts of Odisha in terms of socio-economic development. According to the 2011 census (provisional figures), more than 90 percent of the population lived in rural areas and more than 70 percent of the population in Deograh lives below the poverty line.

While the agriculture sector contributes only around 38-40 percent to the GDDP, it is the main source of livelihood for people of Deogarh. More than 90 percent of the people are engaged in agriculture and allied activities (pisciculture, horticulture, forestry and animal husbandry). More than 51 percent of the people engaged in agriculture are cultivators and around 31 percent are agricultural labourers.The climate of Deogarh is suitable for agricultural and horticultural activities. The Gohira Dam Hydel Power Project on river Brahmani is an important source of irrigation for the District. Paddy is the primary crop, accounting for more than 60 percent of the total cultivated area. Apart from paddy other major crops include pulses, til, oil seeds, mustard, onion and potato. The main fruit crops include mango, banana, litchi, watermelon and orange. The agriculture sector is however marred with several constraints like shortage of cold storages, dependence on traditional farming methods, lack of technological upgradation, small land holding, lack of proper market linkage and transport facilities. Skill development in agriculture has been a weak area. While the department provides various training and extension services under the National Food Security Mission and Agricultural Technology Management Agency (ATMA), it is still insignificant in terms of total requirement. Moreover, the educated youth do not prefer working in agriculture and as a result there is always a shortage of skilled human resource. In order to change the perception of the population on agriculture and reap the benefits of development, it is important to develop the sector in a holistic way.

Since, 50 percent of total geographical area covered by forests, *Sal* and *Siali* leaves, *Sal* wood, *Mohua* Flower, dead and dry tress and bamboos are easily available. Further various medicinal plants are also available which can be used for preparation of ayurvedic medicines and herbal products. Forest dwellers collect the *Sal* and *Siyali* leaves and generate the income by selling the same within or outside the district. Further, some of the communities are also involved in the bamboo craft. However, due to lack of better market linkage they sell their products at a very nominal price. Therefore, it is important to build their capacity and provide better market linkage to improve the income earning capacity of the people.There is scope of generating employment opportunity by setting up small scale industry and involving the local community. Some of the areas that can be focused on include leaf cup & plate making (sal & siyali levaes), siyali rope making, bamboo products and bee keeping.

The local population does not support the establishment of industries as they perceive them as a threat to their environment. However, there is potential for setting up agro based/ food processing industries which can help in generating the employment opportunities within the district.

The private sector participation and entrepreneurial activities have been very limited in the district. There are no large or medium scale industries in Deogarh. There are 133 micro and 4 small scale industries mostly comprising of rice and flour miles and cement tile producing units. However, the industrial activity is not significant in terms of contribution to employment and income. The District Administration is focused on improving the industrial situation in Deogarh. Some of the proposed enterprises to be taken up in the next 5 years include cold storage, switch board making, tyre reteading, fly ash bricks, stone crusher, fabrication, voltage stabilizer manufacturing and assembling, quartz processing, ferro managanese and alloys, oil expeller etc. In order to enable industrial growth, there is a need to focus on availability of adequate infrastructure and creating relevant skills.

The progress in services sector has been slow in the district. Deogarh has significant tourism potential as it is surrounded by small mounts, forest and Pradhanpat waterfall and is well connected by road. Usakothi Wildlife Sanctuary is also close to the District. Therefore, there is an opportunity to generate the employment by promoting tourism activities like camping, trekking, adventure tourism. This would in turn require and also help in growth of hospitality sector incluing hotels and restaurants. Currently, the district has only 2 small hotels that are not sufficient to cater to the requirement. Thus, tourism and hospitatlity offer significant growth potential for the district.

In terms of the healthcare scenario, apart from 3 Community Health Centers (CHC), located at block level, there is no private health facility available in the district. During the visit at CHC, Deogarh, we were informed by the CDMO that 60 percent of the posts for all categories of staff were lying vacant. The shortage of specialized doctors is most severe with 16 of the 24 posts lying vacant. These include specialists in surgery, paedaitrics, eye, orthopedic, pathology, skin, ENT, radiology etc. Other staff including nurses, lab technicians and bedside attendants were also not available within the District. Moreover, low salary and lack of basic living amenities are the main reasons for the high vacancy rate.

There is only one degree college in the district, Deogarh college, that offers courses in Arts (Political Science, Economics, History, Philosophy, Oriya, Maths) and Science (Physics, Chemistry, Botany and Zoology). There are 800 students in the college against 1,800 seats available. There is is acute shortage of faculty members in the collage with only 16 positions filled against the approved 36 approved. The students pointed put that the college should offer a course in Commerce as this would improve employment opportunities for them. In terms of employment, the students wanted to work in the areas of banking, tourism, medicine and law and computers. Students also pointed out the lack of higher educational institutions including technical institutions like engineering and medical college in the district. Further, skilled youth in the district prefered to migrate to other States like Kerala and Tamil Nadu on account of better wages and quality of living as compared to Deogarh.

Further, most of the students cited lack of employment opportunities in the district as the reason to move to other districts/ states after their education. According to the data provided by the District Employment Exchange, 8,367 people have enrolled with the exchange since its inception in 1976, with more than 50 percent of the people being HSC or Intermediate pass. However, only 200-300 people have successfully obtained employment till date.

The opportunities in respect of vocational training are limited in the District as there are only 2 private ITCs offering courses in the field of Fitter, Electrician and Cutting & Sewing. There is no Government owned ITI in the District. The ITCs lack in infrastructure, quality of faculty and

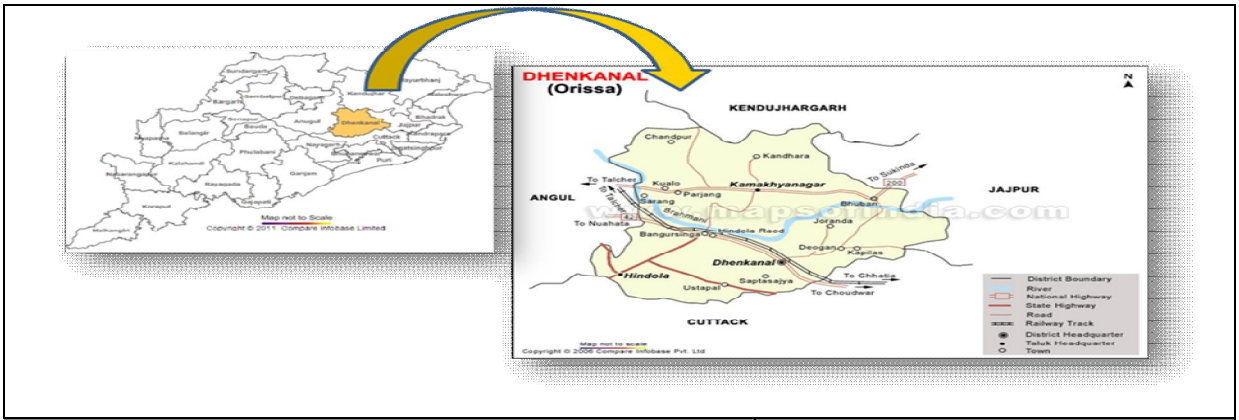
placement linkages. There is a shortage of availability of faculty within the district and most of the faculty members are from outside the district.

During the discussion with the various stakeholders, the study team found that there is lack of skilled manpower like electrician, plumber, mason, automobile mechanics, home appliance repairing, welder, clerical Staff, accountants etc. The District Administration also pointed out to the need for people in the areas of transformer repairing, motor winding, electrical/ electronics repairing and servicing, motor winding and late works.

- **Primary sector:** Significant proportion of polulation depends on agriculture. Skill development is required to enhance productivity and diversify into allied areas like horticulture, integrated agriculture.
- **Secondary sector:** Even though presently there is insignificant presence of industry, skills required for small scale industries are required.
- **Services Sector:** Skill development to provide services associated with daily living are required. Presently there is no ITI s which are catering to the need. The district has great potential for tourism. If promoted, it would create demand in several sectors like hospitality, transportation etc.

10.9 Dhenkanal

Dhenkanal district is spread over an area of 4452 Sq Km which forms approximately 2.86 percent of the total geographical area of the State. Administratively, the district is divided into 3 subdivisions, 8 blocks, 199 Gram Panchayats and 1076 villages. Dhenkanal is surrounded by Keonjhar District in the north, Jajpur in the east, Angul in the west and Cuttack in south.



District Information	Dhenkanal	Odisha	Source
Area (in Sq Km)	4,452	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	2.86% (15)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	8	**309**	Census 2001
No of GPs	199		Census 2001
Total no of inhabited villages	1076		Census 2001
Forest area as % of total geographic area	39.10%	**37.66**	Census 2001

Figure 56: District Map of Dhenkanal

10.9.1 Demography

District total population of Dhenkanal as per Census 2011 (Initial provisional data), is 11.93 lakhs of which males and females were 6.13 and 5.80 lakhs respectively. The population of Dhenkanal increased at a lower rate (11.82 percent) compared to the State average (13.97 percent) during 2001 and 2011 census. The district constitutes 2.84 percent of the total population of the State. Population density of 268 is representative of the average state population density as per 2011 census. The district has a poor sex ratio compared with the state average. The sex ratio for Dhenkanal as per 2011 provisional census figures is 947 per 1000 male, much below the State average of 978 per 1000 male. In terms of social composition of the population, SCs constitute approximately 18.49 percent of the total population while STs forms 12.79 percent of the total population. About 8.7 percent population lives in urban areas. As per 2001 census, the population in the working age group constituted 59.28 percent of the total population. Work participation rate of the district is 33.42 percent. Out of the total workers 73.45 percent are main workers and 26.55 percent are marginal workers. With a human development index (HDI) of 0.591(rank 12) and Gender development index (GDI) of 0.531(rank 12), Dhenkanal ranks among the top fifteen districts of Odisha.

Population	Dhenkanal		Source
Total population (in lakh)	11.93	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	6.13	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	5.80	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	2.84% (18)	**NA**	Census 2011 provisional figures
Density of population	268	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	11.82%	**13.97%**	Census 2011 provisional figures
Urban population %	7.79%	**11.51**	Census 2001
SC population %	18.49%	**16.53**	Census 2001
ST population %	12.79%	**22.13**	Census 2001
Sex ratio	947	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	59.28%	**47.85**	Census 2001
Worker participation rate	33.42%		Census 2001
Share of primary sector to total workers	60.00%	**64**	Census 2001
Proportion of agriculture laborer in workforce	34.27%	**34.53**	Census 2001
Human Development Indicators	**Dhenkanal**		**Source**
Human Development Index (HDI)- (Ranking)	0.591 (12)	**NA**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.531 (12)	**NA**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	16540 (12)		Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.565 (6)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 36: Socioeconomic indicators- Dhenkanal District

10.9.2 State of Education

Dhenkanal has a high education index 0.773 and is ranked 8th in the state. In terms of literacy also, the district fares better than the State's average. The average literacy rate of Dhenkanal in 2011 (as per provision census figures) is 79.41 percent compared to 69.42 percent in 2001. Gender wise male and female literacy is 87.08 percent and 71.4 percent respectively. For 2001 census, same figures stood at 80.57 and 57.89 showing a proportionate increase in literacy level for all the groups in Dhenkanal district over last 10 years. The district has a good concentration of primary schools and out of the total children in the school going age in 2009, only 1.41 percent were out of school (OPEPA-2009).

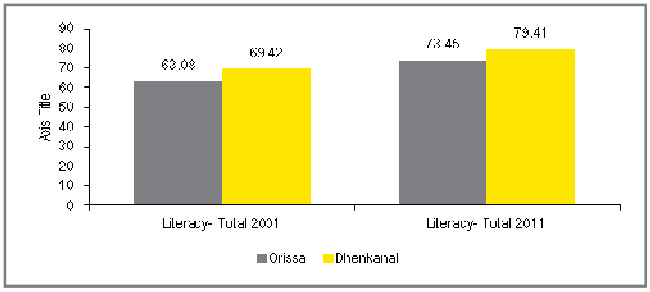


Figure 57: Literacy Rate- Dhenkanal District

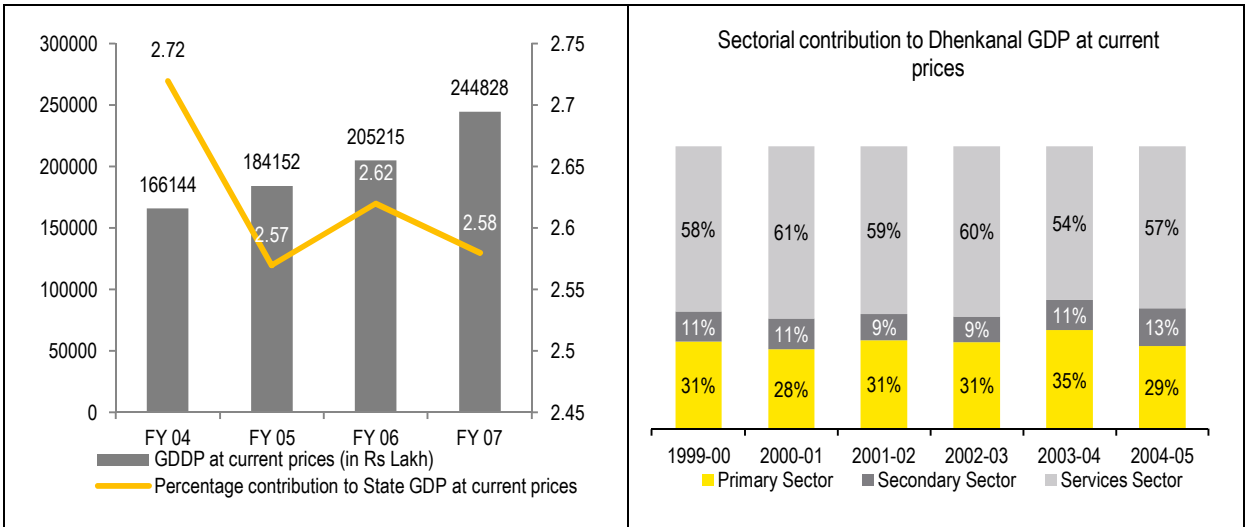
For higher education there are 45 junior colleges and higher secondary schools (10+2). As per the Department of Higher Education (DHE), the total sanctioned strengths in arts, science and commerce streams were 6368, 2688 and 896 respectively. The admission details for the year 2011-12 suggests that demand for arts courses was far more than demand for science and commerce courses. 47 percent of the seats in commerce stream were vacant after the end of admission process compared to only 8 percent in arts and 13 percent in science.

At the degree and professional education level, there are 25 colleges. The admission details for the current year show that there is an average utilisation of 85 percent. The district has good infrastructure for technical education. One of the four government engineering colleges in the State, the Indira Gandhi Institute of Technology, is located in Dhenkanal District. Synergy institute of technology, a private engineering college, is also located in the district. Together, the two degree engineering colleges offer various courses including telecom engineering, computer engineering and mechanical engineering and have a combined intake capacity of approximately 786 students per year. In addition to engineering degree colleges, there are 3 polytechnic institutes including a government (women) polytechnic centre offering engineering and other diploma courses. As per the admission details, at an aggregate level only 6 percent of the seats were vacant in 2010. Interaction with the principal of the women polytechnic centre revealed that the vacancy and absenteeism is higher among the women. Total intake capacity in polytechnic institutes is approximately 895 students per year. Major courses include mechanical, electrical and civil engineering. There is a pharmacy college that has the capacity to train 60 students.

In terms of vocational training, although there is a Government ITI, it offers only one course and with only 21 seats. As per the statistics shared by State Council of Vocational Education and Training (SCEVT), 43 percent of the seats remained vacant in 2010. There are approximately 22 private ITCs offering courses in 9 trades. Fitter and electrician have the highest concentration of seats. As per SCEVT data, there is 40 percent vacancy in private ITCs as well.

10.9.3 Economic Profile

As per economic survey 2010-11, Dhenkanal is among the top fifteen districts in the State with a CAGR of 6.2 percent for the period 2000-01 to 2006-07. In terms of contribution to the state GDP, over the four year period from 2004-07, while the district GDP increased in absolute terms, its contribution decreased from 2.72 percent of State GDP in 2004 to 2.58 percent of the state GDP in 2007. In terms of sectoral allocation, agriculture constitutes an important economic activity contributing 29 percent of the district GDP in 2007. Services sector however remains the highest contributor while the industry sector shows an increasing trend.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 58: Gross District Domestic Product (at current prices) of Dhenkanal

Agriculture

Agriculture remains the backbone of Dhenkanal economy. Dhenkanal is located on the mid central table land- agro climatic zone. Almost 43 percent of the geographical area is cultivable area. Out of the total cultivable area of 1.84 thousand hectares, almost 50 percent comes under highland category, 28 percent under medium land and 22 percent under low land. About 60 percent of total work force depends on agriculture for livelihood as cultivators or agricultural laborers. Dhenkanal is ranked 16th in the State in terms of number of agricultural laborers, constituting 34.27 percent of total working force.

The varied agro climatic zones in Dhenkanal make it high agricultural potential area. While paddy is the primary crop, other crops including maize, sunflower, and vegetables etc are being adopted by the farmers. The district accounts for highest production of Mango and some other horticultural crops. Cashew is an important crop. It also has good potential for mushroom cultivation.

Performance of Dhenkanal district is good in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 12th with a per capita agricultural output of 1460. Vegetables contribute highest to the total agricultural output of Dhenkanal with a value of 324.77 (2008-2009), followed by food grains (216.24.47) and cereals with (188.83) (all figures in thousand metric tonnes).

With an average landholding of 1.56 hectare, landholding pattern in the District is comparatively better as compared to the other districts with only 39.89 percent of the farmers being marginal farmers.

Industries

The undivided Dhenkanal district (Angul and Dhenkanal) have more than 30 percent of the total coal reserve of India. Fuel, land, power, road, railway link all are readily available. Moreover the Paradeep port is also nearby. The land of Angul has been exhausted which has created great demand for land for industries in Dhenkanal. Located on the Chowdwar-Angul-Jharsuguda-Rourkela Industrial corridor, Dhenkanal is an upcoming growth center of Odisha with huge potential for growth in industries. There are more than 15 large and medium scale industries in Dhenkanal and many more are in the pipeline.

In terms of Investments into large and medium scale industries, Dhenkanal is currently ranked 6th in the State, with an investment of Rs. 68.72 billion by 2010 and which constitute 7.4 percent of the total investment in large and medium scale industries. Some of major large scale industries include Bhushan Steel and Strips ltd., Nabeharum power and steel India Ltd, Shakthi Sugar limited etc. The chart below shows that steel industry is clearly the largest contributor to the large and medium scale industries pie of Dhenkanal.

In terms of attracting investments and setting up Micro and small scale industries, Dhenkanal is ranked 14rd in the State. MSME investment in Dhenkanal was 1.86 percent of the total investments made in the State till March 2010.

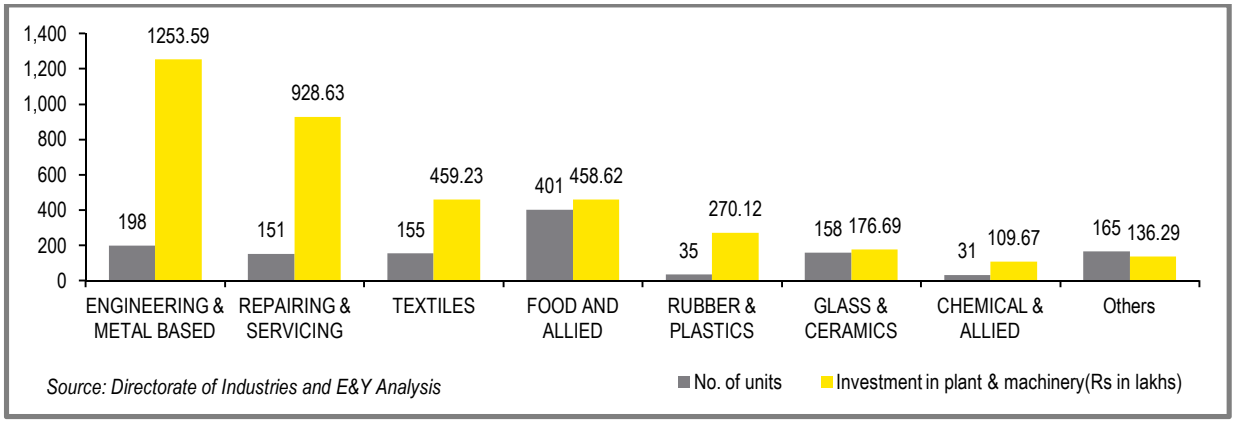
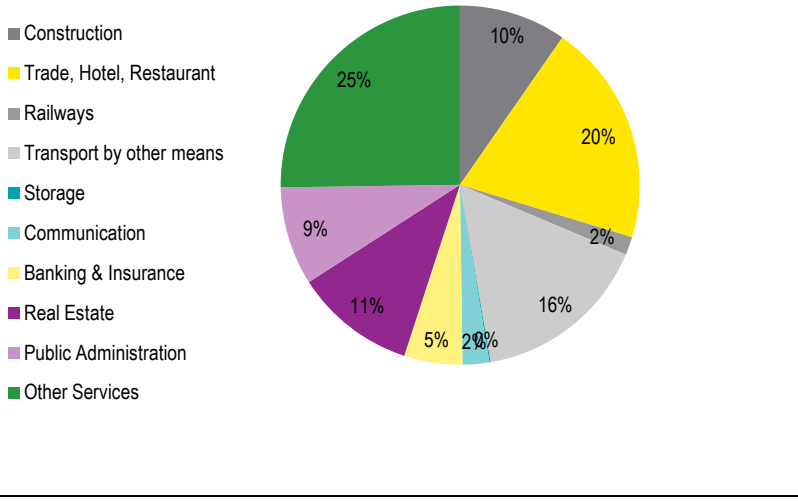


Figure 59: MSME Investments in Dhenkanal till 2010

The MSME investment chart shows that there is a higher concentration and investment in ancillary and demand based industries. Engineering and metal based industry tops the investment chart followed by repairing and servicing. Food processing is 4th in terms of investment even though the district is seen as having a good prospect for development in this sector. Others include miscellaneous manufacturing, paper & paper product, electrical & electronics, forest & wood based livestock & leather industries.

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Dhenkanal GDP, the service sector remains the most important contributor constituting 57 percent of the district GDP.

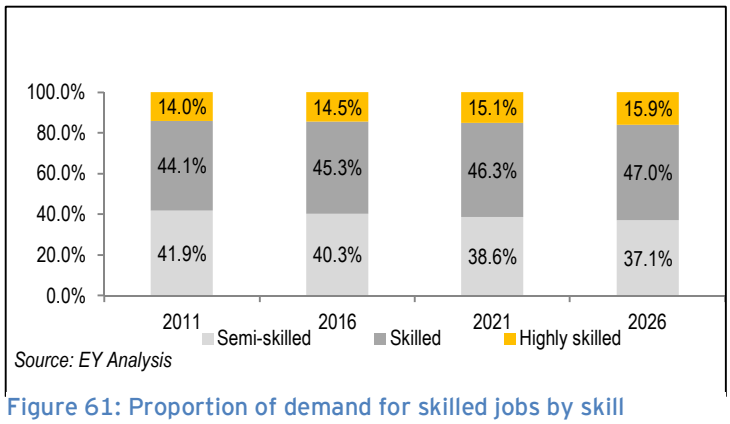


The breakup of the services sector shows that contribution of construction, trade, hotel and restaurant and transportation including railways are major contributors to the service sector of Dhenkanal

Source: Planning Commission, Government of India

Figure 60: Composition of service sector- Dhenkanal- 2004-05

Skill Gap Assessment for Dhenkanal District



Source: EY Analysis

Figure 61: Proportion of demand for skilled jobs by skill categories for Dhenkanal

Over the next 15 years, the total workforce demand for skilled jobs in Dhenkanal district is expected to grow from present levels of 1.9 lakhs in 2011 to 3.3 lakhs in 2026. An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon. The total workforce demand is expected to be dominated by the tertiary sector (82 percent), followed by the primary sector (14 percent) and secondary sector (4 percent).

Some of the prominent sectors from which majority of the workforce demand for skilled jobs in 2026 is expected include tourism, travel, hospitality and trade (0.6 lakh); agriculture (0.5 lakh); education & skill development (0.4 lakh); healthcare (0.4 lakh) and IT & ITes industry (0.4 lakh).

As per the CMIEs Capex database and secondary research, major capital projects have been announced in the power generation and transmission sector. The resultant increased industry growth rates including these sectors have been factored in to arrive at skill-wise demand across the sectors. The proportion of demand gap for semi-skilled workers shows a downtrend in the period 2011-2026, while it shows a continuous uptrend in the same period for skilled and highly-skilled workforce.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	15,989	20,276	25,714	32,610	
Skilled	10,595	13,436	17,040	21,609	
Highly skilled	1,734	2,199	2,788	3,536	
Total demand for skilled jobs	28,318	35,911	45,542	57,755	18
Agriculture					
Semi-skilled	24,229	23,806	23,390	22,982	
Skilled	16,153	15,871	15,594	15,321	
Highly skilled	8,076	7,935	7,797	7,661	
Total demand for skilled jobs	48,458	47,612	46,781	45,964	14
All sectors:					
Semi-skilled	77,941	88,980	103,203	121,621	
Skilled	81,975	100,035	123,565	154,250	
Highly skilled	26,013	31,978	40,364	52,217	
Total demand for skilled jobs	185,929	220,993	267,132	328,088	100

Source: E&Y Analysis

Table 37: Skill-wise demand for sectors where high demand is foreseen- Dhenkanal District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.8 lakhs during the period 2011-2026.

Skilled human resource is expected to account for a large proportion of this widening gap (64 percent), followed by highly skilled jobs (30 percent) and highly skilled jobs (6 percent).

Within the **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (55 percent) and IT & ITeS (20 percent) sectors.

The **skilled** workers' proportion in the incremental gap would be increasingly required in case of education & skill development (26 percent), healthcare (26 percent); and IT & ITeS (16 percent) industries. The **semi-skilled workers** belonging to the tourism, travel, hospitality & trade (37 percent); media & entertainment (20 percent) and banking, financial services & insurance (19 percent) sectors would form a major part of this gap in 2026.

By sector, the Banking, Financial Services & Insurance Sector is expected to account for 21 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly-skilled workers (79 percent) followed by skilled workers (16 percent) and semi-skilled workers (5 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(218)	(354)	(456)	(1,028)
Auto & Auto Components	1	3	6	10
Chemical & Pharmaceuticals	2	4	6	12
Construction materials & building hardware	197	334	478	1,009
Electronics & IT Hardware	3	5	7	15
Food Processing	53	62	70	185
Furniture & Furnishings	19	43	65	127
Leather & Leather Goods	1	1	1	3
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	0	16	31	47
Unorganized sector	15	33	49	97
Banking, Financial Services & Insurance	2,926	5,241	8,885	17,052
Building, Construction & Real Estate Services	(8)	33	66	91
Education & Skill Development	3,366	4,970	7,058	15,394
Healthcare	2,932	4,527	6,609	14,068
IT & ITES industry	2,763	4,359	6,445	13,567
Media & Entertainment	1,153	2,482	4,162	7,797

Sector	2012-16	2017-21	2022-26	2012-26
Tourism, travel, hospitality & trade	1,369	3,520	6,239	11,128
Transportation, logistics, warehousing & packaging	(248)	124	500	376
Total	14,327	25,402	40,221	79,950

Source: EY Analysis

Table 38: Total incremental demand supply gap for skilled jobs by sectors- Dhenkanal District

The incremental demand supply gap is also expected to widen for education & skill development (19 percent). The incremental human resource gap in this sector largely comprises of need for skilled (88 percent) and highly skilled workers (12 percent). Significant incremental requirement is also expected to be witnessed in services such as Healthcare (18 percent) and IT & ITeS (17 percent) sectors.

10.9.4 Development potential and Stakeholder perception

While the contribution of industries to the state GDP is on an upward trajectory, interactions with government officials and members in the community indicated that there is a good potential for further development of the primary sector especially horticulture and related enterprises. Together, Angul and Dhenkanal cater to more than 50 percent of mango production in Odisha. As reported by the agriculture department, production of Mango is highest in Dhenkanal. The potential is however not utilized due to lack of forward and back ward linkages. Cold storage is a major problem. There is a considerable scope of employment creation in food processing industry. Cooperatives, orchards, rural godown and market linkages are necessary along with skill up gradation in management of orchards, processing and grading/quality control etc. In addition to mango, cashew is another important horticulture crop which has a huge potential in the area. Cashew processing units are however limited and there is a scope for increasing the number of cashew processing units. Presently there are 7-8 cashew processing units but these uses older technology and requires up gradation.

Mushroom cultivation is another potential area. Along with Khurda and Puri districts, Dhenkanal has very favorable climate for mushroom cultivation which can be done at a commercial scale with proper technological, skills and marketing linkages. Income generation cycle for Mushroom is short as the gestation period is just 15-16 days. For paddy straw mushroom, which is more popular in the district, technology is not complicated and easier to adapt. In addition to cultivation of mushroom, which can be undertaken through SHGs, mushroom processing units can be set up in district. For spawn (mushroom seed) production, higher level of skills and sophistication is required including knowledge on maintaining ideal temperature etc. There has been a gradual increase in area under maize cultivation. The potential exists as it is less vulnerable to paddy. In order to make it profitable, require good tie-ups with poultry feed companies. Sunflower also has good potential to be developed at commercial level and is currently grown in parts of Gondia block.

Given its rich forest cover, there are ample opportunities in NTFP collection, processing and marketing. Honey and medicinal plants emerged as two important NTFP areas through discussions. Honey farming increases cross pollination and have incremental benefits for fruits and vegetable production. Medicinal plants are grown in some parts of the district, mostly in *Kapilas* region. Growth of these two subsectors requires promoting scientific cultivation and attracting good entrepreneurs. Good tie-ups with FMCG and pharmacy companies can yield good results. The dairy sector in Dhenkanal is still quite under developed and milk is imported from neighboring Cuttack

district. There is an opportunity to strengthen the milk production and processing sector for improving the state of primary sector.

Growth in the number of large and medium scale industries provides an opportunity for growth in Transportation, Hotel & Hospitality and Retail Sector. Most of the industries (existing and upcoming) are located around Dhenkanal town. The town presently lacks quality Hotels, Restaurants, big Retail Chains etc. Proximity to Angul and Cuttack has been an important factor in slow development of Dhenkanal town. This would change however with growth of industries and as a result there will be increased demand for drivers, auto mechanics, housekeeping personnel etc.

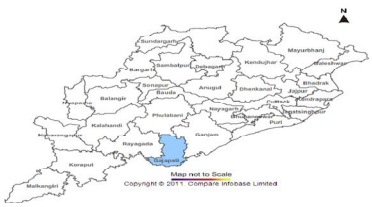
Dhenkanal has quite a few tourist spots which can be developed further. The district is midway between Angul and Bhubaneswar and many tourists like to stop over while travelling to *Satkosia* in Angul. The tourism sector however requires investments in quality hotels and publicity campaigns. The religious festivals, primarily the *laxmi puja* celebrations are done every year at a large scale. This creates an opportunity for promoting handicrafts industry which remains unexplored at a commercial scale. There is a potential to promote *Dokra* art, terracotta and bamboo and cane crafts. Traditional skills exist but it has not been developed using cluster approach.

While growth prospects exists in all the three sectors, most of the respondents stated that there is a need to improve the quality of education at schools as well as vocational training institution level. While there is huge requirements for skills related to Steel, Power, Aluminum and other mining based industries, lack of basic education, number of matriculates and poor communication skills acts as a barrier in accessing the courses that are offered. Most of the VTPs offer substandard trainings and face shortage of quality instructors. The state of government institution is also not very good as there is shortage of human resource. There is a women polytechnic which is functioning at 50 percent of its capacity. Out of 22 sanctioned posts for instructors, only 19 are vacant, reported the Principal of the institute. Awareness about various skills is also limited especially in the rural areas. Interaction with community members in a village located 10 Kms from Dhenkanal town revealed that most of the people working in industries are unskilled, working under contractors and getting very low wages. People complained that ITI education is costly and there is no job guarantee. People were not aware about employment generation schemes and reported that as area under agriculture is fast declining, without proper skills they would be forced to work as wage laborers in the industries. While few mentioned that they will be interested in undertaking mushroom cultivation and poultry farms, most others lacked any orientation about the possible skills and trades for self employment and income generation given the potential for growth in the district in the coming years.

- **Primary sector:** Skills required for undertaking production, value addition and processing for key potential food crops- Mango, Cashew, mushroom and sunflower in addition to HYV paddy. NTFP is an important sector requiring value addition skills.
- **Secondary sector:** High future prospects in mineral and metal based and power industries. The district will require skill sets as per the demand of these industries- mostly technical and mechanical. .
- **Services Sector:** Tremendous opportunity. Vocational training to focus on skills related to this sector- repair and servicing, drivers, auto mechanics, hospitality, health care and nursing, teachers, retailers, counselors, accountants etc. There is a need to improve the existing infrastructure in hospoitality, trade, healthcare and IT/ ITES sector.

10.10 Gajapati

Gajapati District is spread over an area of 4325 Sq Km which forms approximately 2.78 percent of the total geographical area of the State. Topographically, the major part of the district belongs to hilly terrain and undulated topography, which is inhabited by the tribals. Administratively, the district has one subdivision, 7 blocks, 129 Gram Panchayats and 1512 villages. Gajapati is surrounded by Ganjam and Phulbani Districts in the north, Ganjam in the east, Rayagada in the west and Andhra Pradesh in the south.



Map Courtesy: Maps of India

District Information	Gajapati	Odisha	Source
Area (in Sq Km)	4,325	155,707	Census 2011 provisional figures
% share of State Geographical area (Ranking)	2.78% (16)	100 (NA)	Census 2011 provisional figures
No of CD blocks	7	309	Census 2001
No of GPs	129	6,234	Census 2001
Total no of inhabited villages	1,512	47,529	Census 2001
Forest area as % of total geographic area	57.04%	37.66 %	Census 2001

Figure 62: District map of Gajapati

10.10.1 Demography

As per Census 2011 (Initial provisional data), Gajapati has a population of 5.76 lakhs of which males and females were 2.82 lakhs and 2.94 lakhs respectively. There is a change of 10.99 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 1.37 percent of the total population of the State and is ranked 28th among the 30 districts of Odisha. The initial provisional data (Census 2011) suggest a population density of 133 in 2011 making Gajapati one of the most sparsely populated Districts of Odisha. With regards to sex ratio, the district fares well as compared to other Districts and the State average. The sex ratio for Gajapati as per 2011 provisional census figures is 1042 females per 1000 males, much above the state average of 978 females per 1000 males.In terms of social composition of the population, the district is predominantly tribal with STs constituting about 50.78 percent of the total population whereas SCs constitute approximately 7.5 percent of the total population. Gajapati is the 15th urbanized district in the state having about 10.21 percent of its population living in urban areas (as per census 2001).

As per 2001 census, the population in the working age group constituted 55.29 percent of the total population. The population in the age group 0-4 years constitutes 11.83 percent and 5-14 years

comprise 26.17 percent respectively. Work participation rate of the district is 53.11 percent. Out of the total workers 65.32 percent are main workers and 34.68 percent are marginal workers. With a Human Development Index (HDI) of 0.431 and Gender Development Index (GDI) of 0.401, Gajapati falls among the bottom five districts of Odisha.

Population	Gajapati	Odisha	Source
Total population (in lakh)	5.76	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	2.82	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	2.94	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	1.37% (28)	**NA**	Census 2011 provisional figures
Density of population	133	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	10.99%	**13.97%**	Census 2011 provisional figures
Urban population %	10.21%	**14.99%**	Census 2001
SC population %	7.50%	**16.53**	Census 2001
ST population %	50.78%	**22.13**	Census 2001
Sex ratio	1042	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	55.29%	**58.38%**	Census 2001
Worker participation rate	53.11%	**40.03%**	Census 2001
Share of primary sector to total workers	77.90%	**64**	Census 2001
Proportion of agriculture laborer in workforce	45.29%	**34.53**	Census 2001
Human Development Indicators	**Gajapati**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.431 (28)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.401 (27)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	14975 (15)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.294 (28)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 39: Socioeconomic Indicators- Gajapati District

10.10.2 State of Education

Average literacy rate of Gajapati in 2011 (as per provision census figures) is 54.29 percent compared to 41.26 percent in 2001. Gender wise male and female literacy is 65.58 percent and 43.59 percent respectively. For 2001 census, same figures stood at 54.71 and 28.42 showing a proportionate increase in literacy level for all the groups in Gajapati District over last 10 years.

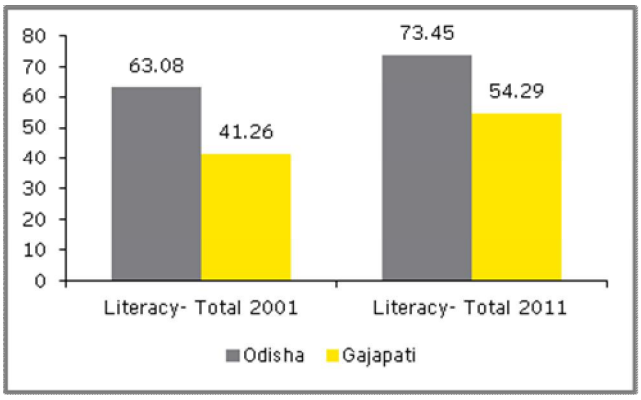


Figure 63: Literacy rate of Gajapati District

Out of the total number of children in school going age, 3.373 percent children were out of school in 2008.

Gajapati has 14 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams, for higher education. As per the Department of Higher Education

(DHE), in the year 2010, the total sanctioned strengths in each of these streams were 1648, 674 and 80 respectively.

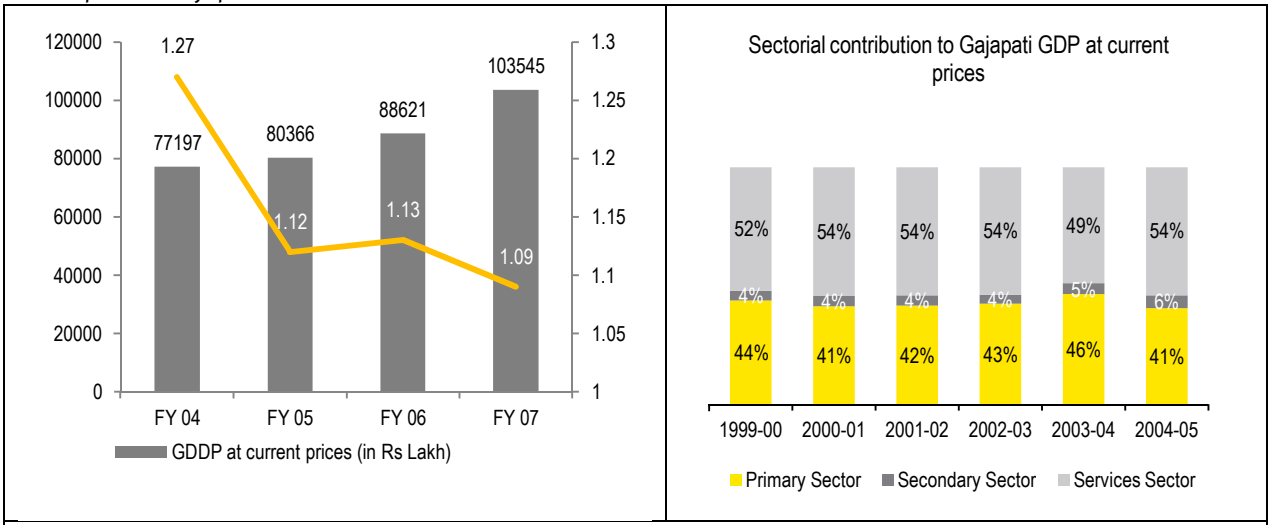
For technical education, Gajapati has a private engineering (degree) college. This engineering college offers various courses and has a combined intake capacity of approximately 420 students per year. Major courses offered include, electronics & telecom engineering, computer science & engineering, electrical & electronics engineering, mechanical engineering, instrumentation & electronics, information technology and chemical engineering. There are no polytechnic institutes in Gajapati as of now.

Gajapati has one Pharmacy College and one nursing college. There aren't any medical colleges or ayurvedic colleges in the district at present.

For vocational training, there is one Government ITI that offers the tractor mechanic course. There are 4 private ITCs offering primarily courses in Fitter, Electrician and Plumber, trades.

10.10.3 Economic Profile

As per economic survey 2010-11, Gajapati is among the bottom few districts in the State with a CAGR of 4.9 percent for the period 2000-01 to 2006-07. As per 2004-05 figures, contribution of services sector to GDDP was 54% followed by agriculture sector. The industrial sector is under developed in Gajapati.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 64: Gross District Domestic Product (at current prices) of Gajapati

Agriculture

People of Gajapati largely depend upon agriculture as their primary means of livelihood. Broadly, this district depicts agrarian economy. About 78 percent of total work force is either cultivators or agricultural laborers. Gajapati is ranked 5th in the State in terms of number of agricultural laborers, constituting 45.29 percent of total working force.

As per Odisha agriculture statistics report 2008-09, eighteen percent of the total geographical area or almost 76 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 36.06 thousand hectares. Apart from paddy, other major crops include food grains and vegetables.

Performance of Gajapati district is however poor in terms of per capita agricultural output. As per

the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 22nd with a per capita agricultural output of 1194. Vegetables contribute highest to the total agricultural output of Gajapati with a value of 209.78 (2008-2009), followed by paddy (43.61), pulses (18.97) and sugarcane (10.64) (all figures in thousand metric tonnes).

With an average landholding of 1.13 hectare, landholding pattern in the District depicts that majority (more than 59 percent) of the farmers have more than a hectare of land holding.

Industries

The district is still backward in terms of industry. Except a few agro-processing units, there is no major industry in this district. However some activities of cottage industries like horn work, jaikhadi bag, cane & bamboo work, *Ganjappa* card & *Pattachitra Mukha*, broom work & *Siali* leaf plate making and Tibetan woolen carpet contributes some place in the cottage industries of the district. Gajapati district does have a potential for development of Industries because of its strategic location and easy access to water sources. The river Vansadhara and Mahendratanaya are two important rivers of Gajapati district. Also, the District is well connected with other important cities and industrial centers and ports through a good network of national and state highways.

Gajapati is yet to progress in terms of attracting investments and setting up Micro and small scale industries. It is ranked among the bottom few districts of the State. MSME investment in Gajapati was 0.46 percent of the total investments made in the State till March 2010.

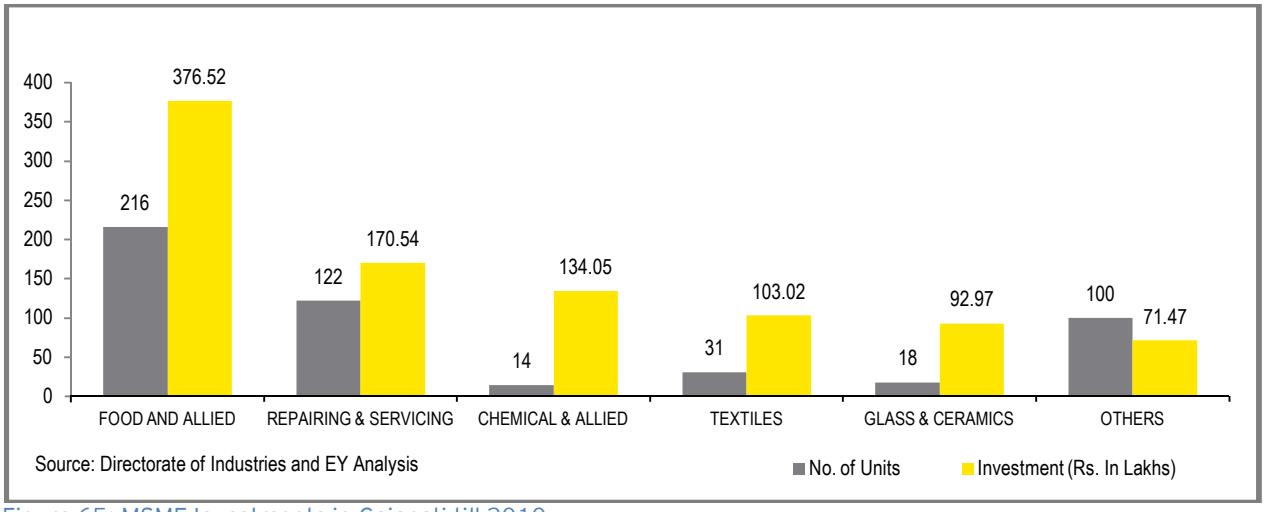
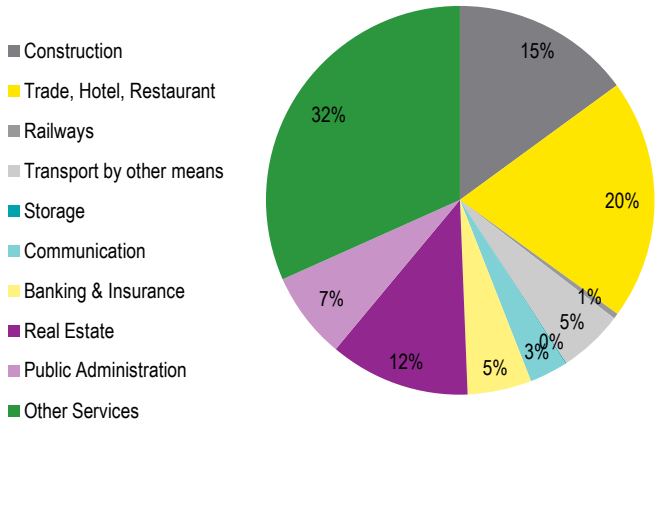


Figure 65: MSME Investments in Gajapati till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Gajapati GDP, the service sector remains the most important contributor constituting 54 percent of the district GDP. The contribution of various sectors to GDDP is shown in chart below.



As depicted in the chart, other services is the leading contributor to the service sector (32 percent) followed by trade, hotel and restaurant (20 percent), construction (15 percent) and real estate (12 percent). Transportation and public administration are also notable contributors to the GDP of Gajapati economy

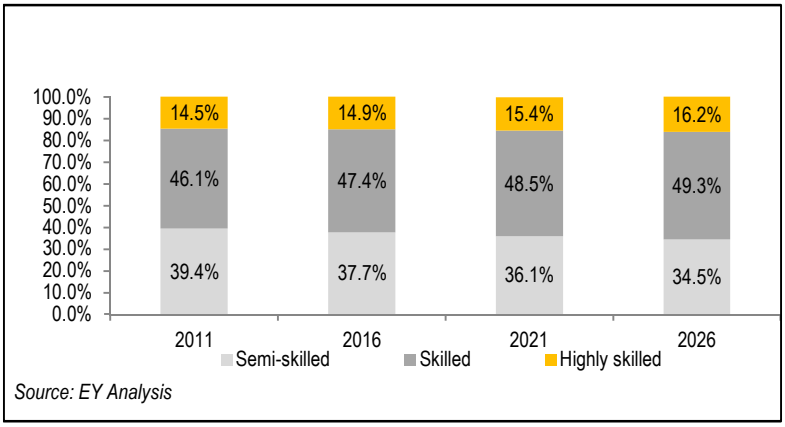
Source: Planning Commission, Government of India

Figure 66: Composition of Service Sector- Gajapati 2004-05

10.10.4 Skill Gap Assessment for Gajapati District

The total workforce demand for skilled jobs in Gajapati district is expected to grow from a level of 1.5 lakh in 2011 to reach 2.6 lakh in 2026. On a macroeconomic level, the tertiary sector is expected to account for 82 percent of the total workforce demand, followed by primary sector (16 percent) and secondary sector (2 percent).

The major sectors expected to create a demand for skilled workforce in 2026 are: tourism, travel, hospitality & trade (0.4 lakh); agriculture (0.4 lakh); education & skill development (0.3 lakh); healthcare (0.3 lakh); IT & ITes (0.3 lakh) and media & entertainment (0.3 lakh).



Source: EY Analysis

Figure 67: Proportion of demand for skilled jobs by skill categories- Gajapati

Over the period 2011-2026, the proportion of **highly-skilled** and **skilled** workers in the gap is expected to grow on a continuous basis, while that of **semi-skilled** workers is expected to reduce during the same period. The secondary research indicates increasing number of food processing, road and power projects are in the offing.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	12,027	15,253	19,343	24,531	
Skilled	7,970	10,107	12,818	16,256	
Highly skilled	1,304	1,654	2,097	2,660	
Total demand for skilled jobs	21,301	27,014	34,258	43,447	17
Agriculture					
Semi-skilled	21,926	21,543	21,167	20,797	
Skilled	14,618	14,362	14,111	13,865	
Highly skilled	7,309	7,181	7,056	6,932	
Total demand for skilled jobs	43,853	43,086	42,334	41,594	16
All sectors:					
Semi-skilled	57,895	65,812	76,150	89,696	
Skilled	67,724	82,766	102,398	128,036	
Highly skilled	21,290	26,028	32,681	42,067	
Total demand for skilled jobs	146,910	174,606	211,229	259,798	100

Source: E&Y Analysis

Table 40: Table: Skill-wise demand for sectors where high demand is foreseen - Gajapati District

On the supply aspect, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand supply gap is expected to be around 1 lakh in the next 15 years.

Skilled manpower accounts for 56 percent of this widening gap, followed by semi-skilled jobs (~22 percent) and highly-skilled jobs (~22 percent).

Education and skill development (28 percent); healthcare (27 percent); and IT & ITes (17 percent) industry are expected to account for the largest incremental gap for **skilled** workers.

As far as the **highly skilled** workforce is concerned, the highest requirement is expected in case of banking, financial services & insurance jobs (53 percent); IT & ITes (22 percent); and education & skill development (9 percent) sectors.

A sizeable share of **semi-skilled** workers is expected to be required in case of tourism, travel, hospitality & trade (39 percent); media & entertainment (25 percent) and banking, financial services and insurance (16 percent) sectors.

It has been observed that the incremental demand supply gap for the skilled jobs **varies with economic activity**. Banking, financial services and insurance is expected to account for 18 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly skilled workers (64 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(557)	(595)	(621)	(1,773)
Auto & Auto Components	2	2	2	6
Chemical & Pharmaceuticals	6	8	9	23
Construction materials & building hardware	108	133	160	401
Electronics & IT Hardware	1	1	1	3
Food Processing	67	74	82	223
Furniture & Furnishings	23	27	31	81
Leather & Leather Goods	-	-	-	-
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	19	23	27	69
Unorganized sector	1	1	1	3
Banking, Financial Services & Insurance	3,402	5,349	8,331	17,082
Building, Construction & Real Estate Services	163	194	221	578
Education & Skill Development	3,937	5,327	7,137	16,401
Healthcare	3,786	5,176	6,987	15,949
IT & ITES industry	3,793	5,184	6,995	15,972
Media & Entertainment	2,937	4,066	5,490	12,493
Tourism, travel, hospitality & trade	3,960	5,543	7,539	17,042
Transportation, logistics, warehousing & packaging	190	254	321	765
Total	21,838	30,766	42,711	95,315

Source: EY Analysis

Table 41: Table: Total incremental demand supply gap for skilled jobs by sectors- Gajapati District

The incremental demand supply gap is also expected to widen for tourism, travel, hospitality & trade sector (18 percent). This reflects the need for semi-skilled (49 percent) and skilled human resource (43 percent).

Other major sectors where a surge in the incremental requirement is expected are education & skill development (17 percent); IT & ITeS (17 percent) and healthcare (17 percent). The requirement for skilled workers is expected to be the maximum in the estimated incremental skill gap workforce.

10.10.5 Development potential and stakeholder perception

In Gajapati district, almost 90 percent of population live in rural areas and as high as 87 percent of workforce is engaged in agriculture sector alone[7]. The soil type and climate is suitable for both horticulture and agriculture crops. The major crops in the district consist of paddy, pulses, oilseeds, sugarcane and cotton. Paddy is the major cereals in the district. More than 60% of lands are located in hilly terrain making it suitable for horticulture plantation. Other cultivable land belongs to the category of medium lands and low lands which if irrigated can provide opportunity for enhanced agricultural output. More than 57% of the area is classified as forest which provides ample opportunity for NTFP collection & marketing.

[7] As reported by the District Agriculture Office

According to Collector Mr. Rabindra Pratap Singh Gajapati is heavily dependent on natural resources for its survival. A large section of tribal youths (both men & women) are engaged in NTFP collection, processing & selling over a considerable period in a year. This also provides income to the family on a sustainable basis. However, processing of NTFP products such as *Chara, Jhuna, Sabai Grass, Amla* etc. are still in nascent stage. Even though tribal residing in the area are having the expertise in processing the same, the skills require further upgradation. Moreover, there is a need for increased capital investments into these processing units. Identified skills in this sector needs to be backed by capital inflow. Skill enhancement training followed by credit linkage with financial institutions shall play a major role in improving the per capita income of the community. While there is ample scope for establishing food processing, cold storage, tamarind processing and agro service centers, there is a need to create network of small and medium enterprises with adequate vocational training infrastructure for creating sustainable employment opportunities for all eligible youths in the district. Within the primary sector, focus may be given on the following:

- Horticulture: Gajapati offers a diversified climate, because of which citrus, pine apple as well as mangoes grow well. The potential has however not been utilized to its optimum level in spite of the efforts made by the National Horticulture Mission. Distress sale of pineapple and lemon are still prevalent. Effort thus needs to be taken to orient individuals having land on horticulture raising techniques and a proper marketing mechanism needs to be established.
- Pisciculture: The district has good coverage of water bodies & ponds which offers opportunity for inland fishery. Most of these ponds have been excavated during pre-independence periods by the then rulers of the state. Even though siltation has reduced the depth of these water bodies yet, these still offers good opportunities for fishery. Fishery Board is offering financial aid to individuals having pond for Pisciculture. Fishing, fish marketing as well as fish processing can be done through proper training to the youths in the regions. *Katla & Rohu* are two major fish type which has the potential.
- Cashew: Gajapati has intensive cashew farming. The cashew is not only qualitative in nature but also is widely farmed over large acreage. The cashew trees once planted earn revenue for a considerable period of time. Cashew requires both labour as well as capital for survival. It is seen that in Gajapati District, most of the cashew processing units belong to individuals who belong to Kerala & Andhra Pradesh. This is largely because of the fact that, sufficient skill building has not been done for local tribal youths. Drying & frying of Cashew, packaging as well as marketing needs to be done in the area by involving local units & setting up small processing units in the locality.

The secondary sector in Gajapati is under developed. Employment in industrial sector is limited. Except for a few agro-processing units, there is no major industry in this district. Skill based Cottage industries like Horn work, *Jaikhadi* bag, Cane & Bamboo work, *Ganjappa* Card & *Pattachitra Mukha*, Broom work & Siali leaf plate making and Tibetan Woolen Carpet etc may be developed further through cluster development approach along with skill up-gradation of these traditional skills. There is high potential to develop employment opportunities in the emerging growth centers like construction works, developing rural infrastructure, small scale industries and mining (granite stone) sectors etc.

The district fares poorly in health indicators & one of the important factors affecting this is the non availability of trained manpower. Positions in Government setup such as ANMs, Health Workers (both Male & Female) & Block Extension officers have remained vacant in many blocks. While health service sector is still in emerging stage, effort needs to be taken to provide diploma courses on health education as well as nursing to tribal girls.

There is a shortage of skilled teachers & education extension workers. This is largely because of a lengthy process to identify, train & absorb individuals in education setup. Even those teachers working as para-teachers needs periodic career advancement training.

The service sector is of key importance to an economy aspiring to achieve rapid growth and prosperity. The sector has been the driver of growth and employment in the state and even in the district. With declining trend of employment in agriculture sector which is now accounts for 80% of the workforce it is evident that we have to create opportunity for people in other sector.

The growth trend in the neighboring states show that the service sector can only provide additional job opportunities and lead the economic development in the district. The factors that advocate service sector growth is that, it is less capital incentive than other sector industry sector. The increased access to Information, communication technologies provide ample opportunity for IT related growth and use of IT as a platform for other development initiatives. Thirdly, the focus on increasing access to education and health facilities through e-platform creates greater opportunities and last but not the least, government's investments in developing necessary infrastructure like communication networks, roads, etc which will boost growth in service business.

- **Primary Sector:** Skill development trainings in agro processing focusing on tamarind, pineapple, cashewnut and NTFP products.
- **Secondary setor:** Skills related to Food processing value chain. Advanced level skills in handicrafts sector especially focusing on Horn work, *Jaikhadi* bag, Cane & Bamboo work, *Ganjappa* Card & *Pattachitra Mukha*, Broom work & Siali leaf plate making and Tibetan Woolen Carpet etc
- **Services sector:** Basic services like healthcare and education along with rural self employment driven services- repair and maintenance of electrical and electronics items, drivers, mechanics etc

10.11 Ganjam

Ganjam District is spread over an area of 8206 Sq Km which forms approximately 5.27 percent of the total geographical area of the State. Topographically, the district has two prominent divisions- the coastal plains area in the east and hill and table lands in the west. The Eastern Ghats run along the western side of the district. The plains lie between the Eastern Ghats and the Bay of Bengal. Administratively, the district is divided into 3 subdivisions, 22 blocks, 475 Gram Panchayats and 2812 villages. Ganjam is surrounded by Nayagarh District in the north, Puri and Khurda in the east, Kandhamal in the west and Gajapati in south.

Map Courtesy: Maps of India

District Information	Ganjam	Odisha	Source
Area (in Sq Km)	8,206	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	5.27% (5)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	22	**309**	Census 2001
No of GPs	475	**6,234**	Census 2001
Total no of inhabited villages	2,812	**47,529**	Census 2001
Forest area as % of total geographic area	38.37%	**37.66%**	Census 2001

Figure 68: District Map of Ganjam District

10.11.1 Demography

Ganjam is the most populated district in Odisha. It constituted 8.39 percent of the total population in 2011. As per Census 2011 (initial provisional data), Ganjam has a population of 35.20 lakhs of which males and females were 17.77 lakhs and 17.43 lakhs respectively. There is a change of 11.37 percent in the population compared to population as per 2001 census. The initial provisional data (Census 2011) suggest a population density of 429 in 2011 making Ganjam the ninth most densely populated District of Odisha. With regards to sex ratio, the district fares relatively better as compared to other districts and the state average. The sex ratio for Ganjam as per 2011 provisional census figures is 981 females per 1000 males, little above the State average of 978 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 18.57 percent of the total population while STs forms only 2.88 percent of the total population. Ganjam is the 6th urbanized district in the state having about 17.59 per cent of its population living in urban areas (as per census 2001).

As per 2001 census, the population in the working age group constituted 56.80 percent of the total population. Work participation rate of the district is 41.32 percent. Out of the total workers 62.77 percent are main workers and 37.23 percent are marginal workers. With a HDI of 0.551, Ganjam is ranked 20th in the State.

Population	Ganjam	Odisha	Source
Total population (in lakh)	35.20	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	17.77	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	17.43	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	8.39% (1)	**NA**	Census 2011 provisional figures
Density of population	429	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	11.37%	**13.97%**	Census 2011 provisional figures
Urban population %	17.59%	**14.99%**	Census 2001
SC population %	18.57%	**16.53**	Census 2001
ST population %	2.88%	**22.13**	Census 2001
Sex ratio	981	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	56.80%	**58.38%**	Census 2001
Worker participation rate	41.32%	**40.03%**	Census 2001
Share of primary sector to total workers	63.25%	**64**	Census 2001
Proportion of agriculture laborer in workforce	38.59%	**34.53**	Census 2001
Human Development Indicators	**Ganjam**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.551 (20)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.518 (15)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	14686 (17)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.389 (24)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 42: Socioeconomic indicators- Ganjam District

10.11.2 State of Education

Average literacy rate of Ganjam is more or less at par with the State average. Literacy rate in 2011 (as per provision census figures) is 71.88 percent compared to 60.77 percent in 2001. Gender wise male and female literacy is 81.85 percent and 61.84 percent respectively. For 2001 census, same figures stood at 75.22 and 46.44 showing a proportionate increase in literacy level for all the groups in Ganjam District over last 10 years.

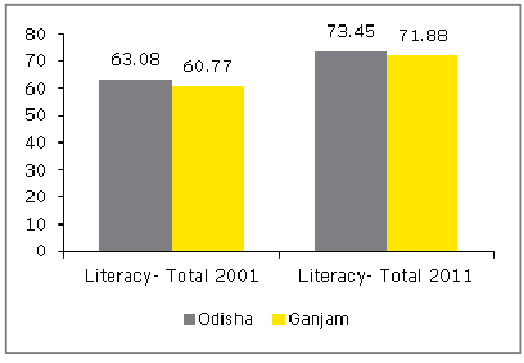


Figure 69: Literacy rates- Ganjam District

Out of the total number of children in school going age, 0.6015 percent children were out of school in 2008.

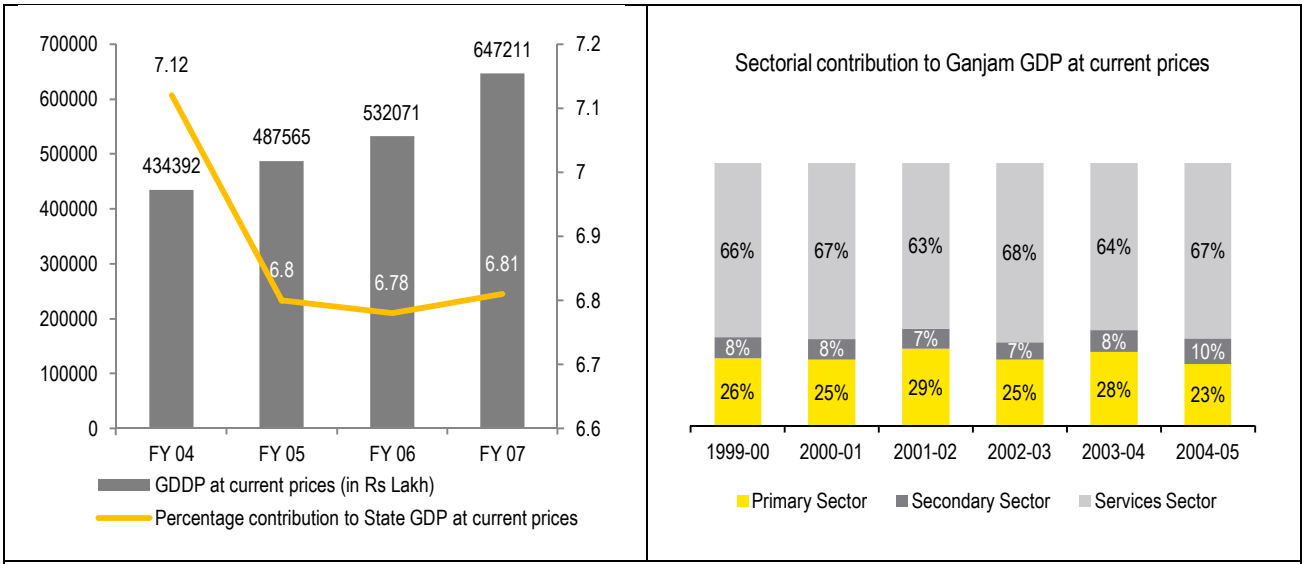
Ganjam is an important district in southern Odisha in terms of higher education. There are 99 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 10320, 9136 and 2352 respectively.

The technical education infrastructure of the district is quite good compared to other districts in Southern Odisha. Ganjam has 5 private engineering (degree) colleges. Together, these engineering colleges offer various courses and have a combined intake capacity of approximately 1566 students per year. Major courses offered include computer science & engineering, information technology, electronics & telecom engineering and electrical and electronics engineering, instrumentation and electronics, mechanical engineering and MCA etc. In addition to engineering degree colleges, there is also a private polytechnic institute offering engineering and other diploma courses. Total intake capacity of this polytechnic institute is approximately 300 students per year. Courses offered are civil, electrical, mechanical and electronics & telecom and computer science. Ganjam has one pharmacy college that has the capacity to intake 60 students. There are no medical, ayurvedic, homeopathy or nursing colleges in Ganjam at present.

In terms of vocational training, the infrastructure in Ganjam is better than most of the districts in Odisha but there seems to be an issue regarding the courses being need based. There are 4 Government ITIs offering courses in 22 trades with primacy to trades like fitter, stenographer (English) and electrician. Other courses include surveyor, painter, welder, mechanist, plumber and data entry operator. The data with regard to utilisation of seats is of great concern. As per 2010 SCVET data, out of the sanctioned seat of 606 only 89 seats were filled by the government ITIs suggesting a vacancy of 85 percent. In case of private institutions, the situation is slightly better. There are 33 private ITCs, covering 30 trades and a total intake capacity of more than 4000 students per year. Major courses are fitter, electrician and COPA . In the year 2010, 55 percent of the seats in private institutions remained vacant.

10.11.3 Economic Profile

As per economic survey 2010-11, Ganjam is among the top ten districts in the State with a CAGR of 7.3 percent for the period 2000-01 to 2006-07. In terms of overall contribution to state GDP, Ganjam is one of the important districts and contributes 6.81 percent of the total State GDP. Agriculture is an important economic activity but the bulk of the share comes from the services sector. The industry sector is not much developed though it has shown an increasing trend in terms of contribution to District GDP.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 70: Gross District Domestic Product (at current prices) of Ganjam

Agriculture

Ganjam is predominantly an agriculture district with about 63 percent of the work force directly depending on agriculture for their livelihood. Ganjam is ranked 12th in the State in terms of number of agricultural laborers, constituting 38.59 percent of total working force. The District is known for its fertile soil and agricultural productivity. Agriculture is not only the tradition of Ganjam people but also it is way of life for them. A variety of crops like paddy, are grown in the district.

The agro climatic condition of the district, long coast line and fertile land makes Ganjam a high agri-potential district. Paddy is the main crop in addition to pulses, ground nut, sugar cane, oil seeds, ragi, *mung*, and *biri* etc. In addition to agriculture animal husbandry and fishery are important allied activities in the district. Ganjam is one of the highest producers of fish, meat, milk and vegetables and hold an important place in the agriculture map of Odisha. Food grains contribute highest to the total agricultural output of Ganjam with a value of 641.29 (2008-2009), followed by vegetables (534.60) and other cereals with (531.15) (all figures in thousand metric tonnes). With an average landholding of 1.06 hectare, landholding pattern in the District depicts that majority (more than 64 percent) of the farmers have only marginal (less than a hectare) land holding.

Industries

The location of Ganjam District is strategic and is quite favourable to industrial development. The Bay of Bengal touches the eastern frontier of Ganjam district and its coast extends over 60 Kms. It provides unique opportunity for fishing and port facility at Gopalpur for international trade. The rivers like *Rushikulya, Dhanei, Bahuda* and *Ghoda Hada* are the prominent ones which govern the agriculture and power sectors of the district. The vast river basin of *Rushikulya* provides good potential for use of ground water. The district is also rich in mineral resources. The chief economic minerals found in the district are abrasives and grinding materials, lime stone (*kankar*), manganese, monazite, sand and talc. Garnetiferous granitic gnashes and charanokites are used for manufacture of grinding stones in the district white clay deposits are also found in different areas of the district. The District is well connected with other important cities and industrial centers and ports through a good network of national and state highways. There are 3 industrial estates in the district spread.

In terms of Investments into large and medium scale industries, Ganjam is currently ranked 15th in the State, with an investment of Rs. 2.6 billion by 2010 and which constitute 0.28 percent of the total investment in large and medium scale industries. Some of the major large scale industries include Indian Rare Earth Ltd. (oscom), Jayashree Chemicals Ltd., The Aska Sugar industry Ltd. In terms of attracting investments and setting up Micro and small scale industries, Ganjam is ranked 10th in the State. MSME investment in Ganjam was 4.07 percent of the total investments made in the State till March 2010.

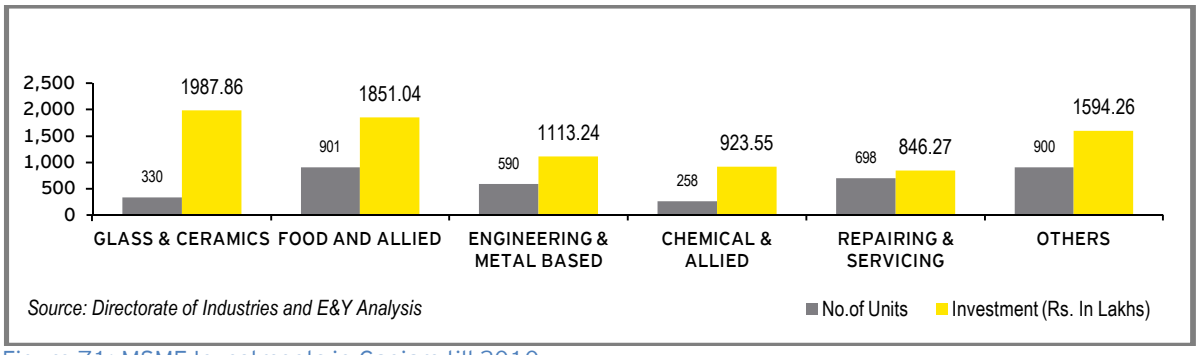
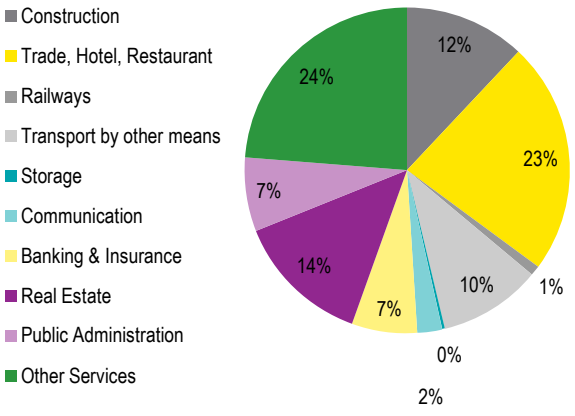


Figure 71: MSME Investments in Ganjam till 2010

Glass and ceramics and food processing industries top the MSME chart. Due to presence of only few large scale industries the ancillary sector has not grown much.

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Ganjam GDP, the service sector remains the most important contributor constituting 67percent of the district GDP.



As depicted in the chart, other services are the leading contributor to the service sector (24 percent) followed by trade, hotel and restaurant (23 percent), real estate (14 percent) and construction (12 percent). Transportation and public administration are also important contributors of GDP of Ganjam economy

Source: Planning Commission, Government of India

Figure 72: Composition of Service Sector- Ganjam 2004-05

10.11.4 Skill gap assessment for Ganjam

Over the next 15 years, the total workforce demand for skilled jobs in Ganjam district is expected to grow from present levels of 7.3 lakhs in 2011 to 13.8 lakhs in 2026. An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon. On a macroeconomic level, the maximum workforce demand in 2026 is expected to be accounted by the tertiary sector (87 percent), followed by primary (10 percent) and secondary sector (3 percent).

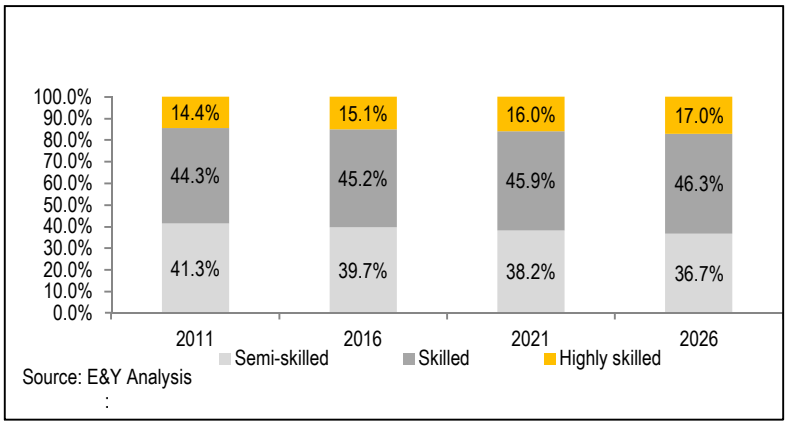


Figure 73: Proportion of demand for skilled jobs by skill categories- Ganjam

Some of the prominent sectors from which the major demand for skilled workforce is expected in 2026 are: tourism, travel, hospitality & trade (2.9 lakhs); banking, financial services & insurance (1.9 lakh); education & skill development (1.6 lakh); healthcare (1.6 lakh) and IT & ITeS (1.6 lakh).

The CMIEs Capex database and secondary research shows that majority of the capital projects announced in the district in the last two years are in the construction, infrastructure and tourism sectors. Promising growth is expected from these sectors, and a commensurate surge in the labor demand is expected as well. In light of these findings, suitable growth rates for these sectors have been factored in to arrive at skill-wise demand across the sectors.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	81,450	103,294	130,995	166,127	
Skilled	53,973	68,448	86,804	110,084	
Highly skilled	8,832	11,201	14,204	18,014	
Total demand for skilled jobs	144,255	182,943	232,003	294,225	21
Banking, Financial Services & Insurance					
Semi-skilled	14,887	22,534	34,108	51,628	
Skilled	8,546	12,936	19,581	29,638	
Highly skilled	31,703	47,988	72,638	109,949	
Total demand for skilled jobs	55,136	83,458	126,327	191,215	14
All sectors:					
Semi-skilled	303,813	354,365	419,840	505,152	
Skilled	325,330	403,171	504,603	636,982	
Highly skilled	105,704	134,661	175,687	234,145	
Total demand for skilled jobs	734,847	892,197	1,100,130	1,376,279	100

Source: E&Y Analysis

Table 43: Skill-wise demand for sectors where high demand is foreseen- Ganjam District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 5.3 lakhs during the period 2011-2026.

The major proportion of this widening gap is expected to be of skilled human resource (54 percent), followed by highly skilled jobs (24 percent) and semi-skilled jobs (22 percent).

Within the **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (61 percent) and IT & ITes (17 percent) sectors.

The **skilled** workers' proportion in the incremental gap is expected to surge in case of education & skill development (25 percent), healthcare (25 percent); and tourism, travel, hospitality & trade (18 percent) industries. The **semi-skilled workers** belonging to the banking, financial services & insurance (19 percent) and media & entertainment (18 percent) sectors would form a major part of this incremental gap in 2026.

By sector, the banking, financial services & insurance are expected to account for 22 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly skilled workers (65 percent) followed by the semi-skilled workers (19 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(1,737)	(1,885)	(1,989)	(5,611)
Auto & Auto Components	22	28	35	85
Chemical & Pharmaceuticals	128	161	197	486
Construction materials & building hardware	2,002	2,474	2,990	7,466
Electronics & IT Hardware	48	60	73	181
Food Processing	285	313	342	940
Furniture & Furnishings	171	209	246	626
Leather & Leather Goods	2	2	3	7
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	100	125	149	374
Unorganised sector	98	118	137	353
Banking, Financial Services & Insurance	23,198	36,940	58,060	1,18,198
Building, Construction & Real Estate Services	788	982	1,153	2,923
Education & Skill Development	19,475	25,971	34,429	79,875
Healthcare	18,620	25,107	33,562	77,289
IT & ITES industry	17,794	24,286	32,753	74,833

Sector	2012-16	2017-21	2022-26	2012-26
Media & Entertainment	13,096	18,351	25,007	56,454
Tourism, travel, hospitality & trade	25,304	35,972	49,486	1,10,762
Transportation, logistics, warehousing & packaging	1,753	2,514	3,312	7,579
Total	121,147	171,731	239,947	5,32,825

Source: E&Y Analysis

Table 44: Total incremental demand supply gap for skilled jobs by sectors- Ganjam District

The incremental demand supply gap is also expected to widen for tourism, travel, hospitality & trade (21 percent). The incremental human resource gap in this sector largely comprises of need for skilled (47 percent) and semi-skilled human resource (45 percent).

Other notable sectors expected to create a significant incremental requirement are education & skill development (15 percent); healthcare (15 percent) and IT & ITeS (14 percent) sectors. A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.11.5 Development potential and Stakeholder perception

Given its strong agrarian economy, fertile soil and favorable climate suitable for growth of agriculture and allied products, the district has a tremendous potential to develop food processing industries and other agriculture based products. The district ranks number one in terms of production of eggs, fish and fruits and is second only to Cuttack in terms of production of meat and milk. Ganjam already has a good concentration of food based MSMEs with a total investment of over Rs. 1851 lakhs. There is a need to develop skills towards value addition in agricultural and allied products. Growth opportunities are available in the following areas:

- Cashew processing industry: Cashew is an important crop in Odisha and it ranks third in India in terms of total production. The infrastructure and quality of processing units is however very weak in the State. The undivided Ganjam district account for almost 50 percent of the cashew processing industries in Odisha and hence is an important MSME in the district. The district has more than 120 cashew processing units and providing direct employment opportunities to around 12,000 people. The main cashew unit processing units are concentrated in Chhattarpur, Ganjam, Chikiti and Purushottampur blocks in the District. There is a potential to further develop the processing industry for cashew nut by developing skills at various levels, including drying and roasting, shelling, removal of peels, grading and packaging. There is also a need to improve the storage facility for improving the shelf life of the stocks. At present the human resource is mostly unskilled and the industry is using the traditional roasting techniques. Skill development and proper infrastructure support could assist in adoption of more advanced boiling technology.
- "*Kewda*" or "*Pandanus fascicularis*" processing: *Kewda* is an important plant used predominantly by the perfume industry and grows abundantly in the coastal region of Ganjam district. Presently, in Ganjam, 140 distillation units are spread over 4 blocks i.e. Chhatrapur, Rangeilunda, Ganjam and Chikiti within 60 kms radius. The plant is also known for its use in traditional medicine as well as in cottage industry. The *Kewda* processing units located in the district provides direct employment to 2650 individuals those who work as labourers & supervisors where as the total dependent households in sub sector are more than 15,000 households in four blocks which includes growers & aggregators. Ganjam is the only district in

Odisha where *Kewda* is cultivated and utilized for commercial purpose. The technology used is traditional and labour intensive and there is a potential to develop the skills both at the workers and the processor level.

- Dairy and dairy products: After Cuttack, Ganjam is highest milk producing district in Odisha. The dairy product industry could be further strengthened through skill upgradation in processing and value addition of dairy products, infrastructure creation and better policy incentives for the willing entrepreneurs. Along with dairy, Ganjam has a huge potential to develop the poultry industry. The district presently ranks 1 in terms of egg production but compared to States like Andhra Pradesh and Tamil Nadu, the progress is significantly less.
- Fishery: Ganjam is the largest fish producer in Odisha and is blessed with natural resources to produce marine, brackish water and fresh water fish. In addition to fish, there is good potential for prawn cultivation in the district. In spite of endowment advantages, the sector has not perform well owing to several factors that include- small land holding with unclear title deeds, preventing proper credit linkage for undertaking investments; lack of processing infrastructure, cold storage , ice plants etc. Lack of mechanized boats and trawlers for undertaking deep water fishing; absence of fishery development clusters as in case of Andhra Pradesh. In addition to these drawbacks, the fishermen community has low level of education and depends on traditional skills acquired through generations. Development of the fishery sector will require a cluster approach, improved infrastructure fish catching, drying, storing and marketing. It will require developing key skills like using mechanized boats and trawlers, mechanized drying, fish layering etc. Growth of fishery sector will also promote other industries like fish feed factory, hatching units, net weaving units and boat construction units.

In addition to agriculture, Ganjam has all the strategic advantages for development of industries which is presently untapped. In order to create large scale employment options, there is a need to develop the industrial sector which has not progressed well in the district. The district has very good road connectivity (NH 5); well connected with cities like Chennai, Kolkata, New Delhi, etc. through rail network; Bhubaneswar and Visakhapatnam, two important business centers are nearby with good rail and road connections. Education quality is highest among southern Odisha districts implying availability of quality human resource. Water availability and electricity is in abundance. Gopalpur, a seasonal port has the potential to be developed into an active port. There are some industrial estates but most of them are in a defunct state. The District Industries Centre has prepared of list of possible ancillary and downstream industries. The potential ancillary MSME units includes lime, oil seals and rings, sodium silicate, hydrochloric acid, auto repairing workshops, motor winding workshop and transformer units. Trainings are also required in processing of shell oil which is used as an important input in the manufacturing of brake linings, clutch plates, varnish and plastic materials. Potential downstream industries include ceramic and pottery products, welding electrodes, flooring tiles, abrasive papers, particle board and bromine (Gypsum to be collected and used in plaster of Paris). Development of these industries will require special provisions and infrastructure and role of industrial promotion agencies like IPICOL and IDCO will be critical. This will also require willingness and skills among the local entrepreneurs.

Ganjam is known for its Brass and Bell metal craft. There is a scope of encouraging other traditional crafts like stone carving, straw craft, appliqué craft and cane and bamboo crafts. Presently there are no clusters to promote these skills. Interaction with some villagers practicing bamboo and cane crafts revealed that they do not have access to information regarding market and design etc and the products made by them are sold in the local markets at nominal rates only.

As mentioned earlier, Ganjam district is the educational hub of southern Odisha with a good concentration of engineering and medical colleges in addition to the Berhampur University, a prestigious university of Odisha. Paradoxically while concentration of large scale industries is limited in the district, the concentration ITIs is the maximum in Ganjam district. Since there is limited local demand, most of the ITI trained students seek employment outside the district or State. In terms of trades, electrician and fitter are two courses having wide demand.

Lastly, given the scope in agriculture based industries and other MSME and excellent factor endowments to develop large scale industries, there is a potential for growth in services sector especially, education, healthcare, transportation, IT&ITES, hotel, trade and hospitality sectors. Strangely, these aspects were not mentioned by any of the respondents during our visits, indicating that there is lack of awareness about potential areas of growth in future. The existing vocational training and educational infrastructure however could be utilized effectively to create awareness and develop more number of courses relevant to the need of the local youths.

- **Primary sector:** Skills required in cashew and Kewda processing. Food processing units to maximize the advantage of the district having high milk and meat production.
- **Secondary sector:** Skill development for using agriculture as the base for industrial development . Akills would also be required for demand based industries like manufacturing of brake linings, clutch plates, varnish and plastic materials. Potential downstream industries include ceramic and pottery products, welding electrodes, flooring tiles, abrasive papers, particle board and bromine etc. Handicrafts like brass and bell metal, stone, straw and bamboo crafts require further trainings in modern design along with better forward and backward linkage.
- **Services Sector:** Skills required in the areas like healthcare, transportation, IT&ITes, hotel, trade and hospitality.

10.12 Jharsuguda

Jharsuguda is one of the smallest districts and is situated at the western end of Odisha along the State High way No. 10. It is situated at a distance of 515 Km from Calcutta and 616 Km. from Nagpur. The river '*Ib*' flows along the Western side of Jharsuguda town and the river '*Vheden*' flows in the south. Administratively, the district is divided into one subdivision, 5 blocks, 78 Gram Panchayats and 346 villages. Jharsuguda is surrounded by Sundargadh District in the north, Deogarh and Sambalpur in the east, Bargarh in the west and Sonepur in south.

Map Courtesy: Maps of India

District Information	Jharsuguda	Odisha	Source
Area (in Sq Km)	2,114	155,707	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.36% (29)	100 (NA)	Census 2011 provisional figures
No of CD blocks	5	309	Census 2001
No of GPs	78	6234	Census 2001
Total no of inhabited villages	346	47529	Census 2001
Forest area as % of total geographic area	18.52%	37.66	Census 2001

Figure 74: District Map of Jharsuguda

10.12.1 Demography

Jharsuguda is a small district with a population of just 5.79 lakhs in 2011. Male and female population was 2.97 lakhs and 2.82 lakhs respectively. There is a change of 12.56 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 1.38 percent of the total population of the State and ranks 27th in Odisha. Population density of 274 is slightly higher than the State average of 269. Jharsuguda the eleventh most densely populated District of Odisha. With regards to sex ratio, the district fares poorly compared to other districts and the state average. The sex ratio for Jharsuguda as per 2011 provisional census figures is 951 females per 1000 males, much below the State average of 978 females per 1000 males. In terms of social composition of the population, the district of Jharsuguda is majorly dominated by tribals constituting about 31.34 percent of the total population whereas SCs constitute approximately 17.07 percent of the total population. Jharsuguda is the second most urbanized district in the state having about 36.47 percent of its population living in urban areas (as per census 2001).

As per 2001 census, the population in the working age group constituted 53 percent of the total population. Work participation rate of the district is 37.20 percent. Out of the total workers 70.23 percent are main workers and 29.77 percent are marginal workers.

Jharsuguda is ranked second in the State in terms of human development index, while it has the best GDI in the State.

Population	Jharsuguda	Odisha	Source
Total population (in lakh)	5.79	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	2.97	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	2.82	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	1.38% (27)	**NA**	Census 2011 provisional figures
Density of population	274	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	12.56%	**13.97%**	Census 2011 provisional figures
Urban population %	36.47%	**14.99%**	Census 2001
SC population %	17.07%	**16.53**	Census 2001
ST population %	31.34%	**22.13**	Census 2001
Sex ratio	951	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	52.89%	**58.40%**	Census 2001
Worker participation rate	37.20%	**40.03**	Census 2001
Share of primary sector to total workers	46.32%	**64**	Census 2001
Proportion of agriculture laborer in workforce	24.21%	**34.53**	Census 2001
Human Development Indicators	**Jharsuguda**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.722 (2)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.687 (1)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	38747 (2)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.830 (1)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 45: Socioeconomic indicators for Jharsuguda

10.12.2 State of Education

Average literacy rate of Jharsuguda has been better than the State average in both 2001 and 2011. Average literacy rate of Jharsuguda in 2011 (as per provision census figures) is 78.36 percent compared to 70.65 percent in 2001. Gender wise male and female literacy is 86.27 percent and 70.05 percent respectively. For 2001 census, same figures stood at 82.16 and 58.48 showing a proportionate increase in literacy level for all the groups in Jharsuguda District over the last 10 years.

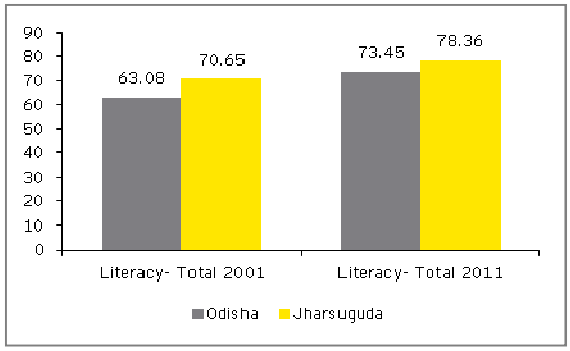


Figure 75: Literacy rates- Jharsuguda District

Out of the children in school going age approximately 2.15 percent children were out of school in 2009. In terms of higher education, while there are 19 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce, the enrolment rate for 2011 suggests that there is a high rate of unfilled seats in all the courses. In 2011, there 19 percent of the seats in arts remained vacant, 42 percent of seats in science and 24 percent of seats in commerce remained vacant. As per the Department of Higher Education (DHE), the total sanctioned strengths

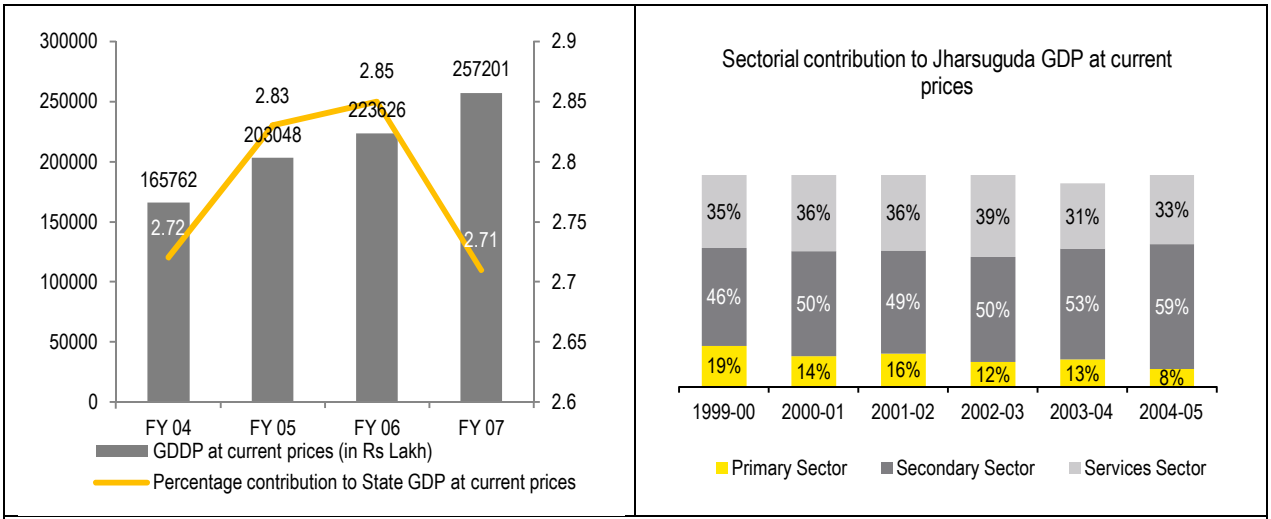
in each of these streams were 2176, 960 and 448 respectively.

For technical education, Jharsuguda has only one private engineering (degree) college. This engineering college offers various courses and has a combined intake capacity of approximately 240 students per year. Major courses offered include electronics & telecom engineering, mechanical engineering, computer science & engineering and electrical engineering. In addition to the engineering degree college, there is a government polytechnic centre offering engineering and other diploma courses. Total intake capacity of this polytechnic institute is approximately 420 students per year. Major courses are electrical, mechanical, civil, electronics & telecom and information technology. Jharsuguda does not have any medical colleges, pharmacy colleges, homeopathic colleges, ayurvedic and nursing colleges at present.

Jharsuguda does not have any Government ITI. There are however 20 private ITC institutes, offering courses in 30 trades including fitter, electrician, and COPA as the major trade. Compared to other district, the utilisation of seats is slightly higher among private ITCs in Jharsuguda. Almost 70 percent of the seats had been filled in 2010.

10.12.3 Economic Profile

With an annual growth rate of 8.2 percent for the period 2000-01 to 2006-07, Jharsuguda is among the top performing districts of Odisha. The district has one of the highest per capita incomes in the State. In terms of District GDP, the contribution of agriculture is negligible. The Industry sector is the largest contributor followed by the services sector.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 76: Gross District Domestic Product (at current prices) of Jharsuguda

Agriculture

The workforce of Jharsuguda is evenly divided between agricultural labourers and cultivators and other workers. About 38 percent of the total work force of Jharsuguda comprises of other workers while 46 percent of the workforce is either cultivators or agricultural laborers. As per Odisha agriculture statistics report 2008-09, eighty one percent of the total geographical area or almost 88 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 53.91 thousand hectares. Apart from paddy, other major crops include food grains, pulses, and oilseeds. In terms of food security outcome index, Jharsuguda is the top ranking district as its performance of is fairly good in terms of per capita agricultural

output. Food grains contribute highest to the total agricultural output of Jharsuguda with a value of 77.95 (2008-2009), followed by cereals (56.01) and oilseeds with (15.16) (all figures in thousand metric tonnes). Growth of agriculture in Jharsuguda has remained more or less stagnant. With an average landholding of 1.48 hectare, landholding pattern in the District depicts that more than half of the farmers have more than a hectare land holding.

Industries

Jharsuguda District has a huge potential for development of Industries because of its strategic location, proximity to State capital, easy access to water sources (Rivers- *Ib* and *Vhede*) and adequate supply of power[8]. It is an upcoming industrial hub, basically in the metal and cement sectors. Jharsuguda is well connected to all major cities of India through rail network. It is popularly known as the power house of Odisha due to large number of thermal power plants located nearby. The District is well connected with other important cities and industrial centers and ports through a good network of national and state highways. Currently, many small- and medium-scale steel units are being set up in the town vicinity. These include: Bhushan Power & Steel Limited (*Thelkoloi* village, Sambalpur district), SMC Power Generation Ltd., Action Ispat Ltd., Eastern Steel & Power Ltd., and SPS Steel & Power Ltd.

In terms of Investments into large and medium scale industries, Jharsuguda is currently ranked 5th in the State, with an investment of Rs. 63 billion by 2010 and which constitute 10 percent of the total investment in large and medium scale industries. Some of major large scale industries include Jai Hanuman Udyog, Seven Star Steels Ltd. etc.

In terms of attracting investments and setting up micro and small scale industries, Jharsuguda lies amongst the bottom half districts of the state. MSME investment in Jharsuguda was 3.8 percent of the total investments made in the State till March 2010.

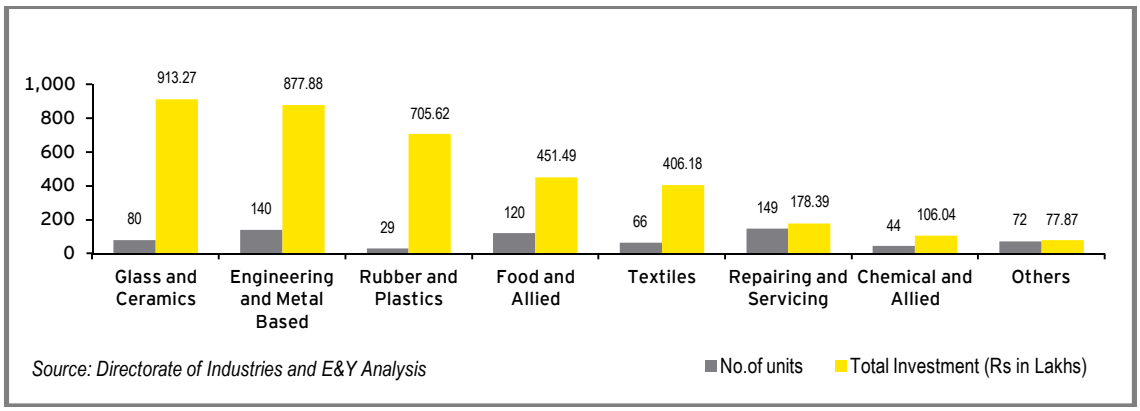
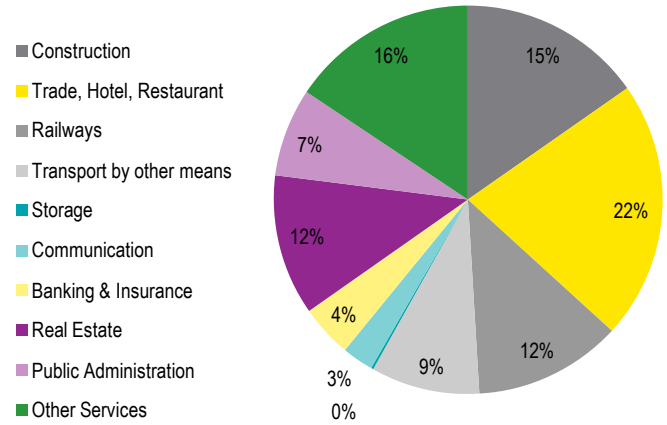


Figure 77: MSME Investments in Jharsuguda till 2010

8 Annual Action Plan- 2011-12; DIC Jharsuguda

Services

The services sector includes construction, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, public administration and other services[9]. The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Jharsuguda GDP, the industry sector remains the most important contributor constituting 59 percent of the district GDP, while the service sector contributes about 33 percent to the district GDP. The contribution of various service sectors to DGDP is shown below.



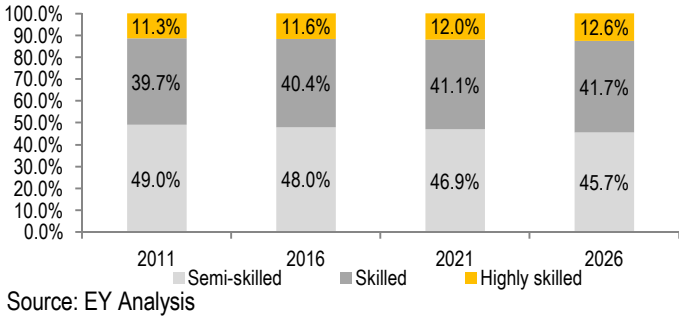
As depicted in the chart, trade, hotel and restaurant is the leading contributor to the service sector (22 percent) followed by other services (16 percent), construction (15 percent) and real estate and railways contributing 12 percent each. Transportation is also a major contributor of GDP of Jharsuguda economy

Source: Planning Commission, Government of India

Figure 78: Composition of Service Sector- Jharsuguda 2004-05

10.12.4 Skill Gap Assessment for Jharsuguda District

The total workforce demand for skilled jobs in Jharsuguda district is expected to grow from a level of 1 lakh in 2011 to reach 1.5 lakhs in 2026. On a macroeconomic level, the tertiary sector is expected to account for 45 percent of the total workforce demand, followed by secondary sector (43 percent) and primary sector (12 percent).



Source: EY Analysis

Figure 79: Proportion of demand for skilled jobs by skill categories- Jharsuguda District

The major sectors expected to create a demand for skilled workforce in 2026 are: unorganized - including tobacco products (0.4 lakh); construction materials & building hardware - including metals (0.2 lakh); tourism, travel, hospitality & trade (0.2 lakh); agriculture (0.2 lakh) and banking, financial services & insurance (0.1 lakh).

[9] Economic Survey report of Odisha-2010-11

Over the period 2011-2026, the proportion of **highly-skilled** and **skilled** workers in the gap is expected to grow on a continuous basis, while that of **semi-skilled** workers is expected to reduce during the same period. The secondary research indicates higher number of power (solar and thermal) and cement projects are in the offing.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Unorganized					
Semi-skilled	17,408	18,714	20,117	21,626	
Skilled	10,880	11,696	12,573	13,517	
Highly skilled	2,176	2,339	2,515	2,703	
Total demand for skilled jobs	30,464	32,749	35,205	37,846	26
Construction materials & building hardware					
Semi-skilled	5,212	5,931	6,749	7,680	
Skilled	6,548	7,452	8,480	9,649	
Highly skilled	1,203	1,369	1,557	1,772	
Total demand for skilled jobs	12,963	14,752	16,786	19,101	13
Tourism, travel, hospitality & trade					
Semi-skilled	5,017	6,362	8,069	10,232	
Skilled	3,324	4,216	5,347	6,781	
Highly skilled	544	690	875	1,110	
Total demand for skilled jobs	8,885	11,268	14,291	18,123	12
All sectors:					
Semi-skilled	48,259	53,327	59,433	66,854	
Skilled	39,091	44,839	51,992	60,950	
Highly skilled	11,095	12,832	15,174	18,372	
Total demand for skilled jobs	98,445	110,998	126,599	146,176	100

Source: E&Y Analysis

Table 46: Skill-wise demand for sectors where high demand is foreseen- Jharsuguda District

On the supply aspect, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand supply gap is expected to keep on widening, and estimated to be more than 0.2 lakh.

Skilled human resource contributes to 62 percent of this widening gap, followed by highly skilled jobs (31 percent) and highly-skilled jobs (7 percent).

Education and skill development (18 percent); healthcare (18 percent); and tourism, travel, hospitality and trade (16 percent) industry are expected to account for the largest incremental gap for **skilled** workers.

As far as the **highly skilled** workforce is concerned, the highest requirement is expected in case of banking, financial services & insurance jobs (48 percent); IT & ITeS (15percent); construction materials & building hardware (8 percent) sectors.

A sizeable share of **semi-skilled** workers is expected to be required in case of tourism, travel, hospitality & trade (30 percent); unorganized (18 percent) and banking, financial services and insurance (12 percent) sectors.

It has been observed that the incremental demand supply gap for the skilled jobs **varies with economic activity**. banking, financial services and insurance is expected to account for 18 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly skilled workers (81 percent) and skilled workers (15 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(70)	(110)	(143)	(323)
Auto & Auto Components	1	3	4	8
Chemical & Pharmaceuticals	9	18	27	54
Construction materials & building hardware	469	806	1,179	2,454
Electronics & IT Hardware	22	39	58	119
Food Processing	31	38	44	113
Furniture & Furnishings	21	39	58	118
Leather & Leather Goods	1	1	2	4
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	2	12	23	37
Unorganized sector	351	746	1,139	2,236
Banking, Financial Services & Insurance	648	1,160	1,980	3,788
Building, Construction & Real Estate Services	(1)	11	21	31
Education & Skill Development	546	850	1,256	2,652
Healthcare	469	765	1,163	2,397
IT & ITES industry	477	772	1,169	2,418
Media & Entertainment	204	432	734	1,370
Tourism, travel, hospitality & trade	372	924	1,661	2,957
Transportation, logistics, warehousing & packaging	(60)	36	142	118
Total	3,493	6,541	10,518	20,552

Source: E&Y Analysis

Table 47: Total incremental demand supply gap for skilled jobs by sectors- Jharsuguda District

The incremental demand supply gap is also expected to widen for tourism, travel, hospitality & trade sector (14 percent). The incremental human resource gap in this sector largely comprises of need for skilled (68 percent) and highly skilled human resource (17 percent).

Other major sectors where a surge in the incremental requirement is expected are IT & ITeS (12 percent) and healthcare (12 percent). The requirement for skilled workers is expected to be the maximum in the estimated incremental skill gap workforce.

10.12.5 Development potential and Stakeholder perception

The district of Jharsuguda is poised to be among India's most vibrant industrial and growth centers in the country. The district is located between Sambalpur (known for its collieries and smelter plant for HINDALCO) and Rourkela (known for its steel plant and National Institute of Technology). While Rourkela has a lot of industries, the new ones are more concentrated around Jharsuguda. In terms of connectivity the second airport of the State is planned at Jharsuguda and Jharsuguda has the best rail connectivity as it is a junction in the Howrah-Mumbai route as well as connected to Bolangir via Sambalpur and Bhubaneswar via Sambalpur. Jharsuguda and Sambalpur, 40 kms apart, if taken together have superb rail connectivity to the rest of the country. The district has lot of mines and minerals which allow rapid industrialization.

The growth of primary sector is stagnant. Though more workforce are engaged in primary sector but due to less rainfall, soil erosion, lack of land fertility and lack of technical skills, people are gradually being forced to move towards secondary sector. Paddy is the primary crop constituting almost 90 percent of the total cultivable area. The activities like food processing units, agro servicing centers and packaging (value addition) of agro products have growth potentials. Adequate infrastructure facility, establishment of a concrete marketing system, sufficient irrigation measures, adoption of modern practices and promotion of animal husbandry, horticulture and fishery practices can contribute largely to improve the primary sector situation. Agriculture extension and training is being provided through *Krushi Sahayak Kendras* and *Krishi Vigyan Kendras* but there is a lack of training infrastructure (software and hardware) to meet the need of the farmers.

The industry sector provides more employment opportunities than that of the agriculture sector. Easy availability of work and the wage difference is major factors for this. There is scarcity of labour for agriculture activities. If changes in cropping pattern with improved skill and knowledge can take place then agriculture sector may create more employment

In terms of industrial growth, Jharsuguda has tremendous advantage. The presence of Rourkela steel plant and the smelters of Hindalco have spawned the growth of a strong base of ancillary industries in Jharsuguda district due to its advantageous location between the two. SMEs engaged in engineering, fabrication and packaging have grown at a fast economic rate providing huge employment opportunity. A lot of large scale industries including Ultra Tech cement, IB Thermal station, IOC's LPG bottling plant, Vedanta, Bhushan Power and steel etc have set up its plants in the district. The Jharsuguda-Sambalpur-Rourkela belt is envisaged to be home to steelmaking capacity exceeding 8 million tonnes per annum.

In spite of huge potential for employment generation, the benefits have not been utilized at the optimum level due to following key factors:

- Absence of specific policies for skill enhancement and support after the training program
- Low infrastructure development at block level
- Diversification of Skill building as per the requirement
- Regular need assessment at the district level

Most of the stakeholders reported that need assessment should be carried out to understand the skill gaps. Appropriate trades should be introduced in the course curriculum of the technical/vocational institutions. Accordingly infrastructures and finance should be arranged. The

concerned vocational training institutes should start agro base courses for the youths. Focus should be given on agro based processing trades and to upgrade the traditional skill base. It was reported by the representatives of the large industries that getting skilled workers is not a problem as they have access to skilled workforce from across the country. The local workforce mostly works as unskilled or semiskilled workers. It was reported that the vocational and technical education infrastructure is currently inadequate. There are no Government ITIs in the district and though there are around 20 private ITIs, only a handful among them are offering quality courses.

Representatives of vocational training providers shared that while civil and mechanical engineering, Fitter, Welder and Draftsmen are the most sought after courses, demand for courses like computer science is quite low. The VTPs also reported that while there is a requirement of developing tailored courses based on the specific demand of each of industries, the current system does not allow that and courses are generic in nature. The ITI representative also agreed that changing the courses is a long drawn process and will require special will and focus. It was generally agreed that agro based skills including Agro servicing units, value addition to agro base products, Bio technology, animal husbandry and fishery sectors skills should be made a part of the vocational training institution.

With growth in industries, there is a huge opportunity of employment generation in the services sector, both in urban and rural areas. While the urban centers will grow creating opportunities for transportation, education, healthcare, construction, trade, hotels and hospitality sector, there will be increased demand for quality products and services in the rural areas. Self employment trainings and specific skills related to these sectors needs to be developed for Jharsuguda to meet its skill requirements in next 15 years.

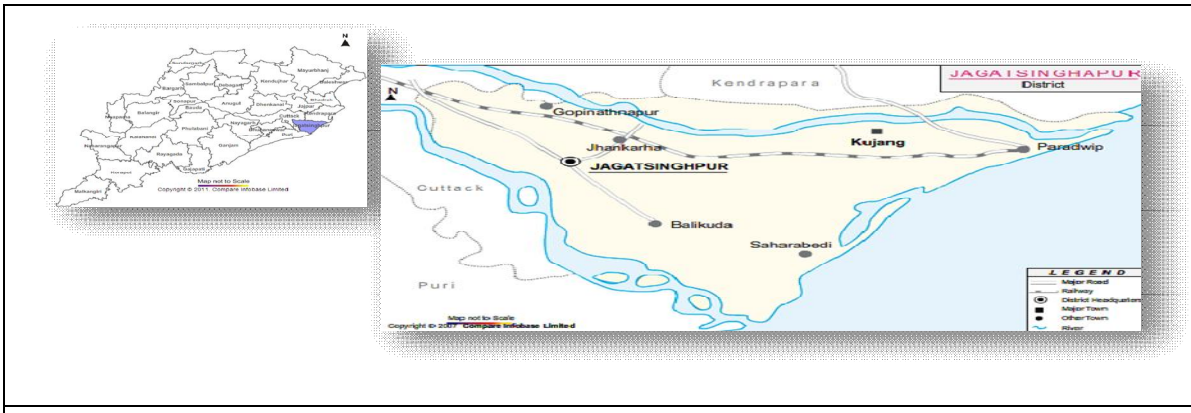
A comprehensive skill development approach is thus required to be undertaken in the district considering that it has a unique opportunity in terms of industrial progress. For reducing the skill gap in the district following areas needs to be focused upon as follows:

- Increase the number and quality of technical and vocational training institutes
- Regular counseling and advertising to create entrepreneurial skills among the youth.
- Creation of better financial support and vision setting for the unemployed youth to initiate their entrepreneurship
- Broad based skill training that is not only confined to the class room only. Need based training with adequate follow up
- Special policies and incentives to promote bank support for the business; reduced insecurity of repayment
- Improved coordination among various departments for the placement

- **Primary sector –** While agricultural output is good there is scope for improvement since the growth has remained stagnant for the last few years. Skill enhancement to improve productivity and practice integrated farming, are some options that can be explored.
- **Secondary sector –** Metal and cement industries are present and likely to expand. This is likely to promote ancillary units, thus creating demand for related skills.
- **Service sector –** Skills would be needed to support occupations in areas like transportation, education, healthcare, construction, trade, hotels and hospitality sector.

10.13 Jagatsinghpur

Jagatsinghpur District is spread over an area of 1,668 Sq Km which forms approximately 1.07 percent of the total geographical area of the State. In terms of area, it is the smallest district in the state. Topographically, it is a coastal district situated at 15 metres of elevation. Administratively, the district is divided into one subdivision, 8 blocks, 194 Gram Panchayats and 1227 villages. Jagatsinghpur is a coastal district and is surrounded by Kendrapara and Cuttack Districts in the north, Bay of Bengal in the east, Cuttack District in the west and Puri and Bay of Bengal in south.



Map Courtesy: Maps of India

District Information	Jagatsinghpur	Odisha	Source
Area (in Sq Km)	1,668	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.07% (30)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	8	**309**	Census 2001
No of GPs	194	**6234**	Census 2001
Total no of inhabited villages	1227	**47529**	Census 2001
Forest area as % of total geographic area	7.78%	**37.66**	Census 2001

Figure 80: District Map of Jagatsingpur

10.13.1 Demography

As per Census 2011 (Initial provisional data), Jagatsinghpur has a population of 11.37 lakhs of which males and females were 5.78 lakhs and 5.59 lakhs respectively. There is a change of 7.44 percent in the population compared to population in 2001, significantly less than the state average change of 13.97 percent. In terms of population, the District constitutes 2.71 percent of the total population of the State and ranks 19th in the State. The initial provisional data (Census 2011) suggest a population density of 681 in 2011 making Jagatsinghpur the second most densely populated District of Odisha. With regards to sex ratio, the district fares poorly compared to other districts and the state average. The sex ratio for Jagatsinghpur as per 2011 provisional census figures is 967 females per 1000 males, much below the State average of 978 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 21.05 percent of the total population while STs forms only 0.82 percent of the total population of the district. The district is predominantly rural with almost 90 percent rural population (as per census 2001). As per 2001 census, the population in the working age group constituted about 60 percent of the total population. Work participation rate of the district is 31.20 percent. Out of the total workers 75.1 percent are main workers and 24.93 percent are marginal workers.

With a human development index (HDI) of 0.557 and Gender development index (GDI) of 0.491, Jagatsinghpur ranks quite low in terms of human development indicators.

Population	Jagatsinghpur	Odisha	Source
Total population (in lakh)	11.37	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	5.78	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	5.59	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	2.71% (19)	**NA**	Census 2011 provisional figures
Density of population	681	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	7.44%	**13.97%**	Census 2011 provisional figures
Urban population %	9.92%	**14.99%**	Census 2001
SC population %	21.05%	**16.53**	Census 2001
ST population %	0.82%	**22.13**	Census 2001
Sex ratio	967	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	60.07%	**58.40%**	Census 2001
Worker participation rate	31.20%	**40.03**	Census 2001
Share of primary sector to total workers	55.00%	**64**	Census 2001
Proportion of agriculture laborer in workforce	25.45%	**34.53**	Census 2001
Human Development Indicators	**Jagatsinghpur**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.557 (19)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.491 (22)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	24213 (7)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.624 (4)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 48: Socioeconomic Indicators for Jagatsingpur

10.13.2 State of Education

The literacy rate for Jagatsinghpur has been better than the State average in 2001 as well as in 2011. Average literacy rate of Jagatsinghpur in 2011 (as per provisional census figures) is 87.13 percent compared to 79.08 percent in 2001. Gender wise male and female literacy is 93.2 percent and 80.88 percent respectively. For 2001 census, same figures stood at 88.55 and 69.28 respectively, showing a proportionate increase in literacy level for all the groups in Jagatsinghpur district over last 10 years. Out of the total number of children in school going age, 0.8626 percent children were out of school in 2008. This is the third lowest figure in the state.

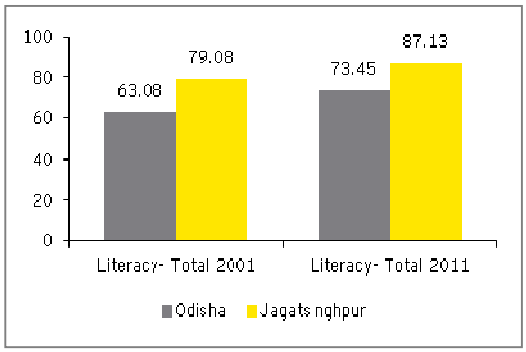


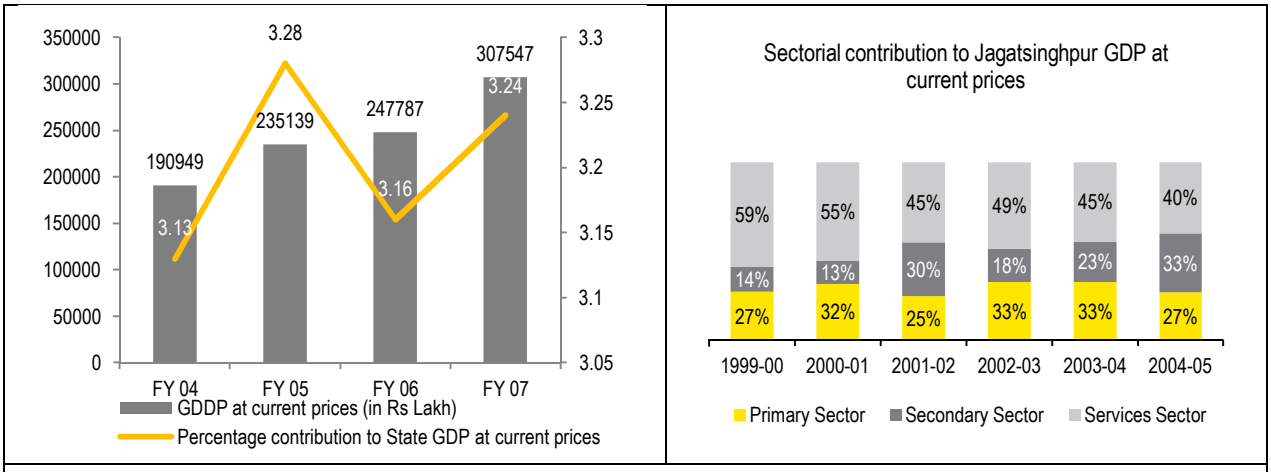
Figure 81: Literacy Rate- Jagatsingpur District

For higher Education there are 33 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 6336, 2432 and 1392 respectively.

Jagatsinghpur does not have any technical colleges, polytechnic institutes or medical or pharmacy colleges. The vocational training infrastructure is also poor as the district does not have any Government ITI. There are 21 Private ITCs, offering training in 22 courses. The courses having maximum number of seats are fitter, electrician and data entry operator. As per SCVET data, in 2010, almost 65 percent of the seats in private ITCs remained vacant.

10.13.3 Economic Profile

As per economic survey 2010-11, Jagatsinghpur is among the top ten districts in the State with an annual growth rate of 8.4 percent for the period 2000-01 to 2006-07. Jagatsinghpur derives its gross domestic products from agriculture, industry and services. The share of industry sector has grown over the years, services sector contributes the bulk of district GDP. The proportionate contribution of various sectors to District GDP of Jagatsinghpur at current prices (2004-05) is shown below:



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 82: Gross District Domestic Product (at current prices) of Jagatsingpur

Agriculture

Agriculture is a very important means of livelihood for the people of Jagatsinghpur. Agriculture employs more than half of the workforce and hence is an important activity in the district. Five out eight blocks in the district depend on agriculture. Jagatsinghpur enjoys rich fertile soil of *Mahanadi* basin and enough ground water which are conducive for raising a variety of crops. Paddy is the most widely grown crop. In addition to paddy, ground nuts, mustard, vegetables, spices and sugarcane are major crops. Among fruit crops, mango covers the maximum area under cultivation at 1.09 thousand hectares followed by banana at 0.36 thousand hectares. Among floricultural crops, Marigold flower has the maximum annual production at 170 quintals followed by Gladioli at 1.8 and Rose at 1.1 quintals. With an average landholding of 1.03 hectare, landholding pattern in the District is appreciable with about 61 percent of farmers having more than a hectare of land holding.

Industries

Jagatsinghpur is one of the emerging growth centers of Odisha. Paradeep port, access to the mining belt of Sundargadh, Keonjhar and Angul and proximity to Bhubaneswar and Cuttack are some of the important factors contributing to economic development of the district. Between 1999-2000 and 2004-05, there has been a steady increase in the contribution of the industrial sector to the district gross domestic product which is more or less at par with the contribution of the agriculture sector. The district ranks amongst the top performing districts in terms of literacy level. After Khurda, Jagatsinghpur is the most densely populated district.

In terms of Investments into large and medium scale industries, Jagatsinghpur is currently ranked 11th in the State, with an investment of Rs. 28 billion by 2010 and which constitute 3.12 percent of the total investment in large and medium scale industries. There are 6 industrial setups in the district, viz. IFFCO Fertilizers Limited, Paradeep Phosphates Limited, Cargil India Private Limited, Paradeep Port Trust Limited, Paradeep Carbons Limited and Skol Breweries Limited.

In terms of investments in Micro and small scale industries, Jagatsinghpur is ranked 21st in the State. MSME investment in Jagatsinghpur was 1 percent of the total investments made in the State till March 2010.

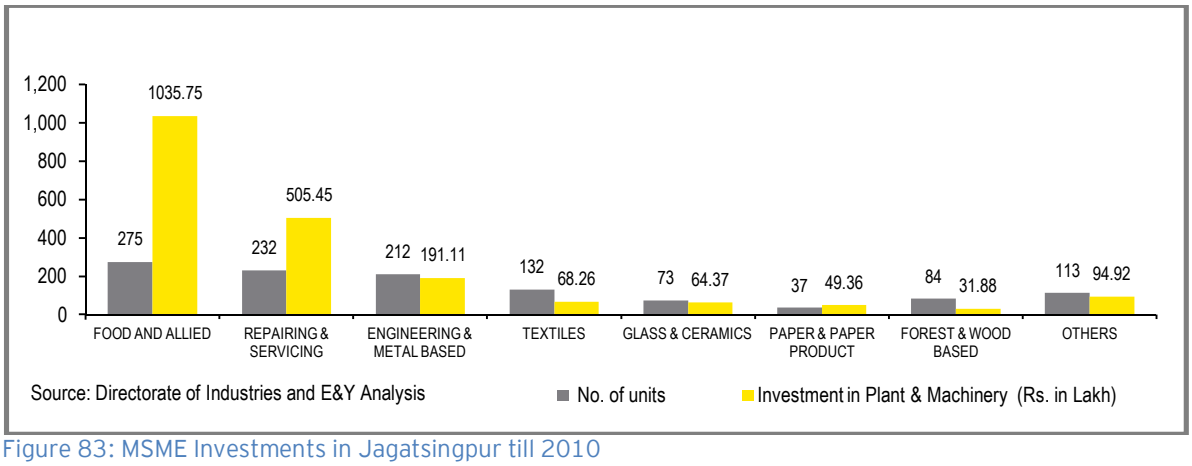
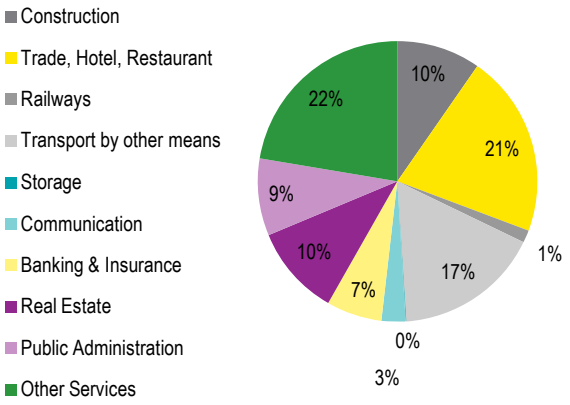


Figure 83: MSME Investments in Jagatsingpur till 2010

Services

The services sector includes construction, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, public administration and other services. The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Jagatsinghpur GDP, the service sector remains the most important contributor constituting 74 percent of the district GDP. The composition of the service sector in terms of contribution to the District GDP of Rayagada at current prices (2004-05) is shown below:



Trade, hotel and restaurant (21 percent), construction and and transport by other means (17 percent) are significant contributors to the GDP of the district. Construction and real estate combined are also important contributors of GDP of Jagatsinghpur economy (20 percent).

Source: Planning Commission, Government of India

Figure 84: Composition of Service Sector- Jagatsingpur 2004-05

10.13.4 Skill Gap Assessment for Jagatsinghpur

The total workforce demand for skilled jobs in Jagatsinghpur district is expected to grow from current levels of 1.4 lakh in 2011 to reach 2.4 lakhs in 2026. Around 71 percent of this total workforce demand is expected to come from the tertiary sector, followed by primary sector (16 percent) and secondary sector (13 percent).

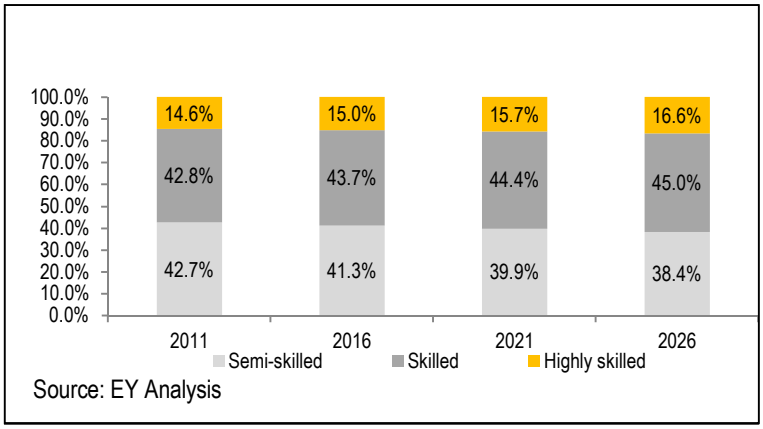


Figure 85: Proportion of demand for skilled jobs by skill categories- Jagatsingpur District

The major sectors which are expected to create a demand for skilled jobs in 2026 are: agriculture (0.4 lakh); tourism, travel, hospitality & trade (0.4 lakh) and banking, financial services & insurance (0.3 lakh).

Over the period 2011-2026, the proportion of skilled and highly-skilled workers in the gap is expected to grow on a continuous basis, while that of semi-skilled workers is expected to reduce during the same period. The CMIE Capex database and secondary research indicates projects on ports, chemicals and hydrocarbons in offing.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture:					
Semi-skilled	20,417	20,060	19,710	19,365	
Skilled	13,611	13,373	13,140	12,910	
Highly skilled	6,806	6,687	6,570	6,455	
Total demand for skilled jobs	40,834	40,120	39,420	38,730	16

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism, hospitality & trade:					
Semi-skilled	10,484	13,296	16,861	21,383	
Skilled	6,947	8,810	11,173	14,170	
Highly skilled	1,137	1,442	1,828	2,319	
Total demand for skilled jobs	18,568	23,548	29,862	37,872	16
Banking, financial services & insurance					
Semi-skilled	2,078	3,146	4,762	7,208	
Skilled	1,193	1,806	2,734	4,138	
Highly skilled	4,426	6,699	10,141	15,349	
Total demand for skilled jobs	7,697	11,651	17,637	26,695	11
All sectors:					
Semi-skilled	60,741	68,373	78,157	90,781	
Skilled	60,920	72,352	87,165	106,399	
Highly skilled	20,717	24,903	30,796	39,151	
Total demand for skilled jobs	142,378	165,628	196,118	236,331	100

Source:

Table 49: Skill-wise demand for sectors where high demand is foreseen - Jagatsingpur District

On the supply aspect, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.5 lakh during the period 2011-2026. While the gap for semi-skilled workers is foreseen to narrow down; there is an incremental requirement of 0.5 lakh skilled workers and 0.2 lakh highly skilled workers.

A major portion of the need for this incremental job requirement for **skilled labor** is primarily expected to come from Education & Skill Development (24 percent); Healthcare (24 percent); and Tourism, Travel, Hospitality & Trade (16 percent).

As far as the **highly skilled** workforce is concerned, the highest requirement is expected in case of Banking, Financial Services & Insurance jobs (59 percent) and IT & ITeS (17 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(22)	(171)	(285)	(478)
Auto & Auto Components	(5)	1	8	4
Chemical & Pharmaceuticals	3	23	44	70
Construction materials & building hardware	270	543	832	1,645
Electronics & IT Hardware	14	46	80	140
Food Processing	205	213	220	638

Sector	2012-16	2017-21	2022-26	2012-26
Furniture & Furnishings	(66)	(2)	57	(11)
Leather & Leather Goods	-	-	-	-
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	(90)	(33)	17	(106)
Unorganized sector	(8)	11	28	31
Banking, Financial Services & Insurance	1,901	3,560	6,215	11,676
Building, Construction & Real Estate Services	(64)	(28)	1	(91)
Education & Skill Development	3,067	3,993	5,199	12,259
Healthcare	2,594	3,512	4,714	10,820
IT & ITES industry	1,884	2,791	3,986	8,661
Media & Entertainment	95	854	1,825	2,774
Tourism, travel, hospitality & trade	(447)	947	2,731	3,231
Transportation, logistics, warehousing & packaging	(810)	(498)	(187)	(1,495)
Total	8,522	15,763	25,485	49,770

Source: E&Y Analysis

Table 50: Total incremental demand supply gap for skilled jobs by sectors- Jagatsingpur District

10.13.5 Development potential and Stakeholder perception

Jagatsinghpur is the smallest District in Odisha in terms of area and ranks 19th in terms of total population of the state. Its proximity to Bhubaneswar and major mining centers and ports, with good road and rail network makes it one of the potential high growth centers of Odisha.

Agriculture employs more than half of the workforce and hence is an important activity in the district. Five out eight blocks in the district depend on agriculture. Jagatsinghpur enjoys rich fertile soil of Mahanadi basin and enough ground water which are conducive for raising a variety of crops. Paddy is the most widely grown crop. In addition to paddy, ground nuts, mustard, vegetables, spices and sugarcane are major crops. Agro climatic condition of the district is host to a number of horticulture produce. Major fruits grown in district are guava, mango, banana, papaya, pineapple, coconut and cashew. Betel vine is an important crop cultivated in some of the coastal villages in the district. The district ranks amongst the top five districts in milk and meat production and has favorable climatic conditions and location advantage for growth of Pisciculture. The district has the second highest literacy rates in Odisha.

While there has been an increase in agriculture production, the progress has been slow. The district faces problem of water logging and flooding and is a disaster prone region. While there has been a steady growth in cultivation of commercial crops, marketing channels are still under developed. With larger concentration of marginal farmers, farm mechanization is a problem area and people still use traditional practices. Ironically while district has some of the largest fertilizer industries, people shared that there is a shortage of fertilizers, as the fertilizers are mostly exported outside the state and the district. Though the agriculture departments has provided several training programs and regular extension services through KVKs, it was felt that there is a need to design the training courses suited to the local requirements and practical skill oriented. Coverage of KVKs is limited and hence overall impact of these trainings is limited.

There is a dearth of quality food processing and value addition industries. There is a good potential for paddy and groundnut based MSMEs which does not exist currently and most of the surplus

produce are sold outside the district. Agriculture and allied sector though has a growth potential, requires favorable policy interventions like increasing the minimum support price, better disaster management initiatives, marketing linkages and creation of agro based industries.

Skill development in agriculture needs to be broad based by increasing the number of institutions and developing need based training programs based on practical exposure. In addition to agriculture, the industry sector has a huge employment potential for unskilled, semi skilled and skilled jobs. Jagatsinghpur has the highest number of adult literates and overall literacy is also high in the district. This provides an opportunity for investing in skill development institutes based on local demand. The existing infrastructure of vocational training is however inadequate. Though there are 22 private ITCs in the district, the quality of training is reported to be unsatisfactory. There is no Government ITI in the district. Industry representatives reported that there is a good demand for skilled Fitters, Welders, Electricians, Instrumentation, High Pressure Vessels Welder, Data Entry Operators etc. In absence of quality training institutes, the industries however are compelled to look for recruitment from other districts. There is a high demand of Instrumentation mechanic but none of the ITCs are offering it. The industry representatives further reported that with mechanization and introduction of new technology, there is a requirement of introducing new courses in the ITCs. Due to lack of information, poor advertising etc, the students do not understand what type of courses they should be pursuing.

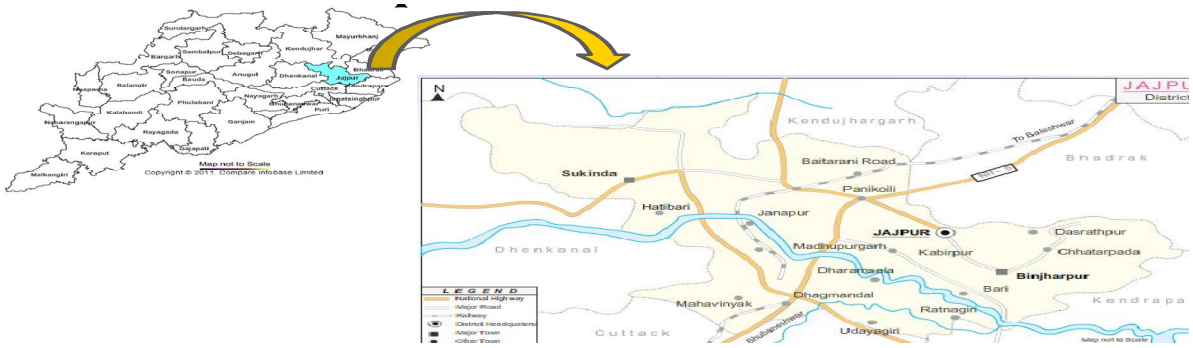
The private ITCs push their courses and the student end up learning trades like Electronics and Plumbing etc. which have few takers when it comes to employment. The industries further suggested that there is a need to involve industry representatives in deciding upon the courses to be provided in the ITCs. There is also a need of providing proper counseling and guidance to students at the time of the admissions.

While agriculture and industry sector provides the thrust, the major bulk of Jagatsinghpur economy is supported by the services sector, which in future is likely to grow. The district presently has very poor urban concentration. Barring Paradeep and Jagatsinghpur town, there are no other urban centres in the district. This should however change with initiation of other large scale industries which are in pipeline. The upsurge in industrialization will create lots of employment opportunities in real estate, construction, education, retail, trade and hotel and hospitality sectors. There is a possibility of growth in infrastructure related projects especially in railways and road construction. In addition to these opportunities will be created in other self employment avenues like mobile repair, computer hardware, automobile repair, beauty treatments, drivers etc.

- **Primary Sector –** The per person land holding is fairly good in the district therefore there is potential to start integrated agriculture where horticulture and floriculture are also grown. This would require imparting relevant skills.
- **Secondary Sector - Large** industries are already present in the district with more coming up. With no Government ITI s in the district there is need to set up institutes for technical training to meet the demand of the district. Further growth in the primary sector can have potential for growth of the food processing industries in the MSME sector.
- **Service Sector –** There is ample scope to impart training to people to cater to the requirements of the service sector. Skills would be required for a wide spectrum of areas including transport, construction, health care, education, retail etc. The literacy levels are also better than the state average which would mean that there would be better preparedness to receive the training.

10.14 Jajpur

Jajpur District is spread over an area of 2899 Sq Km which forms approximately 1.86 percent of the total geographical area of the State. Administratively, the district is divided into one subdivision, 10 blocks, 280 Gram Panchayats and 1575 villages. Jajpur is surrounded by Keonjhar District in the north, Bhadrak in the east, Dhenkanal in the west and Cuttack and Kendrapara in south.



Map Courtesy: Maps of India

District Information	Jajpur	Odisha	Source
Area (in Sq Km)	2,899	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.86% (24)	**100**	Census 2011 provisional figures
No of CD blocks	10	**309**	Census 2001
No of GPs	280	**6234**	Census 2001
Total no of inhabited villages	1575	**47529**	Census 2001
Forest area as % of total geographic area	24.83%	**37.66**	Census 2001

Figure 86: District Map of Jajpur

10.14.1 Demography

As per Census 2011 (Initial provisional data), Jajpur has a population of 18.26 lakhs of which males and females are 9.26 lakhs and 9 lakhs respectively. There is a change of 12.41 percent in the population compared to population as per 2001 census. The district constitutes 4.35 percent of the total population of the state and is 7th most populated district with a high population density of 630 in 2011 making Jajpur the fourth most densely populated District of Odisha. With regards to sex ratio, the district fares poorly compared to other districts and the state average. The sex ratio for Jajpur as per 2011 provisional census figures is 972 females per 1000 males, slightly below the State average of 978 females per 1000 males.

With regard to the social composition of the population, SCs constitute approximately 22.9 percent of the total population while STs forms only 7.76 percent of the total population. The district is predominantly rural with only 4.5 percent urban population. As per 2001 census, the population in the working age group (15-59 years) constituted 58.79 percent of the total population. Work participation rate of the district is 27.49 percent. Out of the total workers 77.78 percent are main workers and 22.22 percent are marginal workers. With a human development index (HDI) of 0.54 (rank 22) and Gender development index (GDI) of 0.386 (rank 28), Jajpur is one of the poor performing district in Odisha.

Population	Jajpur	Odisha	Source
Total population (in lakh)	18.26	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	9.26	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	9.00	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	4.35% (7)	**NA**	Census 2011 provisional figures
Density of population	630	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	12.43%	**13.97%**	Census 2011 provisional figures
Urban population %	4.50%	**14.99%**	Census 2001
SC population %	22.99%	**16.53**	Census 2001
ST population %	7.76%	**22.13**	Census 2001
Sex ratio	972	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	58.79%	**58.40%**	Census 2001
Worker participation rate	27.49%	**40.03**	Census 2001
Share of primary sector to total workers	56.05%	**64**	Census 2001
Proportion of agriculture laborer in workforce	30.27%	**34.53**	Census 2001
Human Development Indicators	**Jajpur**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.540 (22)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.386 (28)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	15090 (14)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.452 (15)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 51: Socioeconomic indicators for Jajpur

10.14.2 State of Education

Jajpur has a better average in terms of State of education. It is ranked 7th in the State on education index and the average literacy is better than the State average. Average literacy rate of Jajpur in 2011 (as per provision census figures) is 80.44 percent compared to 71.44 percent in 2001. Gender wise male and female literacy is 87.36 percent and 73.37 percent respectively. For 2001 census, same figures stood at 81.89 and 60.76 showing a proportionate increase in literacy level for all the groups in Jajpur District over last 10 years. Out of the total number of children in school going age, 1.629 percent children were out of school in 2008.

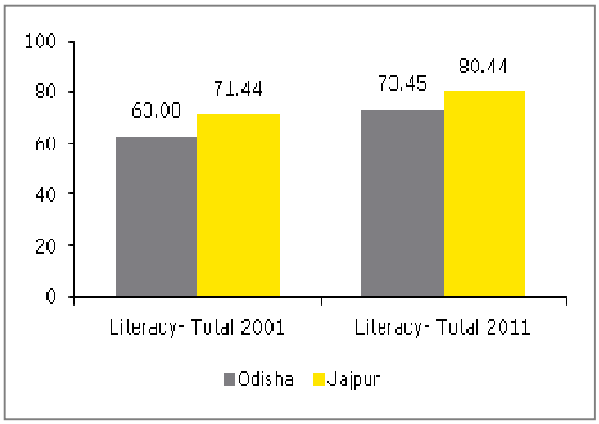


Figure 87: Literacy rate- Jajpur District

There are 60 junior colleges and higher secondary schools (10+2) offering courses in the following streams - Arts, Sciences and Commerce. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 11328, 4914 and 2160 respectively. As per the admission statistics of 2011, 20 percent of the seats in Arts, 26 percent science and 36

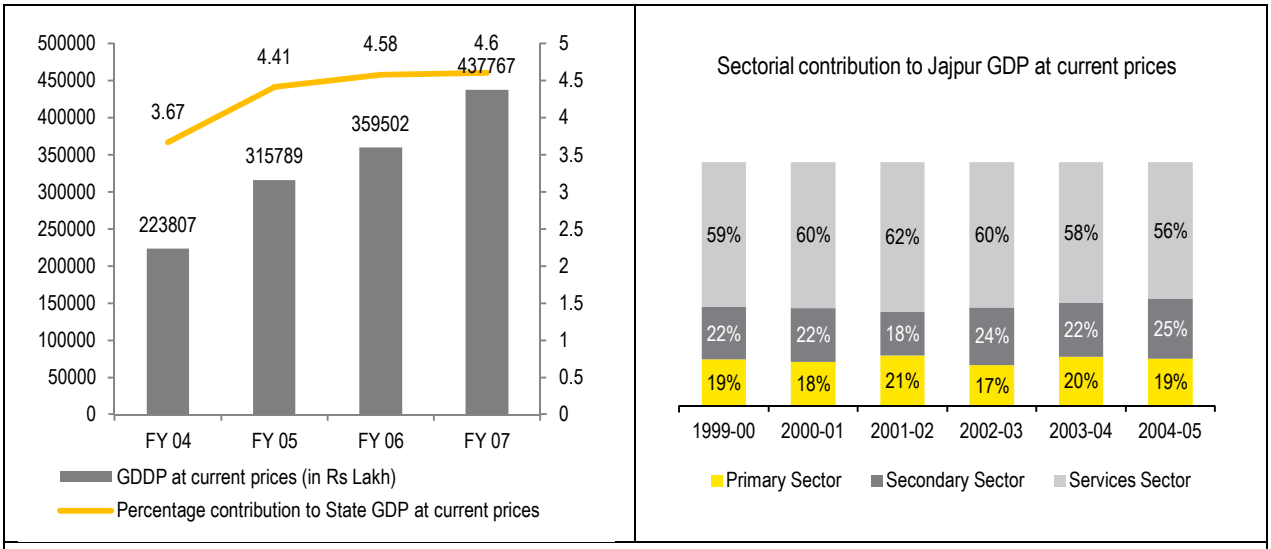
percent commerce seats remained vacant indicating a higher rate of under utilisation of seats.

For technical education, Jajpur does not have any engineering (degree) college. There are 2 polytechnic institutes offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 335 students per year. Major courses are mechanical and electrical and civil. Jajpur does not have any medical, pharmacy or homeopathy college.

For Vocational Training, there is no Government ITI in Jajpur District. There are however 30 private ITCs offering training in 10 different courses and annual intake capacity of 3660. The important courses offered in the private ITCs are fitter, electrician and data entry operator.

10.14.3 Economic Profile

As per economic survey 2010-11, Jajpur is among the top five districts in the State with a CAGR of 11.1 percent for the period 2000-01 to 2006-07. There is a considerable growth in share of district in State GDP over the years. In 2007 Jajpur contributed 4.6 percent of the State GDP. Jajpur derives its gross domestic products from agriculture, industry and services. While agriculture sector continues to play a major role, the contribution of industry sector has increased over the years. The Gross district domestic product of Jajpur at current prices (2004-05) is shown below:



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 88: Gross District Domestic Product (at current prices) of Jajpur

Agriculture

People of Jajpur largely depend upon agriculture as their primary means of livelihood. About 56 percent of total work force is either cultivators or agricultural laborers. Jajpur is ranked 20th in the State in terms of number of agricultural laborers, constituting 30.27 percent of total working force.

As per Odisha agriculture statistics report 2008-09, fifty percent of the total geographical area with 145 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 138.93 thousand hectares. Apart from paddy, other major crops include pulses (*mung, biri* etc.), vegetables (potato, onions etc.), oilseeds and fruit crops.

Performance of Jajpur district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 16th with a per capita agricultural output of 1251. Food grains contribute highest to the total

agricultural output of Jajpur with a value of 243.89 (2008-2009), followed by cereals (217.87) and rice with (212.26) (all figures in thousand metric tonnes). With an average landholding of 1.26 hectare, the majority (more than 50.67 percent) of the farmers have more than a hectare of land holding.

Industries

Jajpur District has a huge potential for development of Industries because of its strategic location, proximity to State capital, easy access to water sources (Rivers-*Baitarani, Kani, Kharasrota, Budha, Badagenguti, Brahmani, Kelua* and *Birupa*) and adequate supply of power[10]. *Kalingnagar* is a very favourable destination for investors with companies like Tatas, Mescos steel group, Visa steel ltd, JSL Ltd. investing there, *Kalingnagar* is served by NH-200 that connects the iron ore/Chromite belt of Jajpur and Keonjhar districts with the Paradeep Port. The District is located on the Eastern corridor Railway link and is well connected with all the major parts of the country for transportation of Industrial cargo as well as passenger services. The District is well connected with other important cities and industrial centers and ports through a good network of national and state highways. The District is rich in Chromite, nickel ore and iron ore based industries.

In terms of Investments into large and medium scale industries, Jajpur is currently ranked 2nd in the State, with an investment of Rs. 119.19 billion by 2010 and which constitute 12.89 percent of the total investment in large and medium scale industries. Some of major large scale industries include IDCOL Ferro Chrome & Alloys Ltd., Jindal Stainless Industries, Konark met coke Ltd etc.

The same is not true for Micro and small scale industries. MSME investment in Jajpur was only 1.71 percent of the total investments made in the State till March 2010. Jajpur is ranked 16th in the State. Food and allied products has maximum number of units with an investment of Rs. 980 lakhs while minimum investment is in forest and wood based products with an investment of Rs. 24 lakhs only. Others include livestock & leather, electrical & electronics, and misc. manufacturing.

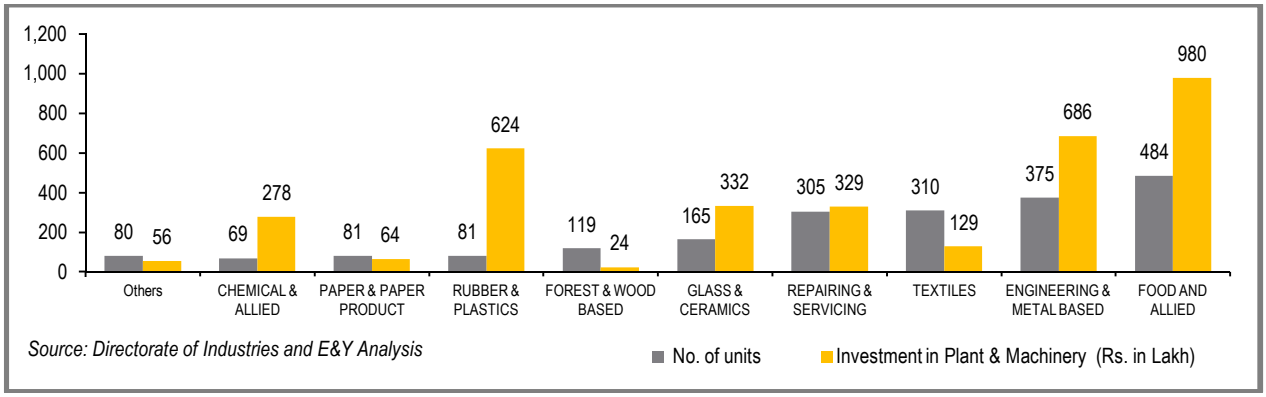


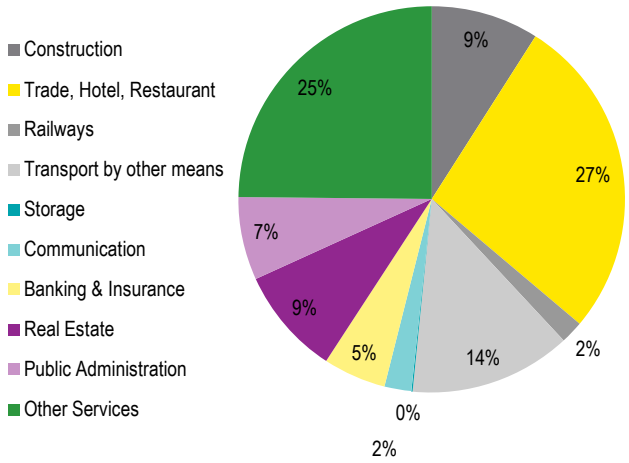
Figure 89: MSME Investments in Jajpur till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. The service sector remains the most important contributor to the GDP, 56 percent of the district GDP can be attributed to the service sector. The contribution of various sectors to GDDP is shown in chart

[10] Annual Action Plan- 2011-12; DIC Jajpur

below.



As depicted in the chart, trade, hotel and restaurant is the leading contributor to the service sector (27 percent) followed by other services (25 percent), transport by other means (14 percent) real estate and construction (9 percent) each. Transportation including railways is a major contributor of GDP of Jajpur economy.

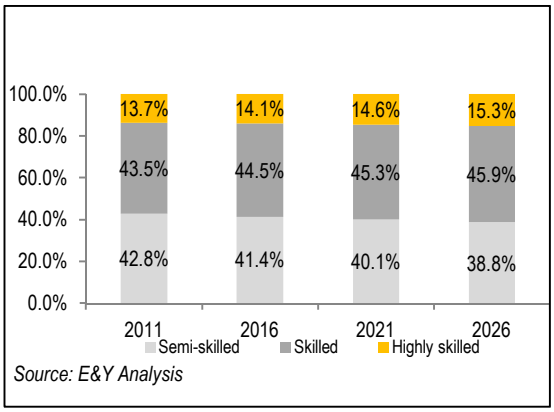
Source: Planning Commission, Government of India

Figure 90: Composition of Service Sector- Jajpur 2004-05

10.14.4 Skill Gap Assessment for Jajpur

During the next 15 years, the total workforce demand for skilled jobs in Jajapur district is expected to grow to 3.9 lakhs in 2026 from present levels of 2.3 lakhs in 2011. The total workforce demand created in 2026 is expected to be dominated by the tertiary sector (75 percent), followed by primary (16 percent) and secondary (9 percent) sectors.

The major sectors from which the workforce demand for skilled jobs in 2026 is primarily expected comprises tourism, travel, hospitality & trade (0.8 lakhs); agriculture (0.6 lakh); education & skill development (0.4 lakh); healthcare (0.4 lakh) and IT & ITes industry (0.4 lakh).



Source: E&Y Analysis

Figure 91: Proportion of demand for skilled jobs by skill categories- Jajpur District

The secondary research and CMIE's Capex database indicates several projects in agriculture (irrigation), metals and power industries in the offing. The same have been factored in the analysis for estimating skill-wise demand for the sectors.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	23,080	29,270	37,120	47,075	
Skilled	15,294	19,396	24,597	31,194	
Highly skilled	2,503	3,174	4,025	5,104	
Total demand for skilled jobs	40,877	51,840	65,742	83,373	21

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture:					
Semi-skilled	31,038	30,999	30,960	30,922	
Skilled	20,692	20,666	20,640	20,614	
Highly skilled	10,346	10,333	10,320	10,307	
Total demand for skilled jobs	62,076	61,998	61,920	61,843	16
All sectors:					
Semi-skilled	96,615	110,607	128,403	151,188	
Skilled	98,404	118,734	144,972	178,914	
Highly skilled	30,956	37,600	46,835	59,774	
Total demand for skilled jobs	225,975	266,941	320,210	389,876	100

Source: E&Y Analysis

Table 52: Skill-wise demand for sectors where demand is foreseen- Jajpur Disrict

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (i.e. for highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.9 lakhs during the period 2011-2026. hile the district is foreseen to have an over-supply of semi-skilled workers, there is an increasing requirement for **skilled** and **highly skilled** workers.

A major part of the incremental gap for **skilled** workers (~74,000) is expected to come from sectors like education and skill development (23 percent); healthcare (23 percent); tourism, travel, hospitality and trade (20 percent) and IT & ITeS (14 percent) industry.

Amongst the incremental requirement for **highly skilled** workers (~29,000), a higher requirement is foreseen in case of banking, financial services & insurance jobs (53 percent) and IT & ITes (18 percent) sectors.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(12)	(26)	(37)	(75)
Auto & Auto Components	(4)	15	35	46
Chemical & Pharmaceuticals	22	54	89	165
Construction materials & building hardware	529	902	1,301	2,732
Electronics & IT Hardware	18	36	55	109
Food Processing	158	167	176	501
Furniture & Furnishings	(12)	23	56	67
Leather & Leather Goods	2	2	2	6
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	(41)	(1)	35	(7)

Sector	2012-16	2017-21	2022-26	2012-26
Unorganised sector	4	24	43	71
Banking, Financial Services & Insurance	3,059	5,439	9,218	17,716
Building, Construction & Real Estate Services	(59)	(13)	26	(46)
Education & Skill Development	4,811	6,397	8,465	19,673
Healthcare	4,137	5,707	7,763	17,607
IT & ITES industry	3,289	4,837	6,876	15,002
Media & Entertainment	725	1,994	3,625	6,344
Tourism, travel, hospitality & trade	571	3,547	7,375	11,493
Transportation, logistics, warehousing & packaging	(783)	(389)	9	(1,163)
Total	16,413	28,716	45,112	90,241

Source: E&Y Analysis

Table 53: Total incremental demand supply gap for skilled jobs by sectors- Jajpur District

Sector-wise, higher incremental demand and supply gap is expected in the education and skill development sector (22 percent); banking, financial services & insurance (20 percent); healthcare (20 percent); and IT & ITeS (17 percent) sectors. Except for BFSI sector (which is foreseen to witness higher requirement of highly skilled workers), a major part of the incremental skill gap requirement in the aforementioned sectors is expected to be for skilled workers.

10.14.5 Development potential and Stakeholder perception

Although the contribution of agriculture to the GDP is not very high a large section of population is engaged in agriculture. Marginal and small farmers constitute about 84 percent of the population. Presence of rivers like brahmani, baitarni and kharasrota provide assured irrigation to crops. The soil is very suitable for cereals, pulses, oilseeds and vegetable. Paddy is the subsistence crop of the district followed by pulses and vegetables. Most of the farming is done using traditional methods. Very little modernisation has been done in the district. Improved technology for storage of grains and strengthening the value chain is required. Interaction with the women and youth showed that there is less enthusiasm, especially among the youth, to engage in activities related to agriculture. One of the main reasons for this is less returns for their labour. A number of them are registered under the MGNREGA.

There are about 15 mines in the district providing employment to about 4500 youth. It was shared that 90 percent of chromate ore in India is found in Jajpur district. Being a mineral rich area, it has potential for developing SMEs which would provide employment to youth in larger numbers. Kalinganagar industrial complex, due to its strategic location is fast emerging as as an industrial hub. There are 17 medium and large scale industries in the district and a large number of small scale industries. At present there are 226 food processing units and 37 ancillary units. Another 70 food processing units and 123 downstream units are in the pipeline as shared at the DIC. This throws open several opportunities for employment provided people with adequate skills are available. However, the setting up of these units will need to be demand based. It is an anomaly that while Jajpur is the highest groundnut producing district of Odisha, there is no processing unit to manufacture groundnut oil. The groundnuts are usually sent to other states for value addition. Setting up of groundnut processing units will not only generate employment, it will also fetch higher income for the district after value additionhas been done.

There seems to be a problem with regard to opportunities for vocational trainings. There is no Government owned ITI in the district. Its 13 private ITCs do provide training in different trades but it is not sufficient to meet the enormous demand for skilled persons. Besides they charge very high fee which is out of reach for most rural youth. The employment exchange has conducted trainings in the area of Welding, Fabrication, House Wiring, Repair of Domestic Appliances, Mobile Repairing but it cannot be said whether these trainings led to placements. On the whole very few placements are taking place through the employment exchanges. There are plans to initiate placement linked training programmes in the district under the purview of the Employment Mission where some new areas have been identified – Retail, Food and Beverage, Telecom Sales, Front Office Operations, Banking and Financial Services and Housekeeping. Since this would be a placement linked programme, the outcome of this may provide learning for linking job seekers with job providers. Some corporate groups have their own training centres to develop skills to meet their requirements. As an example, Jindal group has its own training institute which provides training in computers, electrical, driving and refrigeration.

As in the case of weavers in other districts, there is need for extending support to the weavers in this district also. About 1000 hectares of tussar farms are present in the district. The tussar cocoons are maintained by sericulture federation. In addition to managing the tussar farms, the federation grades and distributes to societies or individuals as recommended by the textiles department who then deploy weavers at a certain monthly salary. This amount is found inadequate by the weavers. On the other hand those who wish to produce their own products need to pay a higher price for the cocoons. Some other crafts are also present in the district. Golden grass craft is being practices in 4-5 panchayats. There are two other clusters Baidyarajpur and Rautrapur for brass and bell metal work; and two clusters in stone carving – *Chatiya* and *Sukhwapada*. All these clusters require marketing support and regular skill upgradation.

Five out of its 10 blocks are fast getting urbanised which would mean greater scope for employment generation through the service industry. Hospitality , motor repair are some of the most obvious areas which will provide opportunities for employment in addition to some other areas mentioned above.

- **Primary Sector** – High production of groundnuts but no processing centre to extract groundnut oil. Although paddy, vegetables, pulses, oilseeds and fruits are grown in the district the productivity could be improved through the use of modern farming methods and practising integrated farming to better economic returns. Relevant skill would be needed.
- **Secondary Sector** – There are iron and chrome mines, therefore, there is potential to develop industries in these areas. There are fewer MSME industries. There is no Government ITI to meet the requirements of the skilled human resource required. The tussar farms can be supported to increase their capacity and quality and also promote silk weaving.
- **Service Sector** – Increase in urbanization in the district would give rise to demand for the service sector including hospitality, transportation, construction and other areas. Skills would need to be imparted to help people utilize these opportunities by providing quality services.

10.15 Kalahandi

The district of Kalahandi is spread over an area of 7,290 Sq Km which constitutes around 5.09 percent area of the total area of Odisha. Topographically, the district has two prominent divisions- hilly terrain in the southwestern part and plain land to the west. Administratively, the district is divided into 2 subdivisions, 13 blocks, 273 Gram Panchayats and 2099 villages. Kalahandi is surrounded by Naupada and Bolangir Districts in the north, Kandhamal and Rayagada in the east, Nabarangpur in the west and Koraput in south.

Map Courtesy: Maps of India

District Information	Kalahandi	Odisha	Source
Area (in Sq Km)	7,920	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	5.09% (7)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	13	**309**	Census 2001
No of GPs	273	**6234**	Census 2001
Total no of inhabited villages	2099	**47529**	Census 2001
Forest area as % of total geographic area	32.07%	**37.66**	Census 2001

Figure 92: District Map of Kalahandi

10.15.1 Demography

As per Census 2011 (Initial provisional data), Kalahandi has a population of 15.73 lakhs of which males and females were 7.85 lakhs and 7.88 lakhs respectively. There is an increase of 17.79 percent in the population compared to number in 2001. Compared to the state's average population growth rate of 13.97 percent, population in Kalahandi has increased at a faster rate. In terms of population, the District constitutes about 3.75 percent of the total population of the State. A large part of the district (32.07 percent) is covered under forest and the population density is quite low compared to the state average (199 in 2011). Kalahandi has a favorable sex ratio of 1003 females per 1000 males according to the latest census data which is better than the state average of 978 females per 1000 males.

The district is predominantly rural (over 90 percent rural population) with a large proportion of tribal population (as per census 2001). Almost half of the district's population comprises of SCs and STs, with both groups constituting 17.67 percent and 28.65 percent of the total population of the district respectively (Source: Initial provisional data, Census 2011). As per Census 2001, a significant part of the district's population (57.61 percent.) falls under the working age group (15-

59 years). Work participation rate of the district is 46.50 percent. Out of the total workers 61.53 percent are main workers and 38.47 percent are marginal workers.

Population	Kalahandi	Odisha	Source
Total population (in lakh)	15.73	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	7.85	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	7.88	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	3.75% (11)	**NA**	Census 2011 provisional figures
Density of population	199	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	17.79%	**13.97%**	Census 2011 provisional figures
Urban population %	7.49%	**14.99%**	Census 2001
SC population %	17.67%	**16.53**	Census 2001
ST population %	28.65%	**22.13**	Census 2001
Sex ratio	1003	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	57.61%	**58.40%**	Census 2001
Worker participation rate	46.50%	**40.03**	Census 2001
Share of primary sector to total workers	80.03%	**64**	Census 2001
Proportion of agriculture laborer in workforce	50.40%	**34.53**	Census 2001
Human Development Indicators	**Kalahandi**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.606 (11)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.579 (8)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	13088 (24)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.395 (23)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 54: Socioeconomic indicators for Kalahandi

Among the KBK districts, Kalahandi has a much better human development index. With an HDI of 0.606, Kalahandi is ranked 11th in the State. In terms of GDI, the district fares even better and is ranked 8th in the State.

10.15.2 State of Education

The ranking of Kalahandi is however poor in terms of education index. With an index of 0.584, Kalahandi fares much poorer than the State average of 0.723. In terms of literacy, while there has been an increase of 14 percent in the literacy between 2001 and 2011, in aggregate terms, the district literacy is much below the average literacy of the State. The average literacy rate of Kalahandi is 60.22 percent (as per Initial provisional data, Census 2011) which is an increase of 14.28 percent from that of 2001 (45.94 percent) but still is much lower than the state average of 73.45 percent. The gender specific literacy rates for 2011 are 73.34 percent and 47.27 percent for males and females respectively. This is an increment from

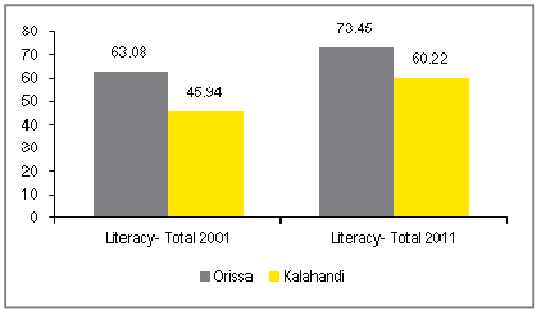


Figure 93: Literacy Rate- Kalahandi District

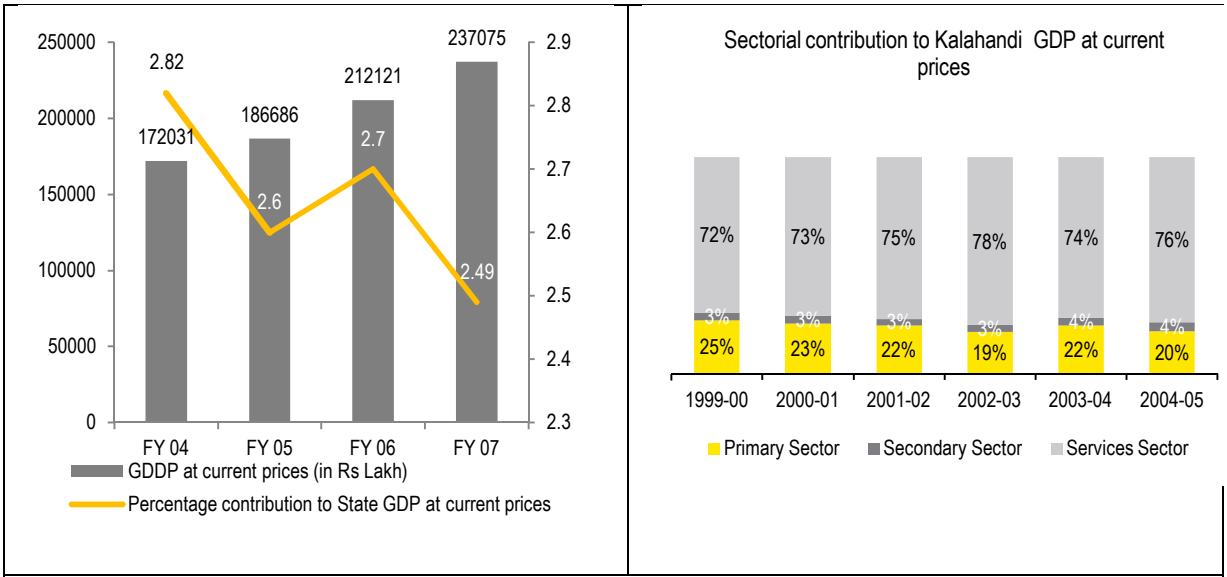
the figures of census 2001 which were 62.66 percent for males and 29.28 percent for females. Literacy rate is particularly poor in Thuamul-Rampur and Lanjigarh blocks. The proportion of out of school children is very high at 6.71 percent, making Kalahandi the 5th District with the highest proportion of out of school children.

There are 44 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce. The utilisation is good compared to other districts. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 5024, 1664 and 400 respectively in 2011. There is a polytechnic institute offering courses in civil, electronics & telecom and computer science etc. These institutes have a combined in take capacity of 360 students annually. Major diploma courses include mechanical, electronics & telecom, computer science, electrical, and civil.

Kalahandi has one government ITI with a total intake capacity of 385 students per year. As per SCVET, only 26 percent of the seats were filled in 2010. The ITI was started in 1960 and offers 13 different courses including fitter, turner, painter, instrumentation etc. The ITI has been upgraded to centre for excellence (CoE) and with focus on fabrication (fitting & welding) sector. Similarly there is a high rate of under utilisation in private ITCs. Total 11 ITCs are operational in Kalahandi, offering 8 courses, reserving seats mainly for computer operator and programming assistance, electrician and fitter among other courses. These ITCs have a combined in take capacity of 925 students annually. As per SCVET however, 74 percent of the seats remained vacant in 2010. Lower concentration of industries and lack of need based trainings in addition to escalated cost of trainings in private institutions may be a factor in low turnout.

10.15.3 Economic Profile

In terms of overall economic growth, Kalahandi grew at a much slower rate than the State with a average annual growth rate of 5percent for the period 2000-01 to 2006-07. The bulk of district GDP is contributed by the services sector. Industries contribution is negligible. Performance of GDDP of Kalahandi at current prices (2004-2007) is shown below:



Source: Economic Survey of Odisha 2010-11 and Directorate of Economics and Statistics

Figure 94: Gross District Domestic Product (at current prices) of Kalahandi

Agriculture

The district has one of the highest proportions of unskilled agricultural labourers forming almost 50 percent of the total work force. Agriculture in total employs almost 80 percent of the total work force making Kalahandi one of the most agrarian districts in Odisha. It ranks 2nd in terms of percentage of agricultural labourers in the work force. As per Odisha agriculture statistics report 2008-09, approximately forty eight percent of the total geographical area or 378 thousand hectares of land was brought under cultivation in District. Paddy remains the major crop in terms of area under cultivation but in terms of yield, it is ranked 27th in the state. Agriculture sector is marred with numerous problems such as a) uncertain onset and erratic distribution of monsoon rains (the district falls in the rain shadow area); b) massive soil erosion and crop losses caused by occasional heavy rains in its hilly and uneven terrains; c) lack of access to knowledge, skills, technologies and quality inputs (especially seeds) needed for scientific farming; d) dearth of credit availability for cultivation of high value crops, animal husbandry, fishery, etc. and e) poor infrastructure, viz., location of markets, roads, transport, etc. The district also banks on collection and processing of valuable non timber forest products which are abundantly available. Even though the produce is collected individually it is sold without processing as limited opportunity is available for the same. Despite these challenges, performance of Kalahandi district is very good in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 3rd with a per capita agricultural output of 2168.

The average landholding of Kalahandi is 1.62 hectare. A significant number (more than 46 percent) of farmers have more than a hectare of land holding.

Industries

Kalahandi district is rich in minerals like Bauxite, Graphite, and Iron etc. The district has only one large scale and one medium scale industry viz. Vedanta Alumina Ltd and Konark Cotton Growers CS with a combined investment of Rs. 40.15 billion (approx.) which constitute 6.4 percent of the total investment in large and medium scale industries. In terms of investment in Micro and small scale industries, Kalahandi is ranked 12th in the State. MSME investment in Kalahandi was 2.37 percent of the total investments made in the State till March 2010. It also has around 700 small and medium scale rice mills. Some of the major industries attracting maximum investments are Food and Allied, Glass and Ceramics and Miscellaneous Manufacturing.

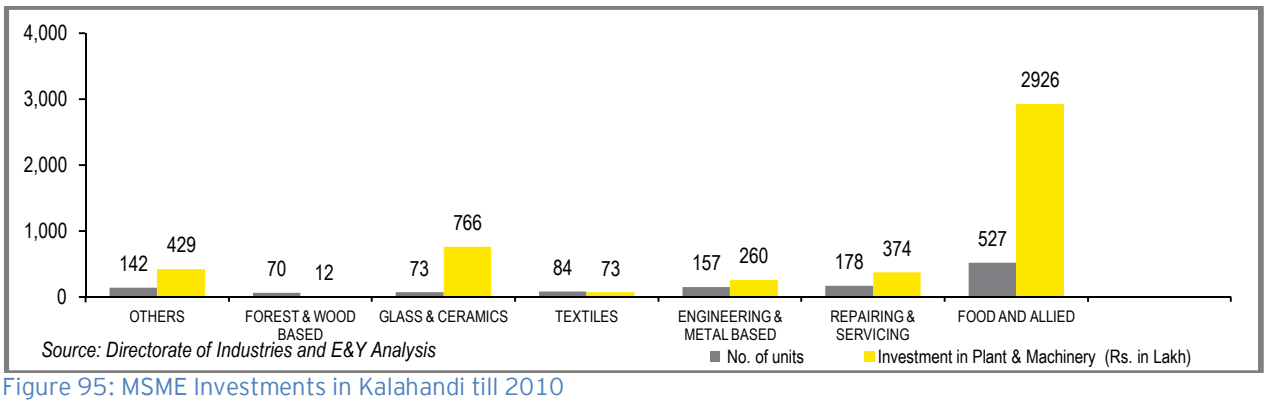
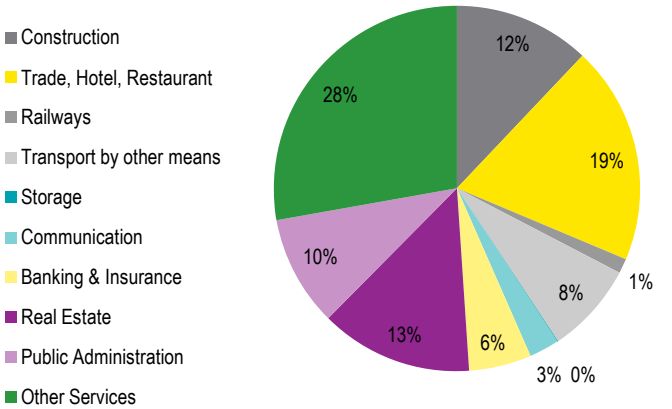


Figure 95: MSME Investments in Kalahandi till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Kalahandi GDP, the service sector remains the most important contributor constituting 76 percent of the district GDP.



As depicted in the chart, the other services group is the leading contributor to the service sector (28 percent) followed by trade, hotel and restaurant (19 percent), real estate (13 percent) and construction (12 percent). Transportation including railways is a major contributor of GDP of Kalahandi economy

Source: Planning Commission, Government of India

Figure 96: Composition of Service Sector- Kalahandi 2004-05

10.15.4 Skill Gap Assessment for Kalahandi District

Over the next 15 years, the total workforce demand for skilled jobs in Kalahandi district is expected to grow from present levels of 3.5 lakhs in 2011 to 6.2 lakhs in 2026. An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon. Looking at the total expected workforce demand created in 2026, the tertiary sector would account for 81 percent, while the primary and secondary sectors would account for 16 percent and 3 percent respectively.

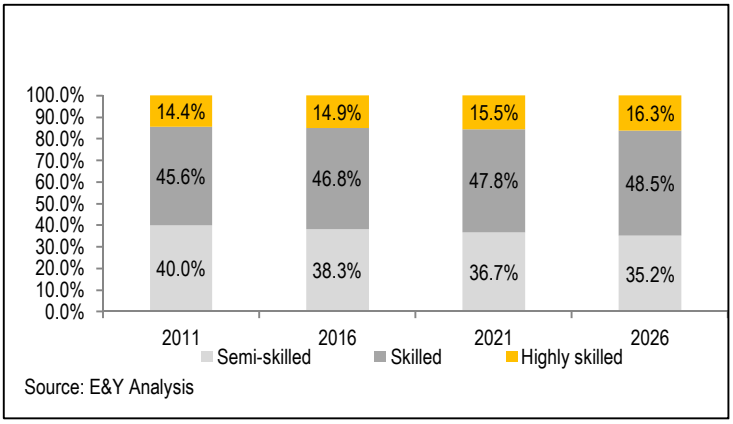


Figure 97: Proportion of demand for skilled jobs by skill categories- kalahandi District

Some of the prominent sectors from which the workforce demand for skilled jobs in 2026 is primarily expected include tourism, travel, hospitality & trade (1 lakh); agriculture (1 lakh); education & skill development (0.8 lakh); healthcare (0.8 lakh) and IT & ITES industry (0.8 lakh).

The secondary research on the KBK district of Kalahandi indicates irrigation, coffee and education projects in offing in the district. This is expected to generate higher level of growth in agriculture sector in the district which has been factored in the analysis.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	27,609	35,013	44,403	56,311	
Skilled	18,295	23,201	29,423	37,314	
Highly skilled	2,994	3,797	4,815	6,106	
Total demand for skilled jobs	48,898	62,011	78,641	99,731	16
Agriculture					
Semi-skilled	49,353	49,291	49,230	49,168	
Skilled	32,902	32,861	32,820	32,779	
Highly skilled	16,451	16,430	16,410	16,389	
Total demand for skilled jobs	98,706	98,582	98,460	98,336	16
All sectors:					
Semi-skilled	139,528	159,454	185,136	218,447	
Skilled	159,153	194,745	240,837	300,805	
Highly skilled	50,263	61,941	78,231	101,148	
Total demand for skilled jobs	348,944	416,140	504,204	620,400	100

Source: E&Y Analysis

Table 55: Skill-wise demand for sectors where high demand is foreseen- Kalahandi District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 2.5 lakhs during the period 2011-2026.

A major proportion of this widening gap is expected to be accounted by skilled human resource (55 percent) of this widening gap, followed by semi-skilled jobs (24 percent) and highly skilled jobs (21 percent).

Within the **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (54 percent) and IT & ITeS (21 percent) sectors.

The proportion of **skilled** workers in the incremental gap would be increasingly required in case of education & skill development (27 percent), healthcare (26 percent); and IT & ITeS (16 percent) industries. The **semi-skilled workers** belonging to the tourism, travel, hospitality & trade (36 percent); media & entertainment (23 percent) and banking, financial services & insurance (16 percent) sectors would form a major part of this gap in 2026.

By sector, the banking, financial services & insurance are expected to account for 18 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly skilled workers (62 percent) followed by semi-skilled workers (22 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(101)	(106)	(110)	(317)
Auto & Auto Components	1	1	1	3
Chemical & Pharmaceuticals	2	2	3	7
Construction materials & building hardware	1,200	1,424	1,672	4,296
Electronics & IT Hardware	20	24	28	72
Food Processing	67	77	87	231
Furniture & Furnishings	67	77	87	231
Leather & Leather Goods	1	2	2	5
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	53	60	68	181
Unorganised sector	8	9	10	27
Banking, Financial Services & Insurance	8,950	13,871	21,383	44,204
Building, Construction & Real Estate Services	270	300	326	896
Education & Skill Development	9,993	13,156	17,278	40,427
Healthcare	9,726	12,886	17,007	39,619
IT & ITES industry	9,500	12,657	16,776	38,933
Media & Entertainment	7,602	10,129	13,335	31,066
Tourism, travel, hospitality & trade	10,435	13,996	18,515	42,946
Transportation, logistics, warehousing & packaging	870	1,088	1,323	3,281
Total	58,824	79,692	107,824	246,340

Source: E&Y Analysis

Table 56: Total incremental demand supply gap for skilled jobs by sectors- Kalahandi District

The incremental demand supply gap is also expected to widen for tourism, travel, hospitality & trade (17 percent). The incremental human resource gap in this sector largely comprises of need for semi-skilled (50 percent) and skilled (43 percent) work force.

Significant incremental requirement is also expected to be witnessed in services like education & skill development (16 percent), healthcare (16 percent) and IT & ITeS (16 percent) sectors.

10.15.5 Development potential and stakeholder perception

While agriculture is the backbone of Kalahandi economy, it is predominantly subsistence oriented with low level of productivity. Growth potential of the district lies in tapping its abundant natural resources and traditional skills to develop the agriculture and allied sector, food processing and mineral based industries and promoting traditional crafts and skills. Considering that the district has one of the highest poverty ratios in the State and has a high education deprivation index, overall growth would depend on investments in education, healthcare and basic services in addition

to creating strong infrastructure for promoting sustainable development. The district is part of the KBK region which is already receiving special funds for all round development. The targeted interventions needs to be continued focusing on improving the quality of basic education and skill development in agriculture, value addition and processing of natural resources.

Within primary sector, opportunity for employment creation are largely based on leaf plate making, packaged pickles preparation, juice and pulp bottling, pharmaceutical items preparation using herbs and herbal extracts etc. The *Rampur, Lanjigarh* area is suitable for different cash crops production. In secondary sector Bauxite exploitation and processing. In power sector, husk of the paddy can be used to generate energy given the paddy processing units in the district and their volume of production. Commercial plantation can be taken up by tribal farmers in Brick factory: although, thousands of labourers in Kalahandi district are brick makers, there is no effort in the district use their skill for making good quality bricks. The production trends shows that, the production of mango, banana, papaya and various vegetables is rapidly increasing in past 5 to 6 years. The varied horticultural production in the district gives ample scope for various processing units in MSME sector.

In tertiary sector, there seems to be little opportunity in the district as the secondary sector is weak in nature. However, the sector offers limited opportunities in terms of security and cleaning provisions to upcoming industrial units, nurses and pharmacists in hospitals and growing nursing homes, skilled teachers at private schools etc. The district is also known for its masons. Training to masons to build on their skills and opportunities can propel additional growth. Both skilled and unskilled labourers in the district can be absorbed in these units following a specific human resource absorb and retentions plan.

The district has only one large scale and one medium scale industry. Even though there is a potential for growth of industries given adequate raw materials in terms of minerals like bauxite, graphite, manganese, iron, quartz etc, industrial development has not happened in the district. The industry representatives stated that communication and energy are the most impeding factors of development of industries in the district. Due to poor transportation network and non-availability of cheap electricity, the industries find it difficult to lower down the operating cost of the units. Hence, setting up industrial units in the district has been low. The industry representatives also reported that that availability of quality human resources in the district is another problem area given there are limited educational, technical and vocational training infrastructure in the district. The varied climatic condition in the district offer opportunity for the horticulture and allied food processing units, but no skills are offered to develop relevant skills.

Lack of adequate industrial units in the district to absorb the trained youth is also a concern. Students tend to migrate to other parts of the state/country which are industry rich. Similarly, unskilled human resource has moved to work as labourers to other districts. The industrial representatives suggested that Government should allow backward area incentive as well as special subsidies to the entrepreneurs who are willing to set up industries for value addition and processing of local produce. Such measures will create a lot of opportunity for employment of semi-skilled as well as unskilled labour force within the district.

The vocational and training institute heads maintain that lack of adequate institution is a major concern. At the same time whatever, little infrastructure is available, they are either running with limited resources or with limited opportunities. While there is one Government ITI at *Bhawanipatna*, its student intake has been below its capacity since the institute does not have funds to advertising.

The private institutions lack quality and attract students based on false promises. Industrial exposure for students is another problem faced by the vocational training providers. Due to limited industrial concentration, exposure visits are costly and is out of bounds for many of the institutions.

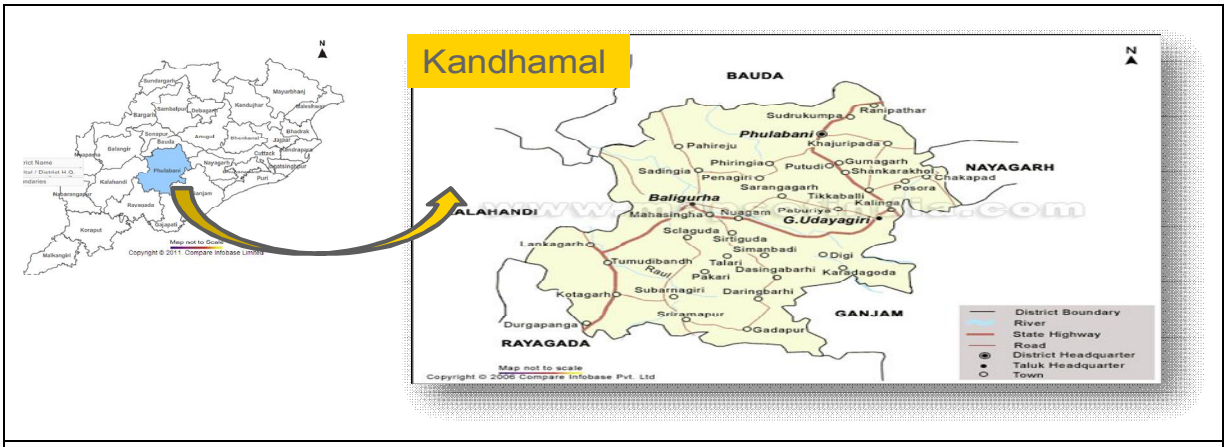
It was shared that if training is imparted in certain skills like electrician, motor mechanic and welder trades in the district if imparted, can create job opportunities. However, `demand' for electronics/ fitter trade is more largely due to lack of awareness. Opening an ITI with electronic fitter trade facilities and seats requires far less investment. In the absence of proper placement services, even if students are trained, they are unable to find suitable vocations.

Interactions with the community members show that there is a high dependence on farm based livelihood during the agriculture season and people migrate during off season. People reported that schemes like MNREGS have been successful in generating income for a part of community. The community members who migrate to other districts/cities mention that carpentry, masonry as well as painting jobs fetch good money and thus they require training in these areas. Women expressed the need to learn skills which they can use for economic activity. E.g. training in incense stick making as well as food processing which iare home based and less investment intensive. Awareness about vocational and technical training and other skill development schemes was very limited as most of the community members reported that they are not aware about availability of skill development schemes, the selection and eligibility criteria etc.

- **Primary** – Food processing of NTFP and other herbal extracts maybe initiated to provide opportunities for economic development. The recent increase in production of fruits can be used to produce processed items like juices, fruit preserves etc.
- **Secondary** – Currently limited opportunities. However, when ancillary units for bauxite and graphite come up more skilled human resource would be required for which there are currently limited opportunities for training
- **Service** – In addition to other areas of service delivery, there is a need to develop skills in the area of education and healthcare. Existing large number of masons can be given skill enhancement opportunities to build on their existing skills.

10.16 Kandhamal

Kandhamal District is spread over an area of 8021 Sq Km which forms approximately 5.15 percent of the total geographical area of the State. The district **Kandhamal** has two sub-divisions, **Phulbani** and **Balliguda**. Phulbani sub-division forms a broken plateau of about 518 metres above sea level, girdled almost continuously by high ranges which cut it off from the surrounding area. On the north-east and west these ranges quite perceptibly rise abruptly from the plains of Boudh district while on the south they merge in the outlines of the Eastern Ghats of Balliguda Subdivision. Administratively, Kandhamal has 12 blocks, 153 Gram Panchayats and 2379 villages. Kandhamal is surrounded by Boudh District in the north, Rayagarh in south, Ganjam and Nayagarh in the east, and Kalahandi in the west.



Map Courtesy: Maps of India

District Information	Kandhamal	Odisha	Source
Area (in Sq Km)	8,021	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	5.15% (6)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	12	**309**	Census 2001
No of GPs	153	**6,234**	Census 2001
Total no of inhabited villages	2,379	**47,529**	Census 2001
Forest area as % of total geographic area	71.20%	**37.66%**	Census 2001

Figure 98: District Map of Kandhamal

10.16.1 Demography

As per Census 2011 (Initial provisional data), Kandhamal has a population of 7.32 lakhs of which males and females were 3.59 lakhs and 3.73 lakhs respectively. There is a change of 12.92 percent in the population compared to population as per 2001 census. The District constitutes 1.74 percent of the total population of the state. The initial provisional data (Census 2011) suggest a population density of 91 in 2011 which makes Kandhamal the least densely populated district in Odisha. With regards to sex ratio, the district fares very well compared to other districts and the state average. The sex ratio for Kandhamal as per 2011 provisional census figures is 1037 females per 1000 males, which is much above the State average of 978 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 16.89 percent of the total population while STs forms the majority at 51.86 percent of the total population. Kandhamal is predominantly rural with only under 7 percent of its total population coming under the category of urban population.

As per 2001 census, the population in the working age group constituted 54.84 percent of the total population. The population in the age group 0-4 years constitutes 12.29 percent and 5-14 years comprise 23.33 percent respectively. Work participation rate of the district is 47.24 percent. Out of the total workers 57.52 percent are main workers and 42.48 percent are marginal workers. With a human development index (HDI) of 0.389 and Gender development index (GDI) of 0.372, Kandhamal ranks 29th among the 30 districts of Odisha.

Population	Kandhamal	Odisha	Source
Total population (in lakh)	7.32	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	3.59	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	3.73	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	1.74% (23)	**NA**	Census 2011 provisional figures
Density of population	91	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	12.92%	**13.97%**	Census 2011 provisional figures
Urban population %	6.79%	**14.99%**	Census 2001
SC population %	16.89%	**16.53**	Census 2001
ST population %	51.96%	**22.13**	Census 2001
Sex ratio	1037	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	54.84%	**58.38%**	Census 2001
Worker participation rate	47.24%	**40.03%**	Census 2001
Share of primary sector to total workers	69.28%	**64**	Census 2001
Proportion of agriculture laborer in workforce	35.95%	**34.53**	Census 2001
Human Development Indicators	**Kandhamal**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.389 (29)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.372 (29)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	20547 (9)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Education Index -(Ranking)	0.645 (23)	**0.723**	State Human Development Report 2004
Food security outcome index (Ranking)	0.237 (30)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 57: Socioeconomic indicators for Kandhamal

10.16.2 State of Education

The literacy rate in kandhamal district has been significantly below the state average. Literacy rate of Kandhamal in 2011 (as per provision census figures) is 65.12 percent compared to 52.68 percent in 2001. Gender wise male and female literacy is 78.41percent and 52.64 percent respectively. For 2001 census, same figures stood at 69.79 and 35.86 showing a considerable increase in literacy level for all the groups in Kandhamal District, most notably in females which are over 15 percent in last 10 years. Out of the total number of children in school going age, 4.193 percent children were out of school in 2010.

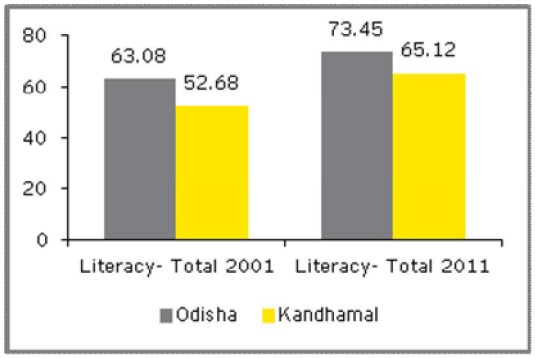


Figure 99: Literacy Rate- Kandhamal District

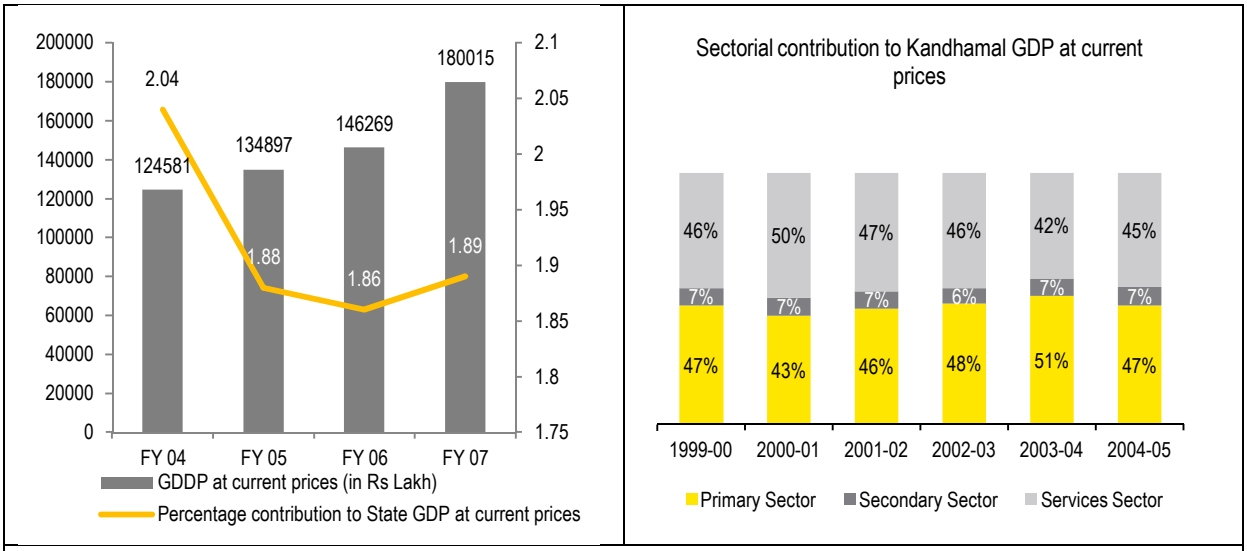
For higher Education there are 18 junior colleges and higher secondary schools (10+2) offering

courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 3820, 642 and 64 respectively.

The district lags behind in terms of options for technical, medical, nursing or professional education. There is one Government ITI in the district apart from 2 private ITCs.

10.16.3 Economic Profile

As per economic survey 2010-11, the economy of Kandhamal grew at a rate of 6.9 percent for the period 2000-01 to 2006-07. In terms of contribution to State's economy, the growth had limited impact. As the chart below shows, contribution to State GDP declined from 2.04 percent to 1.39 percent in a span of 4years. Agriculture sector contributes the highest to the district GDP followed by the services sector. The industrial sector is under developed.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 100: Gross District Domestic Product (at current prices) of Kandhamal District

Agriculture

More than 72 percent of the geographic area in Kandhamal is covered by forests. Most of the cultivable area is upland conducive for horticulture and plantation crops. The district has a favorable agro-climatic condition for production of spices- most notabley turmeric and ginger, potato and flowers. Dependence on primary sector is thus high with more than 60 percent of total work force classified either as cultivators or agricultural laborers. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 30th with a per capita agricultural output of 899. Low productivity levels in agriculture is a result of poor irrigation facilities, poor cropping pattern and practice of practice of traditional practice which is non remunerative and productive. Forest based products and its value addition and rearing of small ruminants are other livelihood options available in the district.

Industries

There are no large scale industries in Kandhamal. In terms of attracting investments and setting up Micro and small scale industries, Kandhamal is ranks low with a total MSME investment of Rs. 1070 lakhs. MSME investment is dominated by the food & allied industry (411) followed by repairing & servicing (156) and by engineering and metal based (136). Others include paper & paper products, textiles and rubber & plastic products.The lack of investment and development in the industrial sector of Kandhamal is can be associated to issues such as connectivity and resources. Kandhamal is not very conducive to travel and transportation and in general it lacks resources.

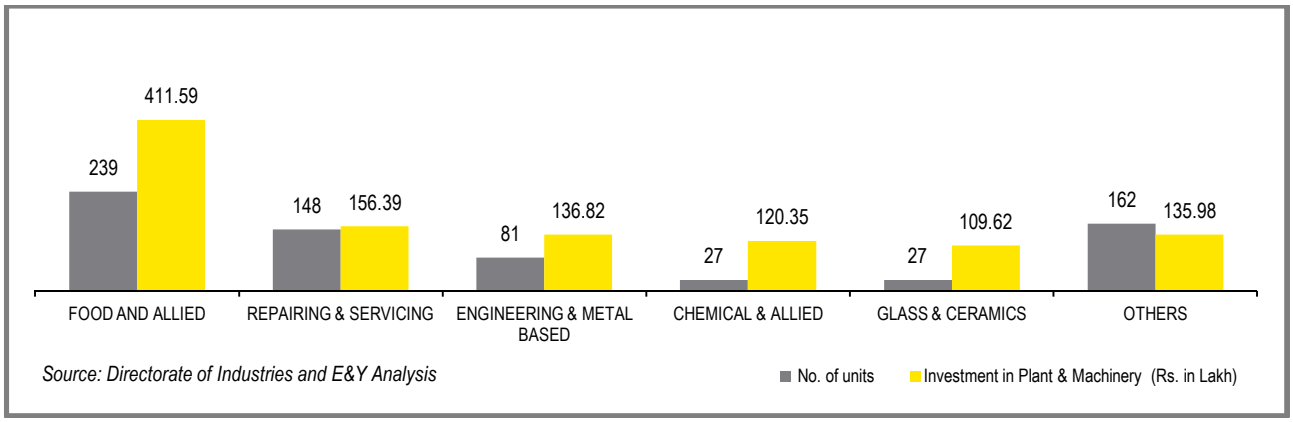
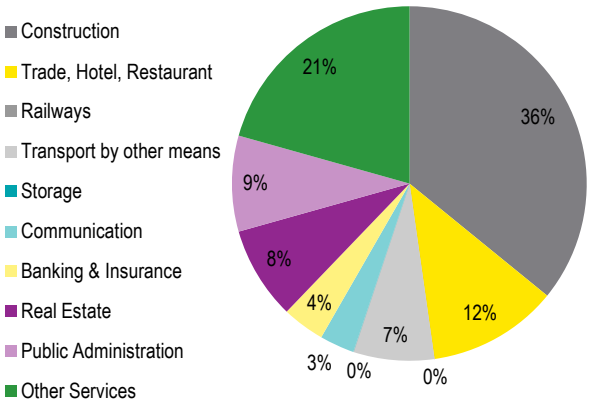


Figure 101: MSME Investments in Kandhmal till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Kandhamal GDP, the service sector remains the most important contributor constituting 47 percent of the district GDP. The contribution of various sectors to GDDP is shown below:



As depicted in the chart, construction (36 percent) is the leading contributor to the service sector, followed by other services (21 percent), trade, hotels and restaurants (12 percent) and public administration (9 percent).

Source: Planning Commission, Government of India

Figure 102: Composition of Service Sector- Kandhamal 2004-05

10.16.4 Skill Gap Assessment for Kandhamal District

Over the next 15 years, the total workforce demand for skilled jobs in Kandhamal district is expected to grow to 2.5 lakhs in 2026 from present levels of 1.5 lakhs in 2011. On a macroeconomic level, the tertiary sector is expected to account for 82 percent of the total workforce demand, followed by primary sector (15 percent) and secondary sector (3 percent).

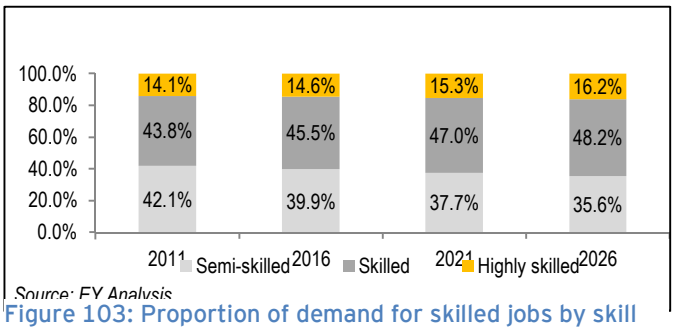


Figure 103: Proportion of demand for skilled jobs by skill categories- Kandhamal District

The major sector from which the workforce demand for skilled jobs in 2026 is primarily expected includes agriculture (0.4 lakh); education & skill development (0.3 lakh); healthcare (0.3 lakh) IT & ITeS industry (0.3 lakh) and media & entertainment (0.3 lakh) sector.

As per the CMIEs Capex database and secondary research, capital projects in hydel power are in offing for the district.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	19,497	19,157	18,822	18,493	
Skilled	12,998	12,771	12,548	12,329	
Highly skilled	6,499	6,386	6,274	6,164	
Total demand for skilled jobs	38,994	38,314	37,644	36,986	15
Education & Skill Development					
Semi-skilled	-	-	-	-	
Skilled	13,609	17,717	23,066	30,029	
Highly skilled	1,459	1,900	2,473	3,220	
Total demand for skilled jobs	15,068	19,617	25,539	33,249	13
Healthcare					
Semi-skilled	1,205	1,569	2,043	2,660	
Skilled	13,410	17,459	22,729	29,591	
Highly skilled	452	588	766	997	
Total demand for skilled jobs	15,067	19,616	25,538	33,248	13
IT & ITes					
Semi-skilled	3,014	3,923	5,108	6,650	
Skilled	8,287	10,789	14,046	18,287	
Highly skilled	3,767	4,904	6,385	8,312	
Total demand for skilled jobs	15,068	19,616	25,539	33,249	13
Media & Entertainment					

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Semi-skilled	7,534	9,554	12,117	15,366	
Skilled	5,876	7,452	9,451	11,986	
Highly skilled	1,657	2,102	2,666	3,381	
Total demand for skilled jobs	15,067	19,108	24,234	30,733	12
All sectors:					
Semi-skilled	62,326	69,118	77,737	88,769	
Skilled	64,938	78,814	96,833	120,266	
Highly skilled	20,824	25,291	31,533	40,307	
Total demand for skilled jobs	148,088	173,222	206,103	249,343	100

Source: E&Y Analysis

Table 58: Skill-wise demand for sectors where high demand is foreseen - Kandhmal District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.9 lakh during the period 2011-2026.

For Kandhamal, the proportion of skilled manpower is expected to account for 65 percent of this widening gap, followed by highly skilled jobs (23 percent) and semi-skilled jobs (12 percent). Amongst the **highly skilled** jobs, a higher requirement is expected in case of banking, financial services & insurance jobs (53 percent) and IT & ITeS (23 percent) sectors.

The major proportion of incremental gap for **skilled** workers is expected to come from sectors like education and skill development (30 percent); healthcare (29 percent); it & ites (18 percent); media & entertainment (11 percent) industry.

The **semi-skilled** workers would be increasingly required in case of media & entertainment (30 percent); tourism, travel, hospitality & trade (20 percent); banking, financial services & insurance (19 percent) and IT & ITes (14 percent) sectors.

The incremental demand supply gap for the skilled **jobs varies by economic activity**. The education & skill development sector is expected to account for 21 percent of this incremental demand supply gap. The incremental gap in this sector is primarily expected to come from skilled workers (~90 percent) and highly skilled workers (~10 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(412)	(461)	(497)	(1,370)
Auto & Auto Components	1	1	1	2
Chemical & Pharmaceuticals	3	4	5	12
Construction materials & building hardware	224	280	342	846
Electronics & IT Hardware	4	5	7	16
Food Processing	25	26	27	77
Furniture & Furnishings	69	92	114	276
Leather & Leather Goods	0	0	1	1
Gems & Jewelry	0	0	0	0
Organized Retail	0	0	0	0
Textile	6	9	11	26
Unorganized sector	5	6	7	18
Banking, Financial Services & Insurance	2,929	4,686	7,404	15,018
Building, Construction & Real Estate Services	189	279	359	827
Education & Skill Development	4,549	5,922	7,710	18,181
Healthcare	4,263	5,628	7,411	17,302
IT & ITES industry	3,833	5,188	6,963	15,984
Media & Entertainment	2,450	3,535	4,924	10,909
Tourism, travel, hospitality & trade	1,535	2,102	2,751	6,388
Transportation, logistics, warehousing & packaging	115	232	355	701
Total	19,788	27,534	37,893	85,215

Source: E&Y Analysis

Table 59: Total incremental demand supply gap for skilled jobs by sectors- Kandhmal District

The incremental demand supply gap is also expected to widen significantly for healthcare sector (20 percent). The incremental human resource gap in this sector largely comprises of need for skilled (94 percent) human resource.

Significant incremental requirement is also expected to be witnessed in services like IT & ITeS (19 percent) and banking, financial services & insurance (18 percent) sectors.

10.16.5 Development potential and stakeholders perspectives

Kandhamal is one of the least developed districts of Odisha, ranked 29th in terms of human development indicators. The District is centrally located and shares its borders with 5 other district of the State. The economy is predominantly dependent on subsistence agriculture and is marked with undulating and hilly terrain and heavy forest cover. Almost 69 percent of the workforce is engaged in agriculture and allied activities. As per 2001 census only 49 percent of the villages in the district were electrified, compared to the State's average of 78 percent. Many parts of the district are still unapproachable and the population is largely scattered as suggested by a population density of just 91 people per square km- the lowest in the State.

There is significant growth potential in agriculture and allied sector, both in terms of crop production, its value addition and processing. Turmeric is the most valuable product in the district with immense commercial importance. The district is the largest producer of organic turmeric in the State, even though only 8 percent of the total cultivable area of Kandhamal was brought under

turmeric cultivation in 2010[11]. This shows that there is a huge opportunity of expanding the production range by bringing more area under turmeric farming. Along with turmeric, Ginger and Potato are other important cash crops having huge growth potential. Positive trends in production of high yielding variety Maize also presents a good opportunity for the district. The district is already rich in forest resources including minor forest produces and medicinal plants. Horticultural crops like Mango, Jack fruit and Pine apple etc. are other major potential crops that can yield commercial returns. There is good potential for sericulture, bee keeping and mushroom production.

In spite of abundant natural resources and favorable ecological factors, the district has not been able to utilize the growth potential of its primary sector owing to limited penetration of technology and scientific know how, poor infrastructure and most importantly poor education and exposure level of its predominantly rural and tribal population.

- Low education & exposure levels and limited entrepreneurial skills: The number of progressive farmers is limited. Agriculture is still subsistence oriented with larger focus on food crops. Paddy still remains the primary crop even though there is ample opportunities to grow and develop commercial crops as mentioned above. Penetration of modern scientific agriculture and farm mechanization is limited.
- Poor infrastructure and management: Even though the district receives annual average rainfall of more than 1500 mm, agriculture is predominantly rain fed with bouts of droughts periodically due to poor management of rain water and high surface run offs and erosion. Only 19 percent of the cultivable area is irrigated during *Kharif* season.
- In adequate forward and backward linkages: Even though products like turmeric, ginger and potato has huge potential, there is limited infrastructure for its storage, value addition and processing. The state of industrialization in the district is poor and there are very few food processing industries.

Growth of primary sector is possible through a range of interrelated interventions at various levels. Improving the quality of basic education is the key to create and enhance the skills of the farmers on scientific agriculture and processing and value addition. There is a need to encourage progressive farmers to undertake commercial agriculture by creating better linkages with the market, improving the communication, transportation and storage infrastructure and attracting more number of food processing based MSMEs in the district.

There is a lot of skepticism with regard to development of Industries in the district. The industry sector is underdeveloped in the district. The stakeholders at the district level were mostly unanimous that industrialization in the district will destroy its unique natural and ecological endowments and since almost 72 percent of the geographical area is covered by forests, growth of large and medium scale industries is not possible in the district. In terms of industrial growth, the only option is to strengthen the MSMEs especially in food processing and handicrafts and forest based produces. The district has ample scope for developing leaf plate making industries, Ayurvedic herbs and medicinal plants, bamboo and wood crafts based enterprises. The District Rural Development Agency is supporting several self help groups to make *Agarbatti* or incense sticks with marketing tie ups with ITC. Similar small and marginal enterprises can help in generating productive employment for the rural artisans.

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11 As per data shared by NABARD

Due to poor quality of education there is huge shortage of skilled manpower in the services sector. There is huge vacancy in almost all the government departments at the district level. It was reported that there is lack of skilled mason workers, auto mechanics, and health care workers including Doctors (No MBBS doctors at the PHC level) etc. Poor infrastructure facilities were reported to be a major factor behind reluctance of outsiders to accept posting in the district. In absence of industrial progress and urbanization, opportunities are also limited as reflected by the youth group interviewed at the district employment office. The group reported that apart from post of para-teachers and special police force, there are no other opportunities of employment in the district. Some of the stakeholders mentioned that the district has huge potential for development of eco-tourism considering the unique landscape, scenic beauty and tribal heritage. Poor infrastructure and security concerns are however considered as major hindrances to the growth of tourism in the district.

The skill development infrastructure in the district is grossly inadequate. More than 100 seats remained vacant after completion of the admission process this year in the only Government ITI located at Phulbani, the district headquarter. Leaving aside the training centre run by IL&FS in Phulnbani and Don Bosco in Balliguda, the quality of training and trainers in the private ITC was reported to be quite poor. Surprisingly, though agriculture and allied activities provides maximum income and job opportunities none of the vocational training centers are offering any courses in agriculture or food processing sectors. IL&FS provides placement linked trainings in apparel management and hospitality and reported successful placement, interaction with some of the students showed that apart from technical skills, the training should also focus on life skills including learning *Hindi* language that would help the rural youths to adjust in bigger cities like Mumbai, Hyderabad, Delhi or even Bhubaneswar. Skill development in Kandhamal requires careful planning and a staggered approach considering the relative backwardness of the district in terms of basic education and cultural profile of the predominantly tribal population. Focus on quality education should be the key aspect of skill development intervention followed by vocational training in agriculture, value addition and processing. Mason, auto repair, mobile repair, drivers, technicians, hospitality and healthcare (nursing and bed side attendants etc emerged as some of the potential areas of skill development in the district

- **Primary sector –** Skill development to improve productivity in the agriculture sector. Value addition of forest produce, medicinal plants and turmeric.
- **Secondary Sector -** Very limited industries present. MSMEs related to food processing can be expanded. Setting up of small enterprises appears more conducive in the current scenario.
- **Service Sector** – Skill development in occupations related to daily lives – masons, electricians, health care workers. Eco tourism, if developed, will throw open several opportunities for employment in the hospitality sector.

10.17 Kendrapara

Kendrapara District is spread over an area of 2644 Sq Km which forms approximately 1.7 percent of the total geographical area of the State. Topographically, the district has four prominent divisions- coastal plains, middle mountains and highlands, central plateaus and the western rolling uplands. Administratively, the district is divided into one sub division, 9 blocks, 230 Gram Panchayats and 1407 villages. Kendrapara is surrounded by Bhadrak and Jajpur Districts in the north, Bay of Bengal in the east, Jajpur and Cuttack Districts in the west and Jagatsinghpur and Bay of Bengal in south.

Map Courtesy: Maps of India

District Information	Kendrapara	Odisha	Source
Area (in Sq Km)	2,644	155,707	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.7% (26)	100 (NA)	Census 2011 provisional figures
No of CD blocks	9	309	Census 2001
No of GPs	230	6,234	Census 2001
Total no of inhabited villages	1,407	47,529	Census 2001
Forest area as % of total geographic area	9.47%	37.66%	Census 2001

Figure 104: District Map of Kendrapara

10.17.1 Demography

As per Census 2011 (Initial provisional data), Kendrapara has a population of 14.4 lakhs of which males and females were 7.18 lakhs and 7.22 lakhs respectively. There is a change of 10.59 percent in the population compared to population as per 2001 census. The District constitutes 3.43 percent of the total population of the State and is 14th highest. The initial provisional data (Census 2011) suggest a population density of 545 in 2011 making Kendrapara the seventh most densely populated district of Odisha. With regards to sex ratio, the district fares better compared to most of the other districts and the state average. The sex ratio for Kendrapara as per 2011 provisional census figures is 1006 females per 1000 males, much above the State average of 978 females per 1000 males. It ranks 8th in terms of sex ratio.

SCs constitute approximately 20.52 percent of the total population while STs forms only 0.52 percent of the total population (Initial provisional data). The district is predominantly rural with almost 94.31 percent rural population (as per census 2001).

As per 2001 census, the population in the working age group (15-59 years) constituted 57 percent

of the total population. The population in the age group 0-4 years constitutes 8.94 percent and 5-14 years comprise 23.2 percent respectively. Work participation rate of the district is 29.82 percent. Out of the total workers 75.6 percent are main workers and 24.4 percent are marginal workers. With a Human Development Index (HDI) of 0.626 Kendrapara is ranked 10th in the State.

Population	Kendrapara	Odisha	Source
Total population (in lakh)	14.40	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	7.18	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	7.22	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	3.43% (14)	**NA**	Census 2011 provisional figures
Density of population	545	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	10.59%	**13.97%**	Census 2011 provisional figures
Urban population %	5.68%	**14.99%**	Census 2001
SC population %	20.52%	**16.53**	Census 2001
ST population %	0.52%	**22.13**	Census 2001
Sex ratio	1006	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	56.99%	**58.38%**	Census 2001
Worker participation rate	29.82%	**40.03%**	Census 2001
Share of primary sector to total workers	67.53%	**64**	Census 2001
Proportion of agriculture laborer in workforce	25.52%	**34.53**	Census 2001
Human Development Indicators	**Kendrapara**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.626 (10)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.516 (18)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	12245 (28)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.508 (9)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 60: Socioeconomic indicators for Kendrapara District

10.17.2 State of Education

Average literacy rate of Kendrapara in 2011 (as per provision census figures) is 85.93 percent compared to 76.81 percent in 2001. Gender wise male and female literacy is 92.45 percent and 79.51 percent respectively. For 2001 census, same figures stood at 87.11 and 66.76 showing a proportionate increase in literacy level for all the groups in Kendrapara District over last 10 years. Out of the total number of children in school going age, 2.06 percent children were out of school in 2010.

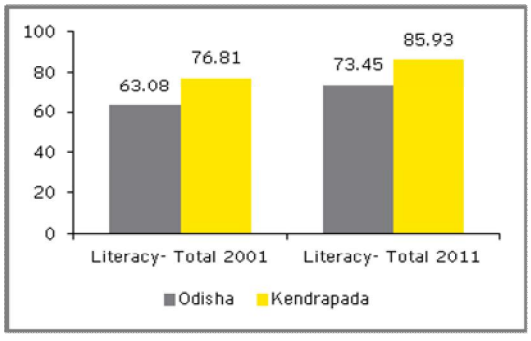


Figure 105: Literacy rates- Kendrapara District

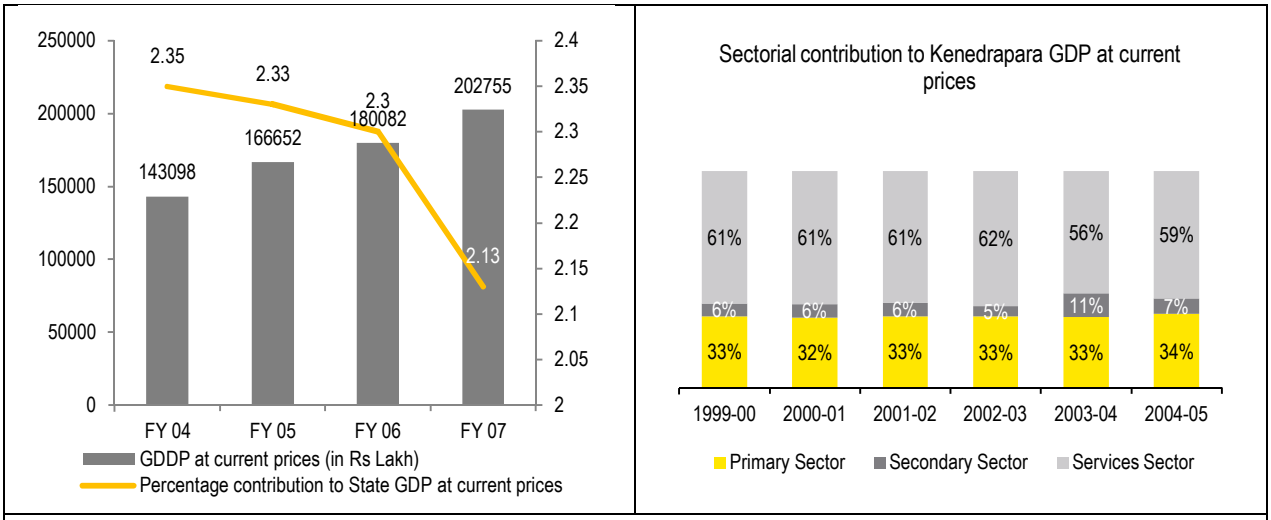
For higher Education there are 47 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 8868, 2984 and 1824 respectively. There are 26 degree colleges. There are no colleges

offering technical courses in the district. There is a private polytechnic institute offering engineering courses. Total intake capacity of this polytechnic institutes is approximately 290 students per year. Major courses are electrical and mechanical and civil among other courses. Kendrapara does not have any medical or pharmacy colleges.

There is one Government ITI in Kendrapara, which is quite known for offering training in plumbing. In addition, there are 17 private ITCs, offering 9 courses, which reserve seats mainly for fitter, electrician and data entry operator.

10.17.3 Economic Profile

With an annual average growth rate of 5.8 percent for the period 2000-01 to 2006-07, the overall contribution of the District to the State GDP has undergone a sharp decline during the period 2004-2007. The economy is entirely dependent on the service sector with agriculture contributing 17 percent and industries only 4 percent.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 106: Gross District Domestic Product (at current prices) of Kendrapara

Agriculture

Agriculture is the mainstay of livelihood for the people in this District which is marred with recurrent floods and water logging. About 68 percent of total work force is comprised of either cultivators or agricultural laborers. Kendrapara is ranked 24th in the State in terms of number of agricultural laborers, constituting 25.52 percent of total working force.

As per Odisha agriculture statistics report 2008-09, 57 percent of the total geographical area or almost 152 thousand hectares of land was brought under cultivation in District. Since most of the agriculture area are low land, paddy is the primary crop with a gross cropped area of 143.02 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops. Though there is a strong potential, the fishery sector is still under developed in the district.

Performance of Kendrapara district is poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 18th with a per capita agricultural output of 1233. Vegetables contribute highest to the total agricultural output of Kendrapara with a value of 275.44 (2008-2009), followed by rice (200.87) and pulses

with (35.72) (all figures in thousand metric tonnes). Mango is the major fruit crop with an area of about 1.09 thousand hectares under cultivation. Kendrapara produces 170 and 1.3 quintals of Marigold and Rose flower respectively.

With an average landholding of 1.11 hectare, landholding pattern in the District is appreciable with a majority (more than 59 percent) of the farmers having more than a hectare of land holding.

Industries

Like most districts in Odisha, Kendrapara is largely agrarian. It is well connected to other cities in Odisha by a network of roads and highways. National highway 5 and 5A pass through the district. It also has 6 rivers passing through it viz., *Luna, Brahmani, Kharasrota, Baitarani, Hansua* and *Chitrotpala*. There are no large or medium scale industries in Kendrapara.

In terms of investments in Micro and small scale industries, Kendrapara is ranked 24th in the State. MSME investment in Kendrapara was 0.47 percent of the total investments made in the State till March 2010. As depicted in the chart, some of the important industries are food and allied, repairing and servicing and engineering and metal based.

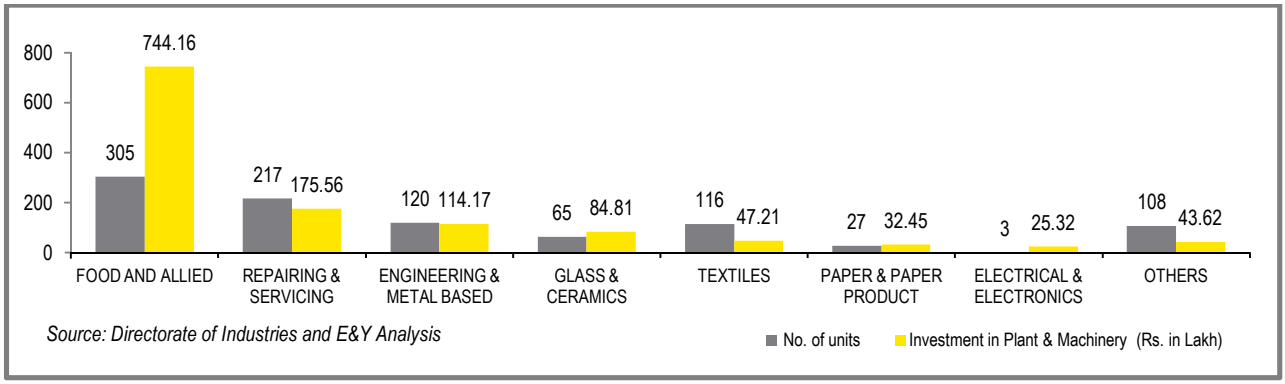
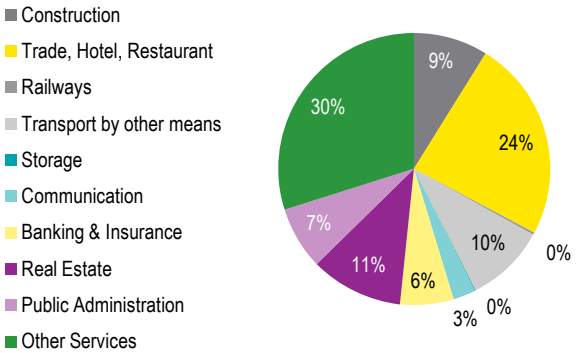


Figure 107: MSME Investments in Kendrapara till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below in the chart. In terms of contribution to Kendrapara GDP, the service sector remains the most important contributor constituting 79 percent of the district GDP. The contribution of various sectors to GDDP is shown as follows:



As depicted in the chart, other Services are the leading contributors to the service sector (30 percent) followed by trade, hotel and restaurant (24 percent), real estate (11 percent) and transportation by other means (10 percent).

Source: Planning Commission, Government of India

Figure 108: Composition of Service Sector- Kendrapara 2004-05

10.17.4 Skill Gap Assessment for Kendrapara District

The total workforce demand for skilled jobs in Kendrapara district is expected to grow from a level 2.1 lakhs in 2011 to reach 3.7 lakhs in 2026. Around 82 percent of this total workforce demand is expected to come from the tertiary sector, followed by primary sector (16 percent) and secondary sector (2 percent).

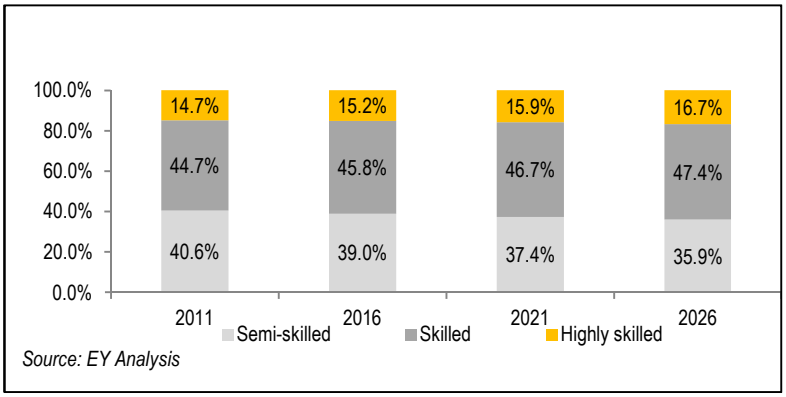


Figure 109: Proportion of demand for skilled jobs by skill categories- Kendrapara District

The major sectors which are expected to create a demand for skilled jobs in 2026 are: tourism, travel, hospitality & trade (0.7 lakh); agriculture (0.6 lakh); and banking, financial services & insurance (0.4 lakh).

Over the period 2011-2026, the proportion of **skilled** workers in the gap is expected to grow on a continuous basis, while that of **semi-skilled** workers is expected to reduce during the same period. The CMIE Capex database and secondary research indicates relatively higher number of capital projects being announced for power generation, logistics and warehousing activities during past two years. As a result, demand for labor for this sector is expected to rise significantly in the next 15 years.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	19,424	24,633	31,240	39,618	
Skilled	12,871	16,323	20,701	26,253	
Highly skilled	2,106	2,671	3,387	4,296	
Total demand for skilled jobs	34,401	43,627	55,328	70,167	19
Agriculture:					
Semi-skilled	31,506	30,956	30,415	29,884	
Skilled	21,004	20,637	20,277	19,923	
Highly skilled	10,502	10,319	10,138	9,961	
Total demand for skilled jobs	63,012	61,912	60,830	59,768	16
Banking, financial services & insurance					
Semi-skilled	3,389	5,130	7,765	11,753	
Skilled	1,945	2,945	4,457	6,747	
Highly skilled	7,217	10,924	16,536	25,029	
Total demand for skilled jobs	12,551	18,999	28,758	43, 529	12
All sectors:					
Semi-skilled	84,055	95,954	111,489	131,848	
Skilled	92,670	112,879	139,281	173,797	
Highly skilled	30,507	37,474	47,334	61,349	
Total demand for skilled jobs	207,231	246,308	298,104	366,994	100

Source: E&Y Analysis

Table 61: Skill-wise demand for sectors where high demand is foreseen - Kendrapara District

On the supply aspect, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

During the period 2011-2026, the demand supply gap of the district is expected to widen by 1.2 lakh in totality (assuming that the current levels of available educational infrastructure and utilization remain the same). The district is expected to create additional requirement of approximately ~78,000 skilled, ~31,000 high skilled and ~7,000 semi-skilled jobs during the next 15 years.

A major portion of the need for this incremental job requirement for **skilled labor** is expected to come from the education & skill development (26 percent); healthcare (26 percent) and tourism, travel, hospitality & trade (16 percent) sector.

As far as the **highly skilled** workforce is concerned, the highest requirement is expected in case of banking, financial services & insurance jobs (58 percent) and IT & ITeS (19 percent).

Amongst the **semi-skilled** workforce, the district is expected to witness an incremental gap requirement in tourism, travel, hospitality & trade (41 percent); banking, financial services & insurance (20 percent); and media & entertainment (20 percent) sectors.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(441)	(585)	(690)	(1,716)
Auto & Auto Components	2	4	6	12
Chemical & Pharmaceuticals	6	10	14	30
Construction materials & building hardware	163	228	297	688
Electronics & IT Hardware	15	22	30	67
Food Processing	45	47	49	141
Furniture & Furnishings	13	25	36	74
Leather & Leather Goods	1	1	1	3
Gems & Jewelry	0	0	0	0
Organized Retail	0	0	0	0
Textile	3	11	18	32
Unorganized sector	8	13	18	39
Banking, Financial Services & Insurance	4,390	7,373	12,016	23,779
Building, Construction & Real Estate Services	5	69	122	196
Education & Skill Development	5,578	7,359	9,678	22,615
Healthcare	5,040	6,822	9,144	21,006
IT & ITES industry	4,345	6,129	8,456	18,930
Media & Entertainment	2,098	3,593	5,472	11,163
Tourism, travel, hospitality & trade	3,019	5,670	9,001	17,690
Transportation, logistics, warehousing & packaging	(119)	100	317	298
Total	24,171	36,890	53,984	115,045

Source: E&Y Analysis

Table 62: Total incremental demand supply gap for skilled jobs by sectors- Kendrapara District

10.17.5 Development potential and Stakeholder Perception

The topography of the district plays a role in determining what kind of income generating activities the local population adopts. In case of Kendrapara, the presence of low lying land in the majority of the area and the close proximity of Bay of Bengal has made agriculture and fishing the mainstay of income generation. Due to the same reason, it is also a district prone to repeated floods and cyclones. Almost 50 percent of the population in the district is involved in agrarian activities. Even though this is a sizeable proportion, there is a shortage of farm laborers who can be employed by the cultivators. The main crop is paddy and its cultivation is mainly subsistence oriented. Due to biannual incidence of floods, the crops get destroyed and hence farmers have not been able to increase variety or the amount of yield. To add to this the farmers also face a problem of the pests and rodents which lead to huge losses for the farmers. The *Krishi Vigyan Kendra* conducts around 72 trainings per year, according to the agriculture department officials, in which the farmers are sensitized about new fertilizers and crops like pulses, jute, sugarcane and vegetables which they could cultivate. Both the, agricultural and horticultural department officials mentioned that the main problem they faced was resistance of the farmers in moving away from archaic farming techniques. Farm mechanization is not an option for the farmers as capital investment required for it is unavailable.

Being a costal district, fish capturing and prawn breeding has potential to be a profitable venture. Though the district has a significant proportion of brackish water bodies, fishing is practiced more than prawn breeding though the latter is more profitable. The district fisheries office opined that one of the reasons for this was the prevalence of viral disease named `white dot' disease which inflicts the prawns. The absence of well planned irrigation and drainage was leading to increased incidence of this disease, which do not have a definitive curative treatment. Lack of technical knowledge and the processes to be followed to procure finance for starting a new activity prevents farmer from taking up prawn breeding.

Kendrapara district has no formal organized industry sector. Sporadic presence of small scale production of cement based goods is the only industry activity. One of the main reasons for this is the absence of production of large quantity of goods that can be used as raw material in establishing a supply chain in the district. According to the district industry centre officials setting up any industry would mean that the raw material would need to be procured from neighboring districts. This would have a cascading effect on the production cost in any industry. Also the fact that most of the land is low lying and prone to floods, makes the maintenance of industry machinery an expensive overhead. These factors have been proving to be a huge disincentive for industry to be set up in the district. The aforementioned factors notwithstanding, the district officials have planned establishment of medium scale food processing industry and plastic industry, the proposals of which are in the pipeline.

Kendrapara has a single ITI which trains its 25 students every year in plumbing skills. ost of the students from this institute get jobs in mega cities like Mumbai, Delhi etc. The jobs in these cities require them to possess a certificate from government run ITI. Almost none of them perceive any livelihood opportunity in Kendrapara. The main reason for this is the absence of avenues where plumbing skills would be useful.

There are 17 private industrial training centers (ITC) in Kendrapara, but there was dissatisfaction with regard to the training being imparted through this institute. The government has recently sanctioned another ITI establishment to Kendrapara district.

In the health department, there is an acute shortage of medial officers and nurses in the district. Almost 60 percent of the primary health care centers have no medical officer in charge of them. The reason for this is perceived to be low remuneration.

All in all, it can be said that Kendrapara with its large expanse of fertile soil and good connectivity to cities can be seen as large producer and warehouse of vegetables and fruits provided infrastructural issues were tackled quickly.

- **Primary sector** – Mostly agrarian population. High production of vegetables and fruits, although productivity needs to improve through appropriate skill development and mentoring. Good potential to develop the fisheries sector.
- **Secondary Sector** – More food processing units can be set up for value addition of vegetables and fruits grown there.
- **Service Sector** – Health care workers are needed to improve the medical services for the population. Besides this other skills needed to provide services concerning daily lives would be useful since surrently there are no such facilities in the district. This would include repair work, electrician, computer operators

10.18 Keonjhar

The district of Keonjhar, lying between 21°1'N and 22°10'N latitude and 85°11' E to 86°22' E longitude presents a panorama of many millennia, both from the geographical and anthropological point of view. Spread over an area of 8,303 Sq. Kms, it is as varied as the whole of Odisha with water-falls of various sizes and roaring gorges with rolling boulders spreading onwards to the plains of Anandapur which are a rare combination to be found elsewhere. Administratively, the district is divided into 3 subdivisions, 13 blocks, 286 Gram Panchayats and 2069 villages. Keonjhar is surrounded by Angul and Dhenkanal Districts in the south, Bhadrak and Balasore in the east, Deogarh and Sundargadh in the west and Mayurbhanj in north.

Map Courtesy: Maps of India

District Information	Keonjhar	Odisha	Source
Area (in Sq Km)	8,303	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	5.33% (4)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	13	**309**	Census 2001
No of GPs	286	**6234**	Census 2001
Total no of inhabited villages	2069	**47529**	Census 2001
Forest area as % of total geographic area	37.35%	**37.66**	Census 2001

Figure 110: District Map of Keonjhar

10.18.1 Demography

As per Census 2011 (Initial provisional data), Keonjhar has a population of 18.03 lakhs of which males and females were 9.07 lakhs and 8.95 lakhs respectively. There is a change of 15.42 percent in the population compared to population as per 2001 census. In terms of population, the district constitutes 4.3 percent of the total population of the state and is ranked 9th highest in the state. The initial provisional data (Census 2011) suggest a population density of 217 in 2011. With regards to sex ratio, the district fares well as compared to other districts and the state average. The sex ratio for Keonjhar as per 2011 provisional census figures is 987 females per 1000 males, much above the state average of 978 females per 1000 males.

The district is predominantly tribal. STs constitute 44.5 percent of the total population while the SCs constitute approximately 11.62 percent of the total population. With almost 13.64 percent urban population, Keonjhar is the 10th most urbanized District in Odisha (as per census 2001) and the population in the working age group (15-59 years) constituted 58.05 percent of the total population. Work participation rate of the district is 39.77 percent. Out of the total workers 63.61 percent are main workers and 36.39 percent are marginal workers.

HDI of Keonjhar is 0.530 and ranks 24th in the State. In terms of GDI, the district is 20th in the State.

Population	Keonjhar	Odisha	Source
Total population (in lakh)	18.03	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	9.07	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	8.96	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	4.30% (8)	**NA**	Census 2011 provisional figures
Density of population	217	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	15.42%	**13.97%**	Census 2011 provisional figures
Urban population %	13.64%	**14.99%**	Census 2001
SC population %	11.62%	**16.53**	Census 2001
ST population %	44.50%	**22.13**	Census 2001
Sex ratio	987	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	58.05%	**58.40%**	Census 2001
Worker participation rate	39.77%	**40.03**	Census 2001
Share of primary sector to total workers	69.40%	**64**	Census 2001
Proportion of agriculture laborer in workforce	36.39%	**34.53**	Census 2001
Human Development Indicators	**Keonjhar**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.530 (24)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) (Ranking)	0.504 (20)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	26211 (3)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.415 (19)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 63; Socioeconomic indicators for Keonjhar District

10.18.2 State of Education

Average literacy rate of Keonjhar in 2011 (as per provisional census figures) is 69 percent compared to 59.24 percent in 2001. Gender wise male and female literacy is 79.22 percent and 58.7 percent respectively. For 2001 census, same figures stood at 71.99 and 46.22 showing a proportionate increase in literacy level for both the groups. In terms of absolute numbers, total literate in Keonjhar District were 10.69 lakhs of which males and females were 6.16 lakhs and 4.53 lakhs respectively as per 2011 census (provisional data). What is a matter of concern about the state of education in Keonjhar is that out of the total children in school going age 7 percent children were out of school in 2009, which is a very high proportion.

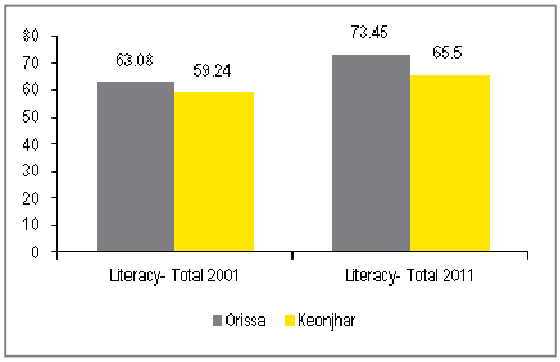


Figure 111: Literacy Rate- Keonjhar District

For higher education there are 45 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were7264, 2402 and 768 respectively in 2011.

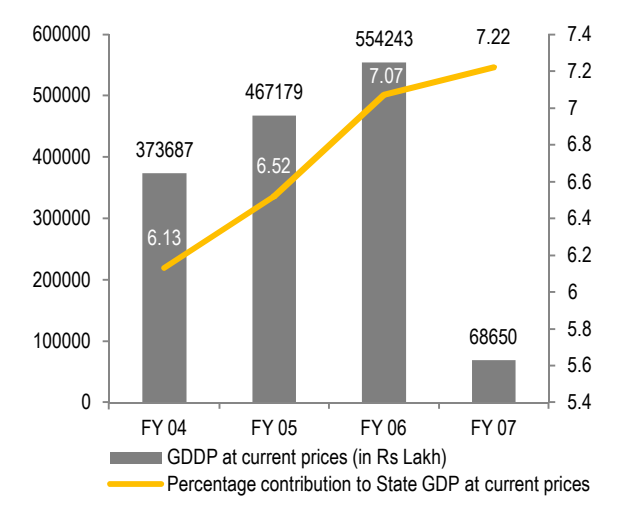
Admission in the current years shows that demand for commerce courses is the minimum. Almost 33 percent of the seats in commerce remained vacant at the end of the admission period. There are 27 degree colleges. The DHE figures on vacancy shows that at least 20 percent of the total seats in the degree colleges remained vacant.

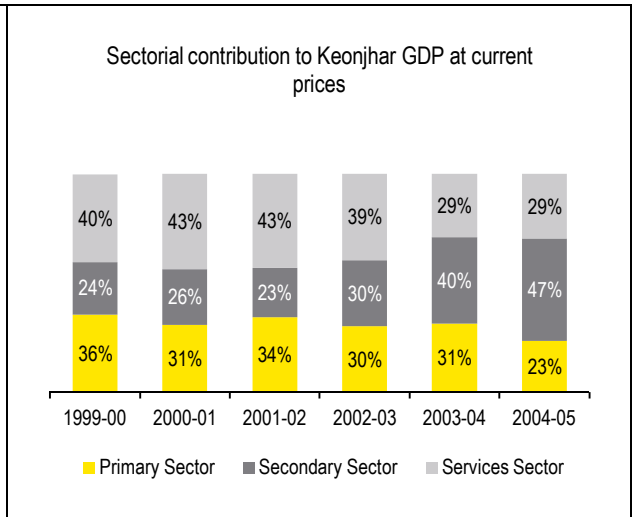
For technical education, Keonjhar has a private engineering (degree) college. The college offers various courses and has a combined intake capacity of approximately 120 students per year. Major courses offered include, mining engineering, electrical engineering and mechanical engineering. Odisha School of Mining Engineering, Keonjhar is a Government Institution of national repute under Government of Odisha, Industries Department. The Institution was started in the year 1956 to impart diploma education in Mining Engineering, being only one in the state as well as the Eastern Region. In addition to engineering degree colleges, there is a government polytechnic centre offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 550 students per year. Major courses are electrical, mechanical and civil. The remaining seats are distributed among other courses which include mining, metallurgy and drilling. Keonjhar does not have any medical colleges, pharmacy colleges, homeopathic colleges, ayurvedic and nursing colleges at present.

For Vocational Training, there is a Government ITI at Barbil, located 80 Km from Keonjhar town. The ITI established in 1964 offers 7 courses covering 205 students annually. Among the courses, fitter, welder and refrigeration and air conditioning are the major ones with maximum number of seats. There are 20 private ITCs covering 4 different courses viz. fitter, electrician, COPA and cutting & sewing. Admission details as obtained from SCEVT suggest that in 2010, 22 percent seats remained vacant in the government ITI while there was 42 percent vacancy in the private ITCs.

10.18.3 Economic Profile

With an average annual growth rate of 11.7 percent for the period 2000-01 to 2006-07, Keonjhar is top most performing district in terms of economic growth. The district has a high per capita income constitute 4.66 percent of the State per capita income. In terms of share of State GDP, Keonjhar has shown a steady increase through the years. In 2007, the district contributed 7.22 percent of the State GDP. Keonjhar derives its gross domestic products from agriculture, industry and services. The contribution of industry sector to total District GDP is 47 percent followed by services (29 percent) and agriculture (23 percent) in 2004-05.





Source: Economic Survey, Odisha: 2010-11 and Directorate of Economics and Statistics

Figure 112: Gross District Domestic Product (at current prices) of Keonjhar

Agriculture

Almost 69 percent of the population in Keonjhar depends on agriculture. While people of Keonjhar largely depend upon agriculture as their primary means of livelihood. More than one third of total work force is comprised of agricultural laborers. Keonjhar is ranked 14th in the State in terms of number of agricultural laborers. As per Odisha agriculture statistics report 2008-09, thirty six percent of the total geographical area or almost 298 thousand hectare of land was brought under cultivation in the district. Paddy is the primary crop with a gross cropped area of 207.16 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops.

Performance of Keonjhar district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 17th with a per capita agricultural output of 1236.Food grains contribute highest to the total agricultural output of Keonjhar with a value of 312.06 (2008-2009), followed by cereals (236.94)and vegetables with (58.43) (all figures in thousand metric tonnes). With an average landholding of 1.13 hectare, landholding pattern in the District depicts that majority (approximately 60 percent) of the farmers have more than a hectare of land holding.

Industries

Keonjhar District has a huge potential for development of Industries because it is highly rich in mineral resources and has vast deposits of iron, manganese and chrome ores. Keonjhar is one of the premier mineral producing districts in Odisha. The district occupies a prominent place in the mineral map of the Country. Iron ore formations occupy most part of the district which can be traced from the Jharkhand border in the north to the Jajpur border in the South. Extensive deposits of Manganese ore are found in *Thakurani* and *Joda* East hills of *Barbil*. Good deposits of Chromite, an important and strategic mineral are found in Boula area near village *Nuasahi* of Anandapur sub-division. There are also some other mineral deposits in the district such as Quartzite, Bauxite, Gold, Pyrophillite and Lime stone. The District is well connected with other important cities and industrial centers and ports through a good network of national and state highways. The district of Keonjhar is in terms of Investments into large and medium scale industries, Keonjhar is currently ranked 9th in the State, with an investment of Rs. 83.4 billion by 2010 and which constitute 9.5 percent of the total investment in large and medium scale industries. Some of major large scale industries mineral based industries include the "Kalinga Iron Works", Barbil and the "Ferro-Manganese Plant", Joda.

MSME investment in Keonjhar was 10 percent of the total investments made in the State till March 2010. Amongst the MSME industries, the highest investment is made for glass and ceramics followed by engineering and metal based industries. The other industries include forest, wood based, textiles, livestock, miscellaneous manufacturing and electrical and electronics.

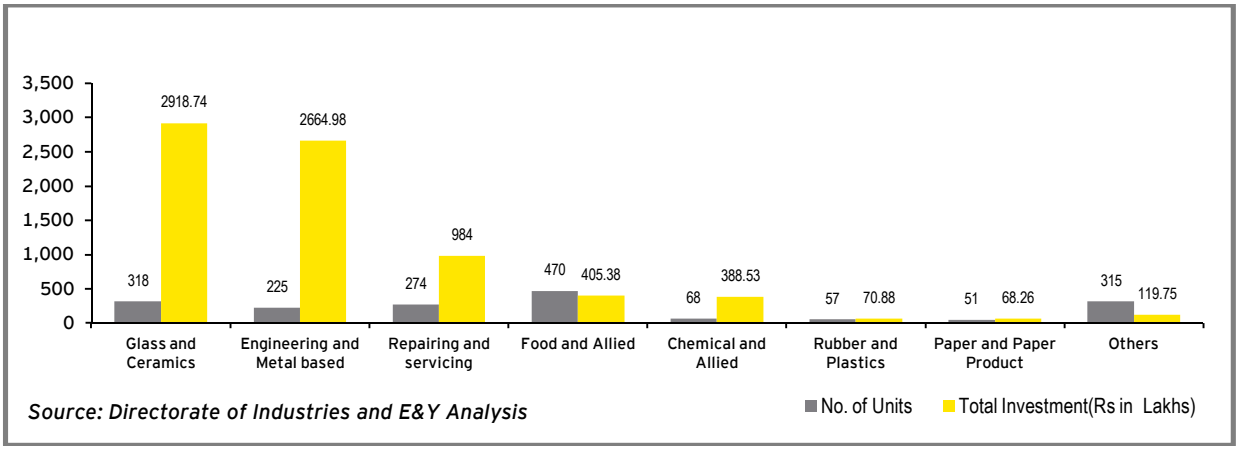
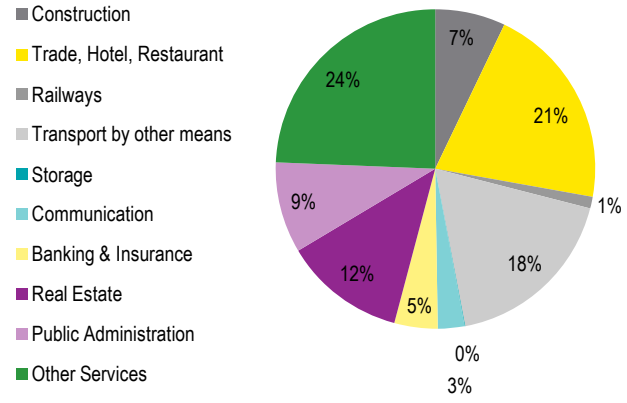


Figure 113: MSME Investments in Keonjhar till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Keonjhar GDP, the industry sector remains the most important contributor constituting 47 percent of the district GDP whereas the contribution of the service sector to the district GDP is about 29 percent. The break up service sector contribution to GDDP is shown below.



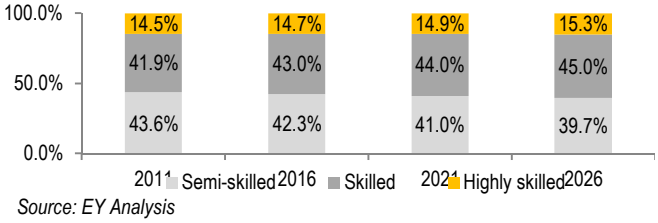
As depicted in the chart, other services are the leading contributor to the service sector (24 percent) followed by trade, hotel and restaurant (21 percent), transport by other means (18 percent) and real estate (12 percent). Transportation including railways is a major contributor of GDP of Keonjhar economy.

Source: Planning Commission, Government of India

Figure 114: Composition of Service Sector- Keonjhar 2004-05

10.18.4 Skill Gap Assessment for Keonjhar District

The total workforce demand for skilled jobs in Keonjhar district is expected to grow from the present levels of 2.5 lakhs in 2011 to 4 lakhs in 2026. The total workforce demand created in 2026 is expected to be dominated by the tertiary sector (58 percent), followed by primary (21 percent) and secondary (21 percent) sectors.



Source: EY Analysis

Figure 115: Proportion of demand for skilled jobs by skill categories- Keonjhar District

The most notable sectors which are expected to create a demand for skilled workforce in 2026 is agriculture (0.8 lakh); tourism, travel, hospitality & trade (0.5 lakh), construction materials & building hardware (0.5 lakh); education & skill development (0.3 lakh); healthcare (0.3 lakh).

The CMIEs Capex database and secondary research shows that majority of the capital projects announced in the district in the last two years are in the mining and power generation sectors. These sectors are expected to grow at a significant pace, and produce a commensurate increase in the labor demand. In light of these findings, suitable growth rates for these sectors have been factored in to arrive at skill-wise demand across the sectors.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	41,837	41,784	41,732	41,680	
Skilled	27,891	27,856	27,821	27,786	
Highly skilled	13,946	13,928	13,911	13,893	
Total demand for skilled jobs	83,674	83,568	83,464	83,359	21
Tourism, travel, hospitality & trade					
Semi-skilled	14,435	18,306	23,215	29,441	
Skilled	9,565	12,130	15,384	19,509	
Highly skilled	1,565	1,985	2,517	3,192	
Total demand for skilled jobs	25,565	32,421	41,116	52,142	13
Construction materials & building hardware					
Semi-skilled	12,729	14,485	16,483	18,756	
Skilled	15,993	18,199	20,709	23,566	
Highly skilled	2,937	3,343	3,804	4,328	
Total demand for skilled jobs	31,659	36,027	40,996	46,650	12
All sectors:					
Semi-skilled	110,293	122,556	137,808	156,922	
Skilled	106,032	124,424	147,841	177,764	
Highly skilled	36,780	42,455	50,109	60,555	
Total demand for skilled jobs	253,105	289,435	335,758	395,241	100

Source: E&Y Analysis

Table 64: Skill-wise demand for sectors where high demand is foreseen - Keonjhar District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc. for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.9 lakh during the period 2011-2026.

For Keonjhar, the proportion of incremental skilled human resource is expected to account for 72 percent of this widening gap, followed by highly skilled jobs (27 percent) and semi-skilled jobs (1 percent).

The **skilled** workers would be increasingly required in case of education & skill development (23 percent); healthcare (23 percent); IT & ITeS (14 percent) and construction materials & building hardware (11 percent).

Amongst the **highly skilled** jobs, a higher requirement is expected in case of banking, financial services & insurance jobs (45 percent); IT & ITeS (19 percent) and education & skill development (7 percent).

The incremental demand supply gap for the skilled jobs is dependent on sectors, and varies according to the level of economic activity witnessed by them. The education & skill development sector is expected to account for 19 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from skilled (89 percent) and highly skilled (11 percent) workers for the district.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(33)	(47)	(59)	(139)
Auto & Auto Components	6	14	22	42
Chemical & Pharmaceuticals	32	53	76	161
Construction materials & building hardware	1,785	2,616	3,524	7,925
Electronics & IT Hardware	22	34	47	103
Food Processing	591	660	730	1,981
Furniture & Furnishings	165	358	545	1,068
Leather & Leather Goods	3	4	4	11
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	0	31	60	91
Unorganized sector	11	21	30	62
Banking, Financial Services & Insurance	2,390	4,054	6,681	13,125
Building, Construction & Real Estate Services	(10)	20	46	56
Education & Skill Development	3,845	5,213	7,002	16,060
Healthcare	3,409	4,756	6,526	14,691
IT & ITES industry	2,974	4,296	6,044	13,314
Media & Entertainment	1,255	2,299	3,656	7,210
Tourism, travel, hospitality & trade	1,592	3,337	5,614	10,543
Transportation, logistics, warehousing & packaging	(313)	0	331	18
Total	17,727	27,718	40,879	86,324

Source: E&Y Analysis

Table 65: Total incremental demand supply gap for skilled jobs by sectors- Keonjhar District

Another major sector where the incremental demand supply gap is expected to widen is healthcare (17 percent). The incremental human resource gap in this sector largely comprises of need for skilled (96 percent) and highly skilled human resource (4 percent).

Significant incremental requirement is also expected to be witnessed in services like IT & ITeS (15

percent); banking, financial services & insurance (15 percent) and tourism, travel, hospitality & trade (12 percent). A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.18.5 Development potential and Stakeholder perception

Keonjhar is largely rural with significant proportion of tribal population. The literacy level of the tribal population is much lower than the overall literacy level of the district making them less equipped to benefit from the existing facilities for skill development that require a certain level of education. There is only ITI in the district. The private training providers charge exorbitant fee much beyond the reach of most tribal youth. Yet during discussion with them their aspiration is to get jobs in the industry since they find it more lucrative and prestigious than working in the fields. They are also keen to learn other skills like electronics, mobile repairing, computer skills and driving. There is severe shortage of skilled people in the local industry. They often need to source them from other districts. Simple requirements like drivers are difficult to find. The training facilities are mostly available for light motor vehicles. Usually the youth start as helpers with truckers and gradually learn to drive.

Being rich in bauxite, iron and chromite ores, mining is widespread. A number of ancillary industries have come up in the district with many more in the pipeline. As per the District statistical handbook (2007) 188 small scale industries had been established in the year 2006-7. According to the local industrialists some downstream industries that have the potential to develop are steel casting, fly ash brick making, sheet metal work and refining of the used lubricants. A large proportion of workforce are unskilled who work as loaders, security guards who are usually sourced from within the district. There is great demand for fitters, welders and electricians who are very difficult to find in Keonjhar and are usually recruited from other districts. The only Government ITI located in Barbil was visited by the team. The Jindal group had been associated with the ITI recently and was struggling to strengthen the ITI since there was shortage of faculty. The infrastructure required upgradation. Some courses being offered at the ITI found no takers e.g. Stenography. Although the ITI had a lot of land available with them it was not being utilized optimally. It is not easy to start new courses or modify existing ones since the process to do so was lengthy.

Odisha School of Mining was established way back in the year 1956 to impart education in mining engineering. It diversified in 1988 by adding diploma courses in mechanical, electrical and drilling engineering and in 1992 metallurgical engineering. The school had good links with all the local industries and students get jobs easily since the demand was much more than the supply. Since this is an upcoming district for industrial development, there is likelihood of an increase in demand for different services like hospitality.

Keonjhar also has about 8 handicraft clusters – stone carving, terracotta, jute craft, art, textiles, appliqué, brass and bell metal work. They receive training under the SJSY scheme. It was shared that there were about 14 handicraft industrial cooperative societies in the district but were not able to function effectively because of shortage of funds. Artisans found it difficult to get loans. Keonjhar has silk plantations of the famous tussar, ari and mulberry. However they were found to be still using the traditional methods of reeling, spinning and weaving. These processes were time consuming making silk production less cost effective. Moreover limited opportunities for marketing made them depend on middlemen who did not give them sufficient returns. A co-operative of

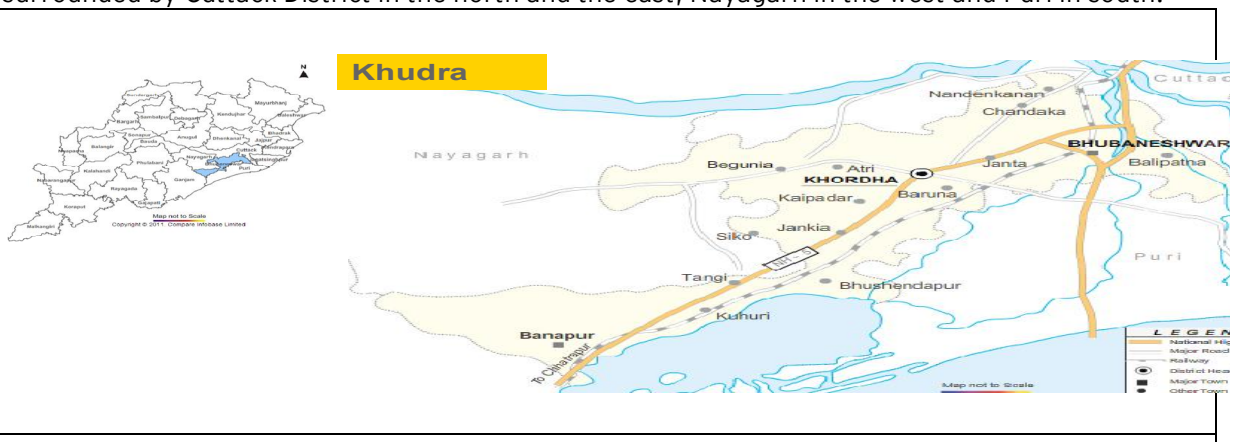
artisans had not been very successful although the SHG based groups had found greater success in purchase of raw material as well as marketing. The weavers required training in the use of modern technology and design development. Some of them used to receive training in all stages of silk rearing from a vocational training college located in Phulbani district. The college had closed down thus limiting opportunities for skill development.

As shared a large section of population of the district is rural based. About 50 percent population is tribal population. Maize, paddy, mustard, sugarcane and jackfruit are grown. There are no food processing units in the area nor is any related training imparted.

- **Primary sector** – Skills to improve agricultural productivity and take up integrated farming
- **Secondary sector** – Offers immense scope for skill development at all levels including fitters, welders, electricians. A number of ancillary units would be set up which will require skilled human resource. Silk production can also be strengthened and handicraft clusters developed to increase opportunities for income generation.
- **Service sector** – With the growth of industries there would be several opportunities of skill development in the service sector – drivers (HMV), banking services, construction, repair and servicing etc.

10.19 Khurda

Khurda District is spread over an area of 2813 Sq Km which forms approximately 1.8 percent of the total geographical area of the State. Administratively, the district is divided into 2 subdivisions (Khurda and Bhubaneswar), 10 blocks, 168 Gram Panchayats and 1358 villages. Khurda is surrounded by Cuttack District in the north and the east, Nayagarh in the west and Puri in south.



Map Courtesy: Maps of India

District Information	Khurda	Odisha	Source
Area (in Sq Km)	2,813	155,707	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.81% (25)	100 (NA)	Census 2011 provisional figures
No of CD blocks	10	309	Census 2001
No of GPs	168	6,234	Census 2001
Total no of inhabited villages	1,358	47,529	Census 2001
Forest area as % of total geographic area	22.06%	37.66 %	Census 2001

Figure 116: District Map of Khurda

10.19.1 Demography

As per Census 2011 (Initial provisional data), Khurda has a population of 22.46 lakhs of which males and females were 11.67 lakhs and 10.79 lakhs respectively. There is a change of 19.65 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 5.36 percent of the total population of the state. The initial provisional data (Census 2011) suggest a population density of 799 in 2011 making Khurda the most densely populated district of Odisha. With regards to sex ratio, the district fares poorly compared to other districts and the state average. The sex ratio for Khurda as per 2011 provisional census figures is 925 females per 1000 males, much below the State average of 978 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 13.54 percent of the total population while STs forms only 5.18 percent of the total population. With almost 43 percent urban population, Khurda is the most urbanized District in Odisha.

As per 2001 census, the population in the working age group constituted 62.57 percent of the total population. The population in the age group 0-4 years constitutes 8.29 percent and 5-14 years comprise 20.89 percent respectively. Work participation rate of the district is 30.63 percent. Out of the total workers 83.51 percent are main workers and 16.49 percent are marginal workers. With a human development index (HDI) of 0.736, Khurda ranks number one in the State.

Population	Khurda	Odisha	Source
Total population (in lakh)	22.46	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	11.67	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	10.79	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	5.36% (5)	**NA**	Census 2011 provisional figures
Density of population	799	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	19.65%	**13.97%**	Census 2011 provisional figures
Urban population %	42.94%	**14.99%**	Census 2001
SC population %	13.54%	**16.53**	Census 2001
ST population %	5.18%	**22.13**	Census 2001
Sex ratio	925	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	62.57%	**58.38%**	Census 2001
Worker participation rate	30.63%	**40.03%**	Census 2001
Share of primary sector to total workers	30.09%	**64**	Census 2001
Proportion of agriculture laborer in workforce	16.35%	**34.53**	Census 2001
Human Development Indicators	**Khurda**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.736 (1)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.632 (5)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	24578 (6)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.507 (10)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 66: Socioeconomic indicators for Khurda District

10.19.2 State of Education

The literacy rate of Khurda district is better than the state average but it lags behind many of the coastal districts. Average literacy rate of Khurda in 2011 (as per provision census figures) is 87.51 percent compared to 79.59 percent in 2001. Gender wise male and female literacy is 92.55 percent and 82.06 percent respectively. For 2001 census, same figures stood at 87.9 and 70.36 showing a proportionate increase in literacy level for all the groups in Khurda District over last 10 years. Out of the total number of children in school going age, 1.722 percent children were out of school in 2010.

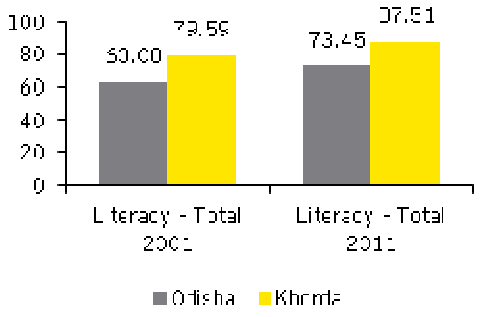


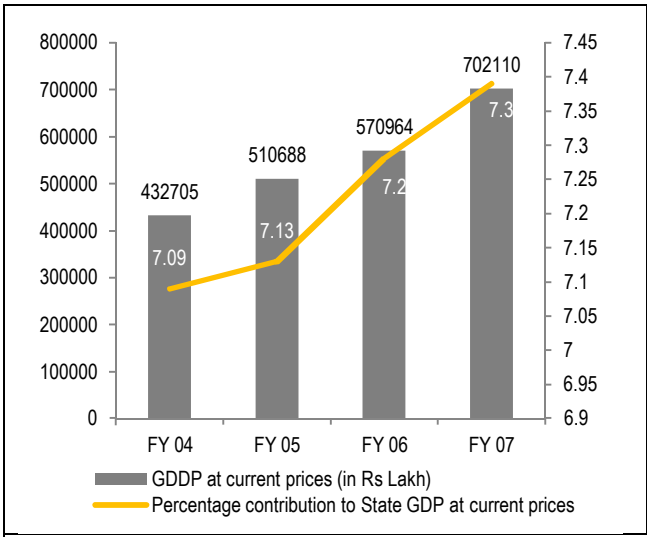
Figure 117: Literacy rate- Khurda District

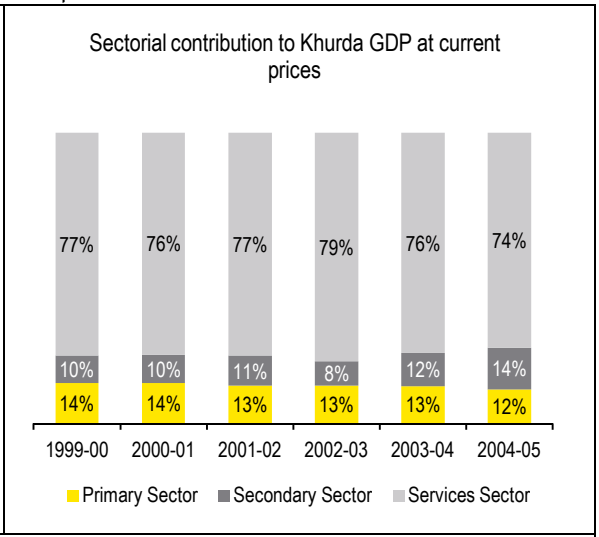
There are 125 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 11328, 16128 and 3600 respectively. At the degree level, there are 98 colleges which offer various courses including some professional courses like B. Tech, MBBS and MBA.

Bhubaneswar is the hub for technical and professional education in the district and State. Khurda district has 18 private engineering (degree) colleges. Together, these Engineering colleges offer various courses and have a combined intake capacity of approximately 6340 students per year. Major courses offered include, electronics & telecom engineering, computer science & engineering, information technology and various other areas. In addition to engineering degree colleges, there are 6 polytechnic centre offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 1560 students per year. Major courses are electrical and mechanical, civil. Khurda does not have any medical colleges.
For vocational training, there is one Government ITI center for vocational training, covering 3 trades. The ITI has been upgraded to centre for excellence in 2010. Major courses offered are, IT & ESM, electronic mechanics and dress making. There are 65 private ITCs offering training in fitter, electrician and data entry operator courses.

10.19.3 Economic Profile

As per economic survey 2010-11, Khurda is among the top three districts in the State with a average annual growth rate of 9.5 percent for the period 2000-01 to 2006-07.The district contributes almost 7.4 percent of the State's GDP . Contribution of agriculture is just 12 percent of the GDDP while the services sector contributes almost 74 percent of the district GDP.





Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 118: Gross District Domestic Product (at current prices) of Khurda

Agriculture

Being a highly urbanized district the people of Khurda largely depend upon services as their primary means of livelihood. Therefore there is a small percentage of total work force (only 30 percent) is either cultivators or agricultural laborers.
As per Odisha agriculture statistics report 2008-09, 46 percent of the total geographical area or almost 304 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 103.8 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops.
Performance of Khurda district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 29th with a per capita agricultural output of 911. Vegetables contribute highest to the total agricultural output of Khurda with a value of 364.25 (2008-2009), followed by food grains (190.66) and rice

with (163.1) (all figures in thousand metric tonnes).
With an average landholding of 0.93 hectare, landholding pattern in the District is highly skewed with majority (more than 69 percent) of the farmers having only marginal (less than a hectare) of land holding.

Industries

Khurda District is not a very industrialized state as majority of the contribution to GDDP comes from the service sector. In terms of Investments into MSMEs, Khurda is ranked low in the State, with an investment that constitutes 0.18 percent of the total investment in large and medium scale industries. Some of major large scale industries that have invested in this region are mango pulps, repairing and overhauling of trains, breweries, granite slabs etc.

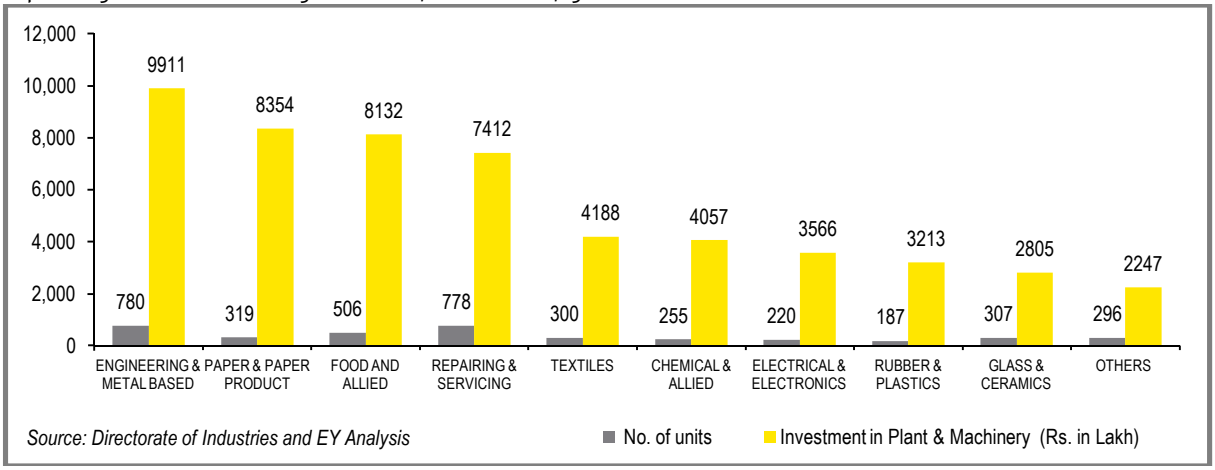
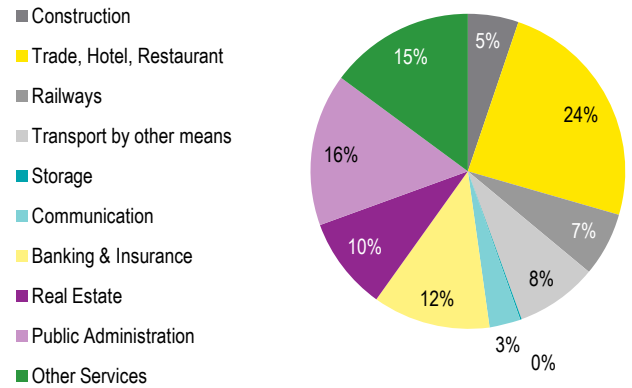


Figure 119: MSME Investments in Khurda till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Khurda GDP, the service sector remains the most important contributor constituting 74 percent of the district GDP. The contribution of various sectors to DGDP is shown below.



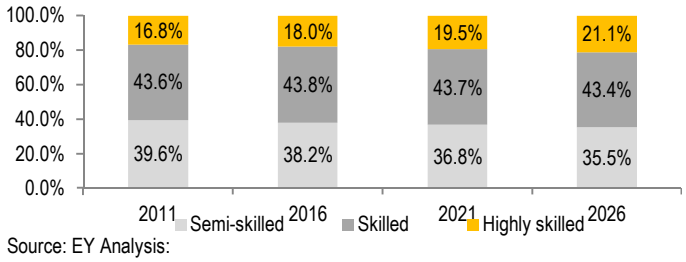
As depicted in the chart, trade, hotel and restaurant is the leading contributor to the service sector (24 percent) followed by public administration (16 percent), other services (15 percent), banking & insurance (12 percent) and real estate (10 percent). Transportation including railways is a major contributor of GDP of Khurda economy.

Source: Planning Commission, Government of India

Figure 120: Composition of Service Sector- Khurda 2004-05

10.19.4 Skill Gap Assessment for Khurda District

Over the next 15 years, the total workforce demand for skilled jobs in Khurda district is expected to grow from present levels of 3.9 lakhs in 2011 to 8.2 lakhs in 2026. An increasing shift towards highly skilled jobs is expected during this 15 year time horizon. The total workforce demand is expected to be dominated by the tertiary sector (90 percent), followed by the primary sector (~5 percent) and secondary sector (~5 percent).



Source: EY Analysis:

Figure 121: Proportion of demand for skilled jobs by skill categories- Khurda District

Some of the prominent sectors from which majority of the workforce demand for skilled jobs in 2026 is expected include banking, financial services & insurance (1.9 lakh); tourism, travel, hospitality & trade (1.7 lakh), education & skill development (0.8 lakh); healthcare (0.8 lakh) and IT & ITes industry (0.8 lakh). As per the CMIEs Capex database and secondary research, major capital projects have been announced in sectors like food processing, IT, retail and infrastructure. The resultant increased industry growth rates including these sectors have been factored in to arrive at skill-wise demand across the sectors.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Banking, financial services & insurance					
Semi-skilled	14,884	22,530	34,103	51,620	
Skilled	8,545	12,934	19,577	29,634	
Highly skilled	31,698	47,980	72,626	109,931	
Total demand for skilled jobs	55,127	83,444	126,036	191,185	23
Tourism, travel, hospitality & trade					
Semi-skilled	45,904	58,215	73,827	93,627	
Skilled	30,418	38,576	48,922	62,042	
Highly skilled	4,978	6,312	8,005	10,152	
Total demand for skilled jobs	81,300	103,103	130,754	165,821	20
All sectors:					
Semi-skilled	156,519	189,513	232,711	289,761	
Skilled	172,305	217,423	276,478	354,009	
Highly skilled	66,169	89,550	123,323	172,368	
Total demand for skilled jobs	394,993	496,485	632,512	816,138	100

Source: E&Y Analysis

Table 67: Skill-wise demand for sectors where high demand is foreseen- Khurda District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap

for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for highly skilled and skilled jobs is expected to widen by more than 1.7 lakhs during the period 2011-2026.

While there is an incremental requirement of ~85,000 **highly skilled workforce** during the next 15 years, around 83,000 workers would be needed for **skilled jobs.** The district is expected to witness a decrease in requirement of semi-skilled workforce during the next 15 years.

Around 74 percent of this incremental gap for highly skilled workforce would comprise of workforce from the banking, financial services & insurance followed by IT & ITes (11 percent) sector.

The **skilled** workers' proportion in the incremental gap would be increasingly required in case of education & skill development (23 percent), healthcare (23 percent); and tourism, travel, hospitality & trade (17 percent) industries.

By sector, the banking, financial services & insurance sector is expected to account for 45 percent of the incremental demand supply gap. The incremental gap in this sector is expected to come from highly-skilled and skilled workers.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	15	(165)	(299)	(449)
Auto & Auto Components	(77)	59	197	179
Chemical & Pharmaceuticals	(3)	14	32	43
Construction materials & building hardware	39	509	990	1,538
Electronics & IT Hardware	2	60	119	181
Food Processing	102	161	216	479
Furniture & Furnishings	(7)	22	48	63
Leather & Leather Goods	1	2	3	6
Gems & Jewelry	0	0	0	0
Organized Retail	0	0	0	0
Textile	(115)	18	152	55
Unorganized sector	(6)	9	21	24
Banking, Financial Services & Insurance	9,243	21,338	40,715	71,296
Building, Construction & Real Estate Services	(256)	(2)	223	(35)
Education & Skill Development	3,669	7,250	11,910	22,829
Healthcare	2,673	6,238	10,894	19,805
IT & ITES industry	2,752	6,389	11,121	20,262
Media & Entertainment	(396)	2,737	6,666	9,007
Tourism, travel, hospitality & trade	(2,299)	4,336	12,672	14,709
Transportation, logistics, warehousing & packaging	(1,230)	(329)	566	(993)
Total	14,109	48,643	96,242	158,994

Source: EY Analysis

Table 68: Total incremental demand supply gap for skilled jobs by sectors- Khurda District

The incremental demand supply gap is also expected to widen for education & skill development (14 percent). The incremental human resource gap in this sector largely comprises of need for skilled (84 percent) and highly skilled workers (16 percent).

Significant incremental requirement is also expected to be witnessed in services such as IT & ITes (13 percent) and healthcare (12 percent) sectors.

10.19.5 Development potential and stakeholders perception

Khurda is the most urbanized Districts of Odisha and is home to the State Capital of Bhubaneswar. In terms of resources and infrastructure, the district is well endowed. Khurda is well connected with rest of India through rail, air and road networks. It has one of highest literacy rates in the State and is the hub for technical and professional education. The district is equipped with state of the art infrastructure and services and is the economic and political center of the State.

With rapid urban development and subsequent conversion of agriculture land for commercial purposes, dependence on Agriculture and its contribution to the District economy has been low. This however does not undermine the potential for developing demand based crops especially vegetables, fruits, dairy products, fish and meat etc in the rural areas for catering to the needs of the growing urban population. In addition to these demand driven crops, cashew nut plantation is practiced highly in the district and there is a need for establishing more cashew processing units to absorb additional manpower for self employment. The agriculture sector faces several constraints like limited reach and access of technical input on modern farming and lack of irrigation facilities etc which should be the areas that requires attention by the district administration. The district has good infrastructure, storage and communication facilities and with added skills in food processing and value addition techniques, the sector can become more viable in terms of creation of employment and revenue generation. Promotion of this sector requires advanced training and financial support with handholding support from different technical agencies and department.

In terms of industries, the district has tremendous potential, though contribution of the secondary sector to District GDP has been limited. While the large scale manufacturing and utility industries are confined to the periphery and the neighboring districts, being the hub for technical and professional education, the district plays an important role in supply of skilled manpower especially in the highly skilled and skilled categories. In terms of growth industries, real estate and Infrastructure development is among the booming sectors, creating opportunities for skilled masons, electricians, modern machine operators, architects, interior designers, plumbers etc. In the rural areas there is a potential to further strengthen the handloom & Handicraft sector through better market linkage, design support and skill up gradation in modern design, value addition, packaging and marketing. Skills up gradation may be done in terracotta, straw craft; Embroidery work, wood carving, appliqué, spinning and polishing etc.

While the industry sector is booming, the major contributor to the District economy is its thriving services sector. With growing urban population, spurt in industrial development in the State, and rise in income levels has triggered demand for quality services in health care, hospitality, education, retail and IT space. This has triggered a spurt in investments by large corporate bodies including many multinational companies in IT and ITES, health care, skill development and education, banking and financial services, professional services, organized retail, transportation

and hospitality sectors. Growth in these services sector has significant bearing on demand for skilled manpower in IT and ITes, Business Process Outsourcing, hospitality management, healthcare and nursing, teachers and trainers, Retail management, courier Service, security service, home delivery service, banking and Insurance sector services, customer relations and sales etc. In addition to these new growth avenues, Khurda is one of the most important tourist destinations of the State. Its proximity with Puri and Chilka and connectivity through air makes it one of the most favored tourist destinations.

While the district has the largest number of technical and professional colleges, mostly in private domain, the quality of training provided by these institutions needs further introspection. Khurda is the undoubtedly the education hub of the State, but still there are many engineering colleges where the seats remained vacant even after completion of the admission process. As per the SCVET, almost 70% of the seats in Government ITIs and 47% of the seats in private ITCs remained vacant in 2010. While there is requirement of various types of skills as mentioned above, the vocational training institution provides skill development training in limited trades- mostly industrial which may not be as relevant to the demand of the students and this might explain the high level of vacancies in the ITI.

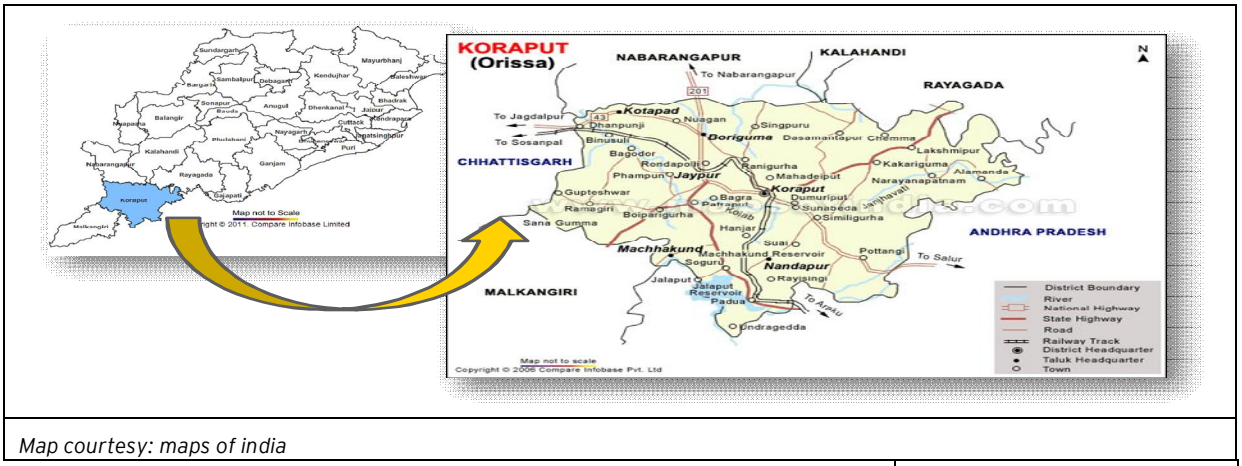
Recently several training programmes have been launched by DRDA office under the placement linked training programs. These includes trainings in bar bending, form work & steel Framing, bed side patient assistant, CNC Operator, customer relation and Sales, diamond cutting & polishing, facility management, fitter/industrial helper, front office management, hospitality services, housekeeping , masonry, Multi Skill Technician, retail management, sales and marketing , security guard , security supervisor , sewing machine operator , spinning and polishing, welder etc. More such trainings need to be organized in a structured and planned manner.

Another aspect with regard to skill development that requires focus is that while a numbers of training programs by government as well as private bodies has been implemented in the district, it is limited to urban areas only. Training on agricultural sector should be maximized for better productivity of food grain. Information regarding the training programme does not reach to the rural pocket of the district. It needs publicity on training programme in Gram Panchayat level & Block Level in order to attract the rural youth for self employment and employability to different jobs to make district as well as India a skilled manpower capital of world.

- **Primary Sector:** Training in food processing and modern agriculture practices focusing on demand based crops- vegetables, dairy products, fish and meat. Cashew nut processing related training will help in strengthening the cashew processing sector.
- **Secondary Sector:** Training in real estate and infrastructure value chain- mason, bar benders, architects, interior designers, electricians, plumbers etc. In addition, training in handicrafts and handloom sector focusing on terracotta, straw craft; Embroidery work, wood carving, appliqué, spinning and polishing etc.
- **Services Sector:** Most important sector. Focus on skill development/up gradation in IT and ITes, Business Process Outsourcing, hospitality management, healthcare and nursing, teachers and trainers, Retail management, courier Service, security service, home delivery service, banking and Insurance sector services, customer relations and sales etc

10.20 Koraput

Koraput District is spread over an area of 8807 Sq Km which forms approximately 5.66 percent of the total geographical area of the State. Administratively, the district is divided into 2 subdivisions, 14 blocks, 226 Gram Panchayats and 1922 villages. Koraput is surrounded by Kalahandi and Rayagada Districts in the north, Andhra Pradesh in the east, Chhattisgarh in the west and Malkangiri district in the south.



Map courtesy: maps of india

District Information	Koraput	Odisha	Source
Area (in Sq Km)	8,807	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	5.66% (3)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	14	**309**	Census 2001
No of GPs	226		Census 2001
Total no of inhabited villages	1922		Census 2001
Forest area as % of total geographic area	21.34%	**37.66**	Census 2001

Figure 122: District Map of Koraput

10.20.1 Demography

With a population of 13.77 lakhs as per 2011 provisional census data, Koraput has shown a high rate of population growth (16.63 percent) compared to the State average (13.97 percent). With a high sex ratio of 1031, Koraput is among the few districts to have a higher female population (6.99 lakhs) compared to male population (6.77 lakhs). In terms of population, the district constitutes 3.28 percent of the total population of the state. Owing to high tribal population, with STs constituting about 50 percent of the total population and inaccessible terrains, the population density is quite low at 156 in 2011 making Koraput the sixth least densely populated district of Odisha. Since population density is lower, urban areas has a slightly greater concentration of population (16.85 percent) compared to 14.99 percent urban population in Odisha as a whole. As per 2001 census, the population in the working age group constituted 58.23 percent of the total population. Work participation rate of the district is 48.32 percent. Out of the total workers 61.95 percent are main workers and 38.05 percent are marginal workers.

Population	Koraput	Odisha	Source
Total population (in lakh)	13.77	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	6.78	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	6.99	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	3.28% (15)	**NA**	Census 2011 provisional figures
Density of population	156	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	16.63%	**13.97%**	Census 2011 provisional figures
Urban population %	16.85%	**14.99%**	Census 2001
SC population %	13.04%	**16.53**	Census 2001
ST population %	49.62%	**22.13**	Census 2001
Sex ratio	1031	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	58.23%	**58.40%**	Census 2001
Worker participation rate	48.32		Census 2001
Share of primary sector to total workers	72.63%	**64**	Census 2001
Proportion of agriculture laborer in workforce	40.18%	**34.53**	Census 2001
Human Development Indicators	**Koraput**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.431 (27)		State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.415 (26)		State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	25171 (4)		Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.386 (25)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 69: Socioeconomic indicators for Koraput

In terms of human development indicators, Koraput is among the most backward districts in the State and is part of the KBK cluster. Koraput ranks 27th and 26th respectively in terms of human development and gender development index. It is also ranks among the most food insecure districts of Odisha.

10.20.2 State of Education

Koraput is ranked among the bottom 5 districts of Odisha in terms of overall education index. In terms of literacy, the data is a matter of great concern. Average literacy rate of Koraput in 2011 (as per provision census figures) is 49.87 percent compared to 35.72 percent in 2001. Gender wise male and female literacy is 61.29 percent and 38.29 percent respectively. For 2001 census, same figures stood at 47.20 and 24.62. Poor literacy figure may be a function of various socioeconomic factors.

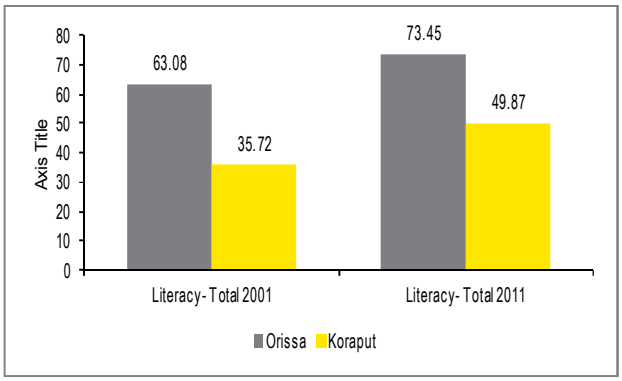


Figure 123: Literacy rates- KoraputDistrict

Block wise literacy figures for 2001 suggests that while the literacy rates were better in the urban areas, with Damanjodi having a literacy rate of 96.32 percent, it was overall poor in rural areas. Among the blocks, Tribal blocks of Bandhgaon, Potangi and Dasmantpur had literacy rates in the range of 19.25 percent to 22 percent showing a wide disparity with Koraput block (44.38 percent)

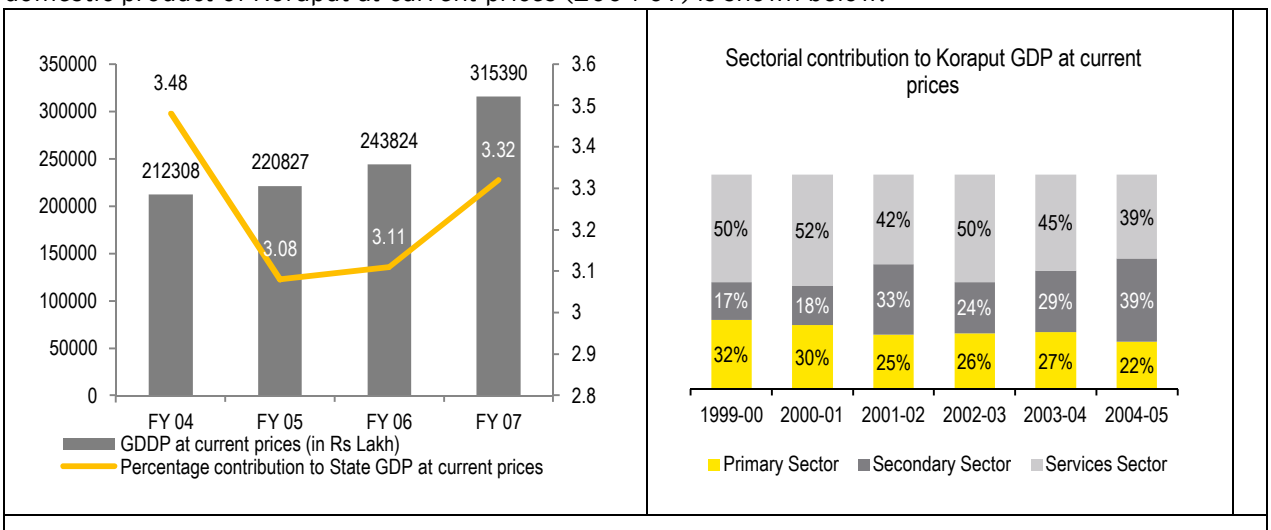
and Jeypore block (32.97 percent). As per the data shared by OPEPA, in 2009, almost 3.83 percent children in the school going age were out of school.

For higher Education there are 27 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 2848, 1666 and 768 respectively. There are 15 colleges which offer various courses including some professional courses like law. There is a private engineering college in Koraput along with two diploma polytechnic institutes offering courses in telecom engineering, computer science & engineering, electrical engineering, mechanical engineering and instrumental engineering. Total combined capacity of these institutes taken together is approximately 1448 seats per year. There is however huge under utilisation as reflected from the data accessed from SCEVT. The data shows that out of 1448 seats, only 896 enrolled in year 2010 indicating a vacancy rate of 38 percent. In addition to engineering, Koraput has one pharmacy college that has the capacity to intake 60 students.

In terms of vocational education, Koraput has one Government ITI and 26 private ITCs operating from 7 out of the 14 blocks in the District. Bandhugaon, Narayanpatna, Boipariguda, Dasmantpur, Kundra, Laxmipur and Nandapur blocks do not have any vocational training centres. There is high vacancy rate in vocational training as well especially among the private ITCs. While the Government ITI is also a centre of excellence, running courses in 22 trades has a vacancy rate of 29 percent, the vacancy rates in the private ITCs was nearly 70 percent of their capacity. Major ITI courses in Koraput include fitter, driver cum mechanic, stenographer and computer operators.

10.20.3 Economic Profile

Ironically, while Koraput features amongst the most poverty struck districts, in terms of economic progress and contribution to State GDP, the district is among the top 15 in the State. The district has shown an annual average growth rate of 6.1 percent during the period 2000-01 to 2006-07 and contributes almost 3.52 percent of the State's GDP. In terms of sectoral allocations, the industries and services tops the chart with 39 percent each in 2007. There is a growth in contribution of industries and a steady decline in contribution of agriculture. The Gross district domestic product of Koraput at current prices (2004-07) is shown below:



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 124: Gross District Domestic Product (at current prices) of Koraput

Agriculture

While about 73 percent of the total workers depend on Agriculture, the sector remains under developed and its contribution to economy has reduced over the years. Due to high proportion of upland and tribal population and absence of modern techniques of production, agriculture sector in the district faces several constraints. Paddy remains the major crop. Maize and cotton production in the district is increasingly replacing the traditional cereals like mandia and kushla. The agro climatic features of the district are highly conducive for cultivation of horticulture crops. Cashew is the most important horticulture crop in the district. A significant section of population, (mostly tribal) depends on minor forest produce collection from the forest & selling it in adjoining areas.

Performance of Koraput district is however average in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 13th with a per capita agricultural output of 1499. Food grains contribute highest to the total agricultural output of Koraput with a value of 269.76 (2008-2009), followed by rice (212.66) and total vegetables with (187.2) (all figures in thousand metric tonnes). With an average landholding of 1.71 hectare, a majority of the farmers have more than a hectare of land holding.

Industries

Koraput is rich in minerals like bauxite, manganese, graphite, china clay, nepheline syenite, quartz and gemstones and that provides the district an opportunity for industrial expansion. Considering high concentration of forests and tribal population and poor infrastructure, industrial progress in the district has been limited to a selected region. There are 4 large scale industries in Koraput which accounts for an investment of more than 8400 crores. National Aluminum Company, Hindustan Aeronautics, Ballarpur industries and Toshali Cement are the four large scale industries in Koraput.

In terms of attracting investments and setting up Micro and small scale industries, Koraput is ranked 18th in the State. MSME investment in Koraput was 1.68 percent of the total investments made in the State till March 2010.

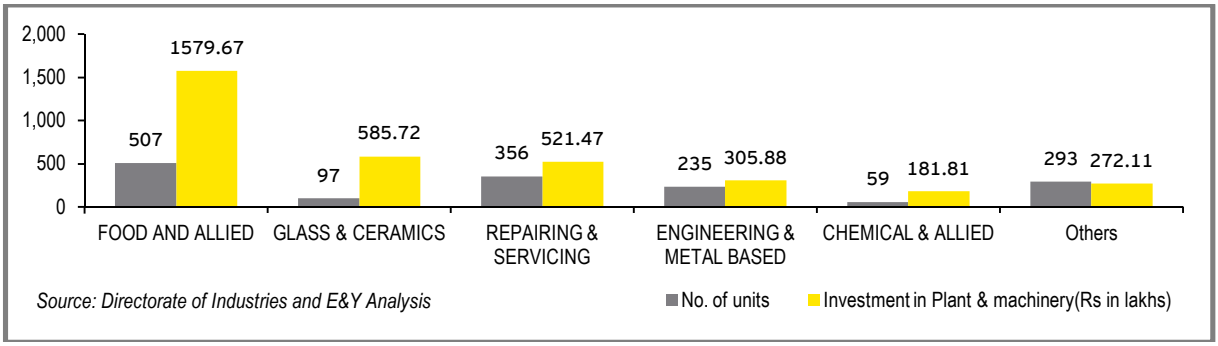
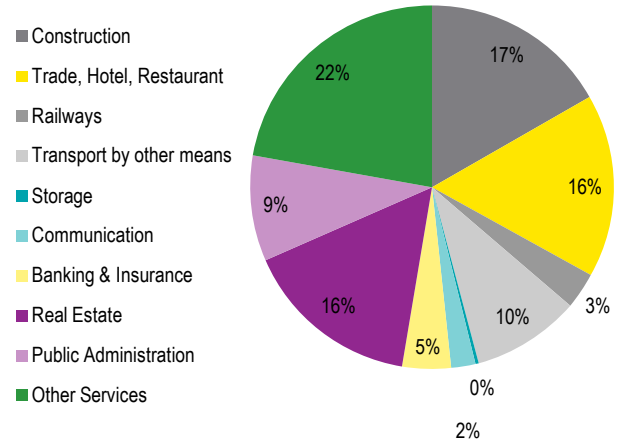


Figure 125: MSME Investments in Koraput till 2010

Food and allied products contribute maximum to the sector with an investment of Rs. 157.97 crore and Chemical and allied products contribute the least with an investment of Rs. 81.81 crore, other products which include miscellaneous, manufacturing , paper & paper product , electrical & electronics , forest & wood based , livestock & leather, has an investment of Rs. 27.21 crore.

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Koraput GDP, the service sector remains the most important contributor constituting 39 percent of the district GDP.



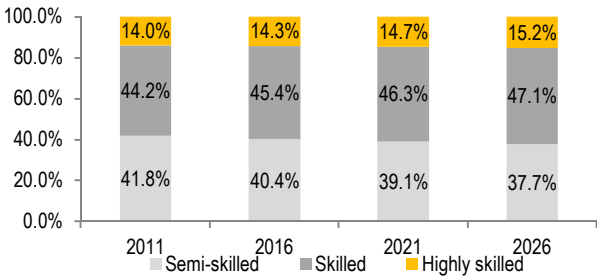
As depicted in the chart other services are the leading contributor to the service sector (23 percent) followed by construction (17 percent), trade, hotel and restaurant & real estate (16 percent).

Source: Planning Commission, Government of India

Figure 126: Composition of Service Sector- Koraput 2004-05

10.20.4 Skill Gap Assessment for Koraput District

Over the next 15 years, the total workforce demand for skilled jobs in Koraput district is expected to grow to 4 lakhs in 2026 from present levels of 2.5 lakhs in 2011. The total workforce demand is expected to be dominated by the tertiary sector (63 percent), followed by the primary (19 percent) and secondary sector (18 percent).



Source: EY Analysis

Figure 127: : Proportion of demand for skilled jobs by skill categories- Koraput District

The top five sectors expected to create a demand for skilled workforce in 2026 are: agriculture (0.8 lakh); tourism, travel, hospitality and trade (0.5 lakh); education & skill development (0.4 lakh); healthcare (0.4 lakh) and IT & ITeS industry (0.4 lakhs).

As per the CMIEs Capex database and secondary research, major projects which have been announced in the Koraput district are in the power generation and transmission sector. Mining sector has also attracted investor's attention. The resultant increased industry growth rates including these sectors have been factored in to arrive at skill-wise demand across the sectors.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	39,983	39,285	38,598	37,924	
Skilled	26,655	26,190	25,732	25,283	
Highly skilled	13,328	13,095	12,866	12,641	
Total demand for skilled jobs	79,966	78,570	77,196	75,848	17
Tourism, travel, hospitality & trade:					
Semi-skilled	13,587	17,230	21,851	27,711	
Skilled	9,003	11,418	14,480	18,363	
Highly skilled	1,473	1,868	2,369	3,005	
Total demand for skilled jobs	24,063	30,516	38,700	49,079	12
All sectors:					
Semi-skilled	105,808	116,972	131,175	149,342	
Skilled	112,071	131,320	155,432	186,517	
Highly skilled	35,436	41,277	49,242	60,348	
Total demand for skilled jobs	253,315	289,569	335,849	396,207	100

Source: E&Y Analysis

Table 70: Skill-wise demand for sectors where high demand is foreseen- Koraput District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 1 lakh during the period 2011-2026.

Skilled human resource is expected to account for 66 percent of the widening demand-supply gap for the Koraput district, followed by highly-skilled jobs (24 percent) and semi-skilled jobs (10 percent).

As for the **highly skilled** jobs, a higher requirement is expected in case of banking, financial services & insurance jobs (50 percent); IT & ITeS (20 percent); and education & skill development (8 percent).

The highest proportion of incremental gap for **skilled** workers is expected to come from services sectors like education and skill development (25 percent); healthcare (24 percent) and IT & ITeS (15 percent) industry.

Tourism, travel, hospitality & trade (32 percent); media & entertainment (20 percent), banking, financial services & insurance (15 percent) constitute the major sectors which are expected to create a demand for **semi-skilled** workers.

A variation is observed in the incremental demand supply gap for skilled jobs in different industries. Education & skill development is expected to account for 18 percent of this incremental demand supply gap. The incremental gap in this sector is primarily expected to come from skilled and highly-skilled employees.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(619)	(771)	(887)	(2,277)
Auto & Auto Components	83	137	196	416
Chemical & Pharmaceuticals	47	68	91	206
Construction materials & building hardware	1,572	2,141	2,763	6,476
Electronics & IT Hardware	130	182	239	551
Food Processing	1,005	526	559	2,090
Furniture & Furnishings	105	164	220	489
Leather & Leather Goods	6	7	8	21
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	38	76	111	225
Unorganised sector	67	98	128	293
Banking, Financial Services & Insurance	3,103	5,152	8,354	16,609
Building, Construction & Real Estate Services	39	92	137	268
Education & Skill Development	4,383	5,896	7,896	18,175
Healthcare	3,998	5,502	7,493	16,993
IT & ITES industry	3,618	5,120	7,105	15,843
Media & Entertainment	1,990	3,211	4,777	9,978
Tourism, travel, hospitality & trade	2,444	4,182	6,414	13,040
Transportation, logistics, warehousing & packaging	2	253	511	766
Total	22,011	32,036	46,116	100,163

Source: E&Y Analysis

Table 71: Total incremental demand supply gap for skilled jobs by sectors- Koraput District

The incremental demand supply gap is also expected to widen for healthcare (17 percent). The incremental human resource gap in this sector largely comprises of need for skilled (94 percent), highly-skilled (4 percent) and semi-skilled human resource (2 percent).

Significant incremental requirement is also expected to be witnessed in services like banking, financial services & insurance (17 percent) and IT & ITeS (16 percent).

10.20.5 Development potential and Stakeholder perception

Mostly known for its high tribal concentration, scenic beauty and chronic poverty and backwardness, Koraput district is amongst the poorest performing districts of Odisha in terms human development indicators. The district lags behind the more progressive districts and the State average in terms all the key developmental indicators including literacy rate which is abysmally low especially amongst the women. While the district is rich in natural resource including

forest resource, ground water with perennial streams, mineral reserves and labour, the factors are mostly unutilized due to poor infrastructure, low level of literacy and limited outreach.

With more than 82 percent rural population, the dependence on agriculture sector is significant. Given the varied agro-climatic conditions suitable for growing different fruits, vegetables and spices, there is high growth potential in the primary sector which includes crop cultivation including maize and cotton, horticulture and spices including turmeric, tamarind, cashew nut and mango. As reported by some of the district level officials, the agriculture sector has witnessed some progress over the years both in terms of area under cultivation and increased productivity. Along with crop production, horticulture, NTFP and MFP collection is an important activity in the primary sector. While there are opportunities, low education level, dependence on traditional farming methods and poor adaptation & exposure to modern agriculture techniques works as major impediments to agriculture growth. Poor infrastructure including irrigation facilities, lack of marketing linkages and social capital in the form of farmer's organizations etc further aggravates the problem.

While schemes like Odisha Tribal Empowerment & Livelihood Programme (OTELP), *Rastriya Krishi Vikas Yojana* (RKVY), National Food Security Mission and *Jananidhi* etc have contributed to progress in agriculture in District, there is a need to continue focusing on developing the agriculture sector especially targeting illiterate and unskilled population and developing their skills in modern agricultural practices along with value addition and processing skills. This should be combined with increased investments in the food processing industries with special focus on value addition of NTFP produces. Creation of proper marketing linkage along with developing marketing skills among the educated youths will create better economic avenues for tribal poor and will help in generating more rural employment. In terms of agriculture based industries, turmeric, tamarind, arhar and cashew processing units have good potential. There are existing models of group entrepreneurship through SHGs and cooperatives that can be further developed for creating employment opportunities for a large section of population. For trainings, the *Krishi Vigyan Kendras* could play a bigger role in coordination with the agriculture and horticulture department, DSMS, District Industries Centre and the District Employment Exchange.

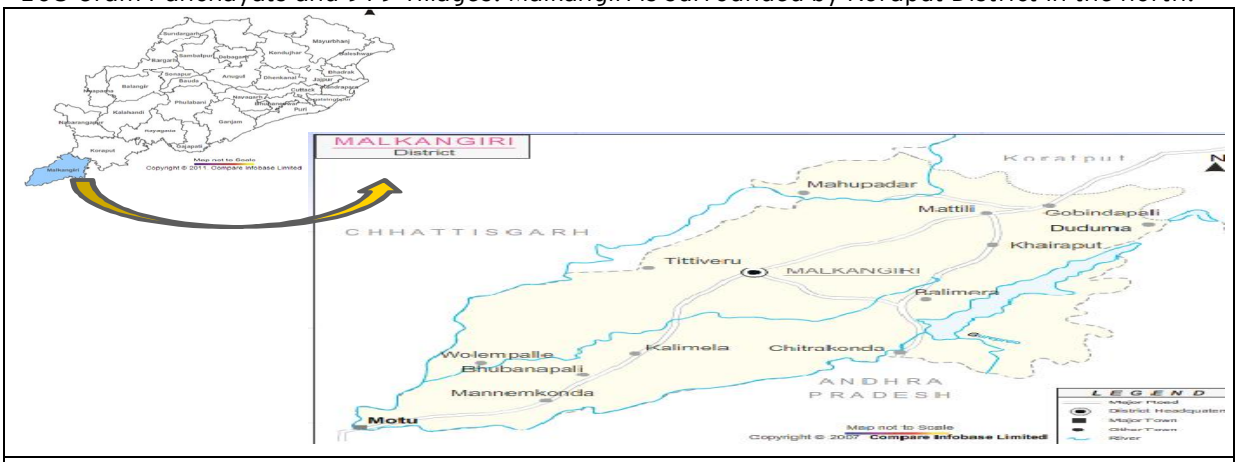
In addition to agriculture there is a good potential to develop local trades and skills especially in the areas of hill broom making, tribal jewellery, terracotta products, bamboo and cane products etc. Tourism is another area which can be developed in the area. The region is scenic delight and rich in cultural and tribal heritage and can attract a lot of tourist.
In terms of vocational training, only 7 of the 14 blocks have presence of industrial training institutes (ITI). The representatives of these institutes reported that there is a demand for courses like masony, drivering, mobile repairing, computer hardware repair etc., which are not being offered currently. These courses along with some self employment courses can create better employable skills among the local youth. In order to initiate these courses there is a need to create better infrastructure and increase the number of vocational training institutions. Since there are only few large and medium scale industries, the demand for ITI trained students is also less. There is a need to create better tie up at the State level for placement of ITI students.
Interaction with the community members reveal that they get employment mostly as agriculture or wage labour. People aspire to learn self employment skills such as masonry, mobile repairing, cycle and two wheeler repairing, leaf plate making etc. along with processing of pulses, spices, tamarind etc. and poultry. Most of the youth acquire skills from their families. There is a limited awareness

about availability of vocational training institutions and options for skill development. Those aware are also unable to pursue courses due to financial constraints and lack of educational qualification. Lack of basic quality education emerged as the major constraint which requires a lot of focus in Koraput.

- **Primary Sector** – Training and mentoring to improve productivity and crop diversification, Food processing to get better economic returns.
- **Secondary Sector** – Setting up of more MSMEs would create demand for relevant skills. At present food processing and glass/ceremics are predominant MSMEs in the district.
- **Service sector** – Short term modular training programmes like mobile repairing, vehicle repair, masonry, driving that will promote employment/self employment. Other areas for which skill development can take place are hospitality, health care and education services.

10.21 Malkangiri

Malkangiri District is spread over an area of 5791 Sq Km which forms approximately 3.7 percent of the total geographical area of the State. Topographically, the district is divided into two distinct physical divisions. The eastern part is covered with steep ghats, plateaus and valleys sparsely inhabited by primitive tribes notable among who are *Bondas, Koyas, Porajas* and *Didayis*.The rest of the district is comparatively flat plain broken by a number of rocky wooded hills. Almost the whole of the district is a vast dense jungle. *Potteru, Saberi, Sileru, Kolab* and *Machhakunda* are the main rivers flowing in the district. Administratively, the district is divided into one subdivision, 7 blocks, 108 Gram Panchayats and 979 villages. Malkangiri is surrounded by Koraput District in the north.



Map Courtesy: Maps of India

District Information	Malkangiri	Odisha	Source
Area (in Sq Km)	5,791	**155,707**	Census 2011 provisional figures
% share of State Geographical area (ranking)	3.72% (13)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	7	**309**	Census 2001
No of GPs	108	**6,234**	Census 2001
Total no of inhabited villages	979	**47,529**	Census 2001
Forest area as % of total geographic area	57.86%	**37.66%**	Census 2001

Figure 128: District Map of Malkangiri

10.21.1 Demography

As per Census 2011 (Initial provisional data), Malkangiri has a population of 6.13 lakhs of which males and females were 3.04 lakhs and 3.09 lakhs respectively. There is a change of 21.53 percent in the population compared to population as per 2001 census. In terms of population, the district is 3rd smallest and constitutes only 1.46 percent of the total population of the State. The initial provisional data (Census 2011) suggest a population density of 106 in 2011 making Malkangiri the 29th most densely populated district of Odisha. With regards to sex ratio, the district fares well compared to other districts and the state average. The sex ratio for Malkangiri as per 2011 provisional census figures is 1016 females per 1000 males, much above the State average of 978 females per 1000 males. The district has high proportion of tribal population. STs constitute approximately 57.43 percent of the total population while SCs form about 21.35 percent of the total population. Malkangiri is predominantly rural with only 6.94 per cent of its population living in urban areas (as per census 2001).

As per 2001 census, the population in the working age group constituted 55.5 percent of the total population. The population in the age group 0-4 years constitutes 9.5 percent and 5-14 years comprise 22.22 percent respectively. Work participation rate of the district is 49.11 percent. Out of the total workers 62.26 percent are main workers and 37.74 percent are marginal workers. With a human development index (HDI) of 0.37 and Gender development index (GDI) of 0.362, Malkangiri is ranked as the worst performing district of Odisha.

Population	Malkangiri	Odisha	Source
Total population (in lakh)	6.13	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	3.04	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	3.09	**207.45**	Census 2011 provisional figures
District Share in State's population (ranking)	1.46% (25)	**NA**	Census 2011 provisional figures
Density of population	106	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	21.53%	**13.97%**	Census 2011 provisional figures
Urban population %	6.94%	**14.99%**	Census 2001
SC population %	21.35%	**16.53**	Census 2001
ST population %	57.43%	**22.13**	Census 2001
Sex ratio	1016	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	55.55%	**58.38%**	Census 2001
Worker participation rate	49.11%	**40.03%**	Census 2001
Share of primary sector to total workers	83.06%	**64**	Census 2001
Proportion of agriculture laborer in workforce	25.81%	**34.53**	Census 2001
Human Development Indicators	**Malkangiri**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.370 (30)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.362 (30)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	12973 (25)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.276 (29)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 72: Socioeconomic indicators for Malkangiri

10.21.2 State of Education

Malkangiri is ranked 29th in terms of literacy rate. Average literacy rate of Malkangiri in 2011 (as per provision census figures) is 49.49 percent compared to 30.53 percent in 2001. Gender wise male and female literacy is 60.29 percent and 38.95 percent respectively. While there has been proportionate increase in the literacy levels of all groups between 2001 and 2011, the increase has been much below the average increase at the State level. Literacy is poor in all the blocks. In the urban areas also the average literacy rate is below par compared to other

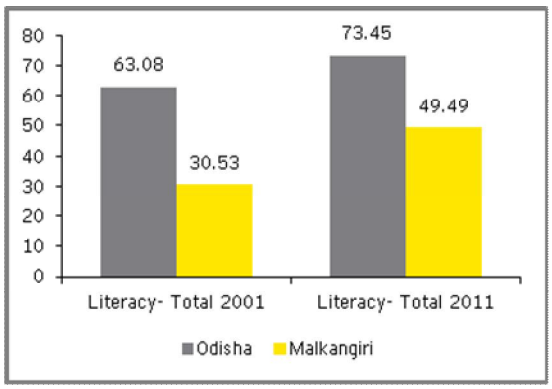


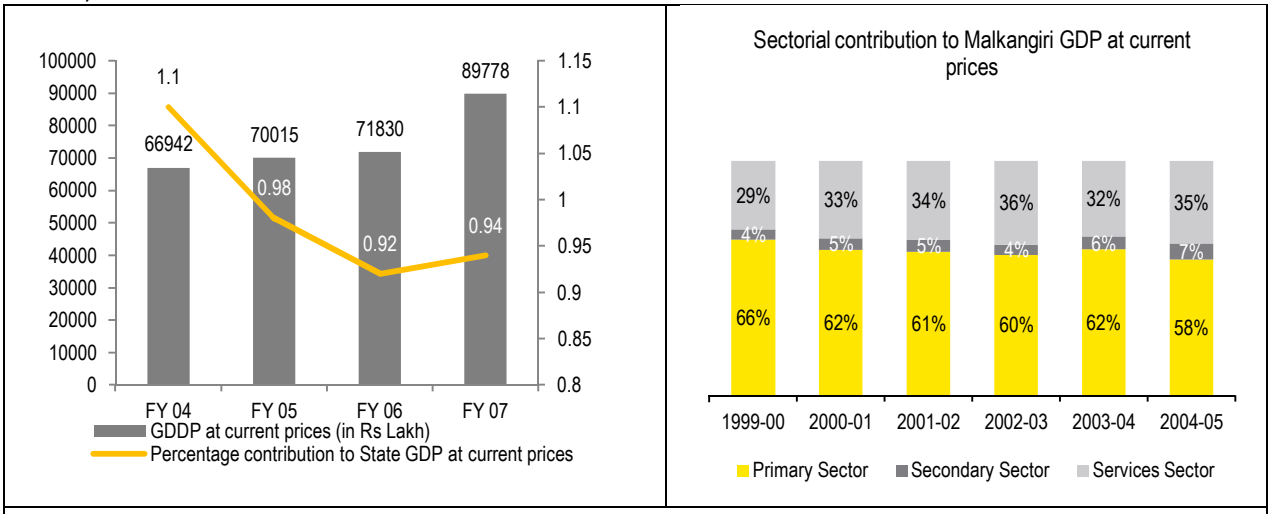
Figure 129: Literacy rate- Malkangiri District

districts and the State average. As per OPEPA, in year 2010, out of the total number of children in school going age, 4.8 percent children were out of school.

For higher education there are 11 junior colleges and higher secondary schools. As per the Department of Higher Education (DHE), the total sanctioned strengths in Arts, Science and Commerce streams were 1216, 256 and 176 respectively. In addition there are 6 degree colleges in the district offering general general academic courses. The infrastructure with respect to technical education is however missing in the district. There are no engineering (degree and diploma) colleges at present. Similarly there are no medical, homeopathy, ayurvedic, pharmacy or nursing colleges in Malkangiri currently.
For vocational training program, there is a government ITI which offers training in 22 trades including trades like wireman, welder and plumber. In addition, there are 3 private ITC imparting training primarily in fitter, and electrician trades. As per the SCVET data, the enrolment and utilisation status of these industrial training institutions was very poor.

10.21.3 Economic Profile

As per economic survey 2010-11, Malkangiri is the bottom most district in the State with a CAGR of 2.6 percent for the period 2000-01 to 2006-07. The chart below shows that the contribution of the district to the State GDP declined between the year 2004 and 2006 and stabilized at around 0.9% of the State GDP in 2007. In terms of sector wise contribution, almost 60% of the GDDP is contributed by the primary sector while the industries and the services sector remain under developed.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 130: Gross District Domestic Product (at current prices) of Malkangiri

Agriculture

Agriculture is the mainstay both in terms of employment and income generation. About 83 percent of total work force is either cultivators or agricultural laborers. Malkangiri is ranked 23rd in the state in terms of number of agricultural laborers. As per Odisha agriculture statistics report 2008-09, twenty five percent of the total geographical area or almost 142 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 93.86 thousand hectares. Apart from paddy, other major crops include maize, ragi and oilseeds. As per the Food Security Atlas of Odisha published by World Food Programme, the district is ranked 2nd

with a per capita agricultural output of 2565. Vegetables contribute highest to the total agricultural output of Malkangiri with a value of 182 (2008-2009), followed by food grains (146.82) and cereals with (132.97) (all figures in thousand metric tonnes).

With an average landholding of 1.88 hectare, landholding pattern in the District depicts even distribution of land between farmers with small land holding (39.16 percent) and the farmers with only marginal (less than a hectare) land holding (32 percent).

Industries

Malkangiri District does not have any large or medium scale industries. A project at *Balimela* is the major Hydro Electric Project in the district. Major rock groups are Granite, Shale, Quartzite, Sandstone, Limestone, Khondalite, Charnockite, Slate, Phyllite and Marble. Dolomite, Asbestos, Tin and steatite are the important minerals of the district. The district has some small scale industries in Light Engineering and Food Processing sector. In terms of attracting investments and setting up Micro and Small Scale industries, Malkangiri is ranked among the bottom few districts in the State. MSME investment in Malkangiri was 0.076 percent of the total investments made in the State till March 2010.

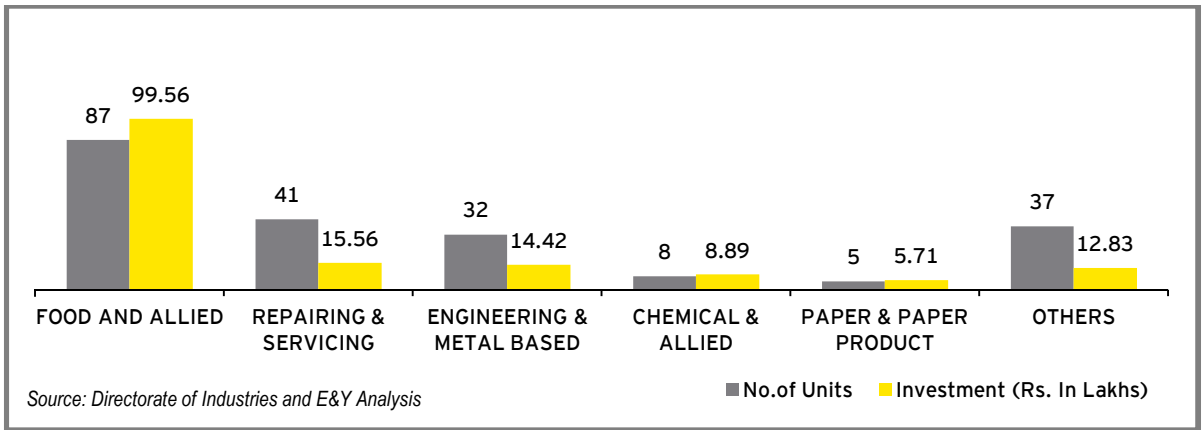
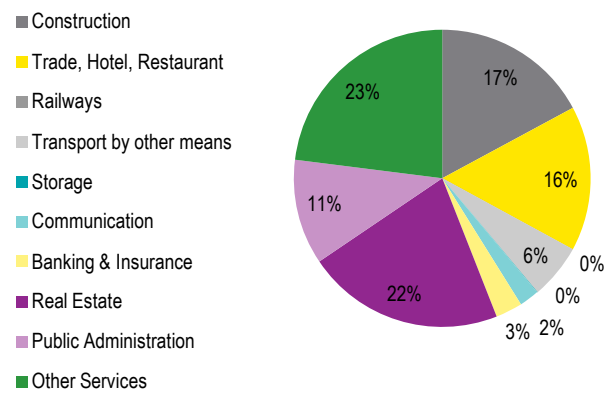


Figure 131: MSME Investments in Malkangiri till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Malkangiri GDP, the economy of the district being agrarian the agriculture sector remains the most important contributor constituting 58 percent of the district GDP.However,the service sector also makes a notable contribution to the district GDP (37 percent). The contribution of various sectors to GDDP is shown below.



As depicted in the chart, other services (23 percent) is the leading contributor to the service sector followed by real estate (22 percent) and construction (17 percent). Trade, hotel and restaurant as well as public administration are also major contributors of GDP of Malkangiri economy

Source: Planning Commission, Government of India

Figure 132: Composition of Service Sector- Malkangiri 2004-05

10.21.4 Skill Gap Assessment for Malkangiri District

During the next 15 years, the total workforce demand for skilled jobs in Malkangiri district is expected to grow to 2.1 lakhs in 2026 from present levels of 1.3 lakhs in 2011. Tertiary sector, employing higher number of skilled manpower is expected to account for around 73 percent of this total skilled workforce demand, followed by primary (21 percent) and secondary sector (6 percent).

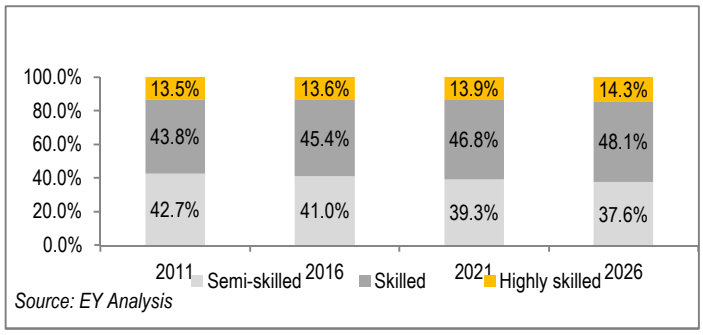


Figure 133: Proportion of demand for skilled jobs by skill categories- Malkangiri District

The major sectors from which the workforce demand for skilled jobs in 2026 is primarily expected comprises agriculture (0.4 lakh); tourism, travel, hospitality & trade (0.3 lakh); education & skill development (0.2 lakh); healthcare (0.2 lakh) and IT & ITes industry (0.2 lakh).

The secondary research and CMIEs Capex database indicates announcements being made for road and power projects in the district.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	23,172	22,767	22,369	21,979	
Skilled	15,448	15,178	14,913	14,652	
Highly skilled	7,724	7,589	7,456	7,326	
Total demand for skilled jobs	46,344	45,534	44,738	43,957	21

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	8,041	10,197	12,932	16,401	
Skilled	5,328	6,757	8,570	10,868	
Highly skilled	872	1,106	1,402	1,778	
Total demand for skilled jobs	14,241	18,060	22,904	29,047	14
All sectors:					
Semi-skilled	55,863	61,782	69,346	79,048	
Skilled	57,317	68,314	82,602	101,175	
Highly skilled	17,567	20,460	24,456	29,997	
Total demand for skilled jobs	130,747	150,556	176,405	210,221	100

Source: E&Y Analysis

Table 73: Skill-wise demand for sectors where demand is foreseen- Malkangiri District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (i.e. for highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.7 lakhs during the period 2011-2026.

The skilled manpower is expected to constitute around 60 percent of this widening gap in 2026, followed by semi-skilled jobs (23 percent) and highly-skilled jobs (17 percent).

A major part of this incremental gap for **skilled** workers is expected to come from sectors such as education & skill development (28 percent); healthcare (28 percent) and IT & ITes (17 percent).

Amongst the **highly skilled** jobs, a higher requirement is forecasted in case of banking, financial services & insurance jobs (42 percent), IT & ITes (27 percent) and education & skill development (11 percent).

The incremental need for **semi-skilled** workers is foreseen to be majorly required in sectors such as tourism, travel, hospitality & trade (36 percent); media & entertainment (25 percent) and IT & ITES industry (12 percent).

Sector-wise, the highest incremental demand and supply gap is expected in the education & skill development sector (19 percent). The incremental gap in this sector is expected to come from skilled workforce (90 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(661)	(682)	(694)	(2,037)
Auto & Auto Components	1	1	1	3
Chemical & Pharmaceuticals	2	2	2	6
Construction materials & building hardware	265	313	366	944
Electronics & IT Hardware	3	3	4	10
Food Processing	34	36	37	107
Furniture & Furnishings	15	18	20	53
Leather & Leather Goods	1	1	1	3
Gems & Jewelry	0	0	0	0
Organized Retail	0	0	0	0
Textile	14	17	19	50
Unorganized sector	376	427	479	1,282
Banking, Financial Services & Insurance	1,690	2,618	4,036	8,344
Building, Construction & Real Estate Services	396	462	526	1,384
Education & Skill Development	3,393	4,417	5,750	13,560
Healthcare	3,294	4,316	5,648	13,258
IT & ITES industry	3,146	4,165	5,495	12,806
Media & Entertainment	2,465	3,278	4,309	10,052
Tourism, travel, hospitality & trade	3,035	4,065	5,372	12,472
Transportation, logistics, warehousing & packaging	187	237	291	715
Total	17,655	23,694	31,662	73,011

Source: EY Analysis

Table 74: Total incremental demand supply gap for skilled jobs by sectors- Malkangiri District

The incremental demand supply gap is also expected to widen for healthcare sector (18 percent), which in turn, would primarily comprise of incremental requirement of skilled (91 percent) workforce.

10.21.5 Development Potential and Stakeholders perception

Malkangiri is part of the KBK group of Districts. It is one of the poorest districts in India performing poorly in almost all the socioeconomic development indicators. BPL population is above 72 percent, literacy is less than 50 percent and has the lowest human development indices in the State. The morbidity rate is quite high due to malnourishment, endemic malaria and several other diseases. Low levels of net cultivable and irrigated land, crop diversification, land productivity and road connectivity are other contributing factors for poor development of the district. The practice of shifting cultivation and depletion of forest resources are leading to food insecurity and energy deficiency which is quite palpable.

It was a common sight to see men and women carrying axes or loads of wood. At many places tree plantation work under MGNREGA was in progress. It was shared that about 200 acres have been selected to plant trees like mango, cashew nut, guava, coconut and banana. This will be scaled up substantially. Most of the farming is organic in nature which, if streamlined can get better returns. There are a number of schemes, both state sponsored and centrally sponsored, which are in operation and need to be scaled up. One of the biggest challenges faced by the district administration to scale these up is the lack of sufficient number of financial institutions which can

help in disbursement of funds. If money is not disbursed on time, it is more likely that men and women opt for easy options like selling some wood which is readily available and making quick buck. Setting up of nationalized banks at the block level is required urgently. This would help the district administration to make the benefits of the schemes available to the intended target group.

Lead sectors identified for development are agriculture, horticulture, animal husbandry, pisci culture. More than 83 percent households are engaged in agriculture. Paddy is the main crop, while other crops are ragi, maize, oil seed, pulses and vegetables. 57.96 percent geographic area is forest area. The forest area includes tamarind, kendu, sabai grass, hill broom, mahua flowers, lac, honey and other medicinal plants. Per capita milk availability is 83 grams per day as compared to 115 grams per day for the State. Thus most of the production in agriculture and allied areas is for subsistence and not large enough to set up industry.

One scheme that requires a mention is the OTELP (Odisha Tribal Emowerment and Livelihood Programme). This is a joint programme of DFID, IFAD, WFP and the State government. The scheme is operational in other tribal dominated districts of the state also. The scheme is carried out with the support of local NGOs and communities. There are experts in areas like agriculture, natural resource management, livestock, pisciculture and horticulture who undertake capacity development of communities with the help of local volunteers. The scheme is likely to converge with the NRLM next year. There are a lot of similarities in the community level work being done through this scheme and some other agencies like ATMA. In view of the situation that there is shortage of human resource, the possibility of converging some of these schemes maybe explored. The activities performed by these functionaries is very valuable in making effective use of the existing schemes and taking them beyond imparting skills to its logical conclusion of creating employment, self employment and enhancing the productivity in agriculture and allied areas.

The district is also making efforts to give exposure to the youth beyond Malkangiri by either inviting other agencies to conduct training or send students to other districts. Counselling camp was organized where a number of organizations participated. There were about 871 registrations by students mostly opting for training in driving and computers. At the time of the visit training in industrial sewing organised by IL&FS was going on for boys and girls. Another 20 youth had been sponsored to receive training in horticulture at the MS Swaminathan Institute based in Jeypore. Number of registrations in the employment exchange is about 195-200 per month. With very few small scale industries, no medium or large scale industries in the district opportunities for employment in the industry are very limited.

The ITI at Malkangiri was set up only two years back. The Institute currently offers training in 9 trades (electrician, fitter, electronics, turner, welder, plumber, wiremen, and data entry operator, cutting and sewing). Out of these trades electrical and fitter trades are more sought after by students. Four of these courses are open for students who have passed class 8 while the rest are for students who have completed their matric level education. The under matric students find it difficult to understand the concepts since the NCVT affiliated courses are offered in English language which creates a language barrier. The institute has an active IMC with members from HAL and NALCO who meet regularly. The ITI faces a challenge in creating opportunities for apprenticeship for the students who pass their examination. Other problems like staff shortage are applicable to this institute also. Another ITI, Polytechnic and 2 SDCs are on the anvil for this area.

An interaction with students of Malkangiri College proved to be quite interesting. The students, both boys and girls, were quite vocal and shared about their aspirations. Despite constraints like lack of infrastructure (the college did not have electricity), distance they had to travel to reach the college, many students shared that if they are given the opportunity, they would like to learn multimedia, event management, dress designing, chef and other skills which they know about but have no means to learn. If they had an option majority of the students would opt for vocational courses than the graduate course. A popular demand was to learn the English language and learn to use computers. Their college offered only humanities and commerce courses. There are very limited job opportunities for the students, the most common ones being teaching or the security forces.

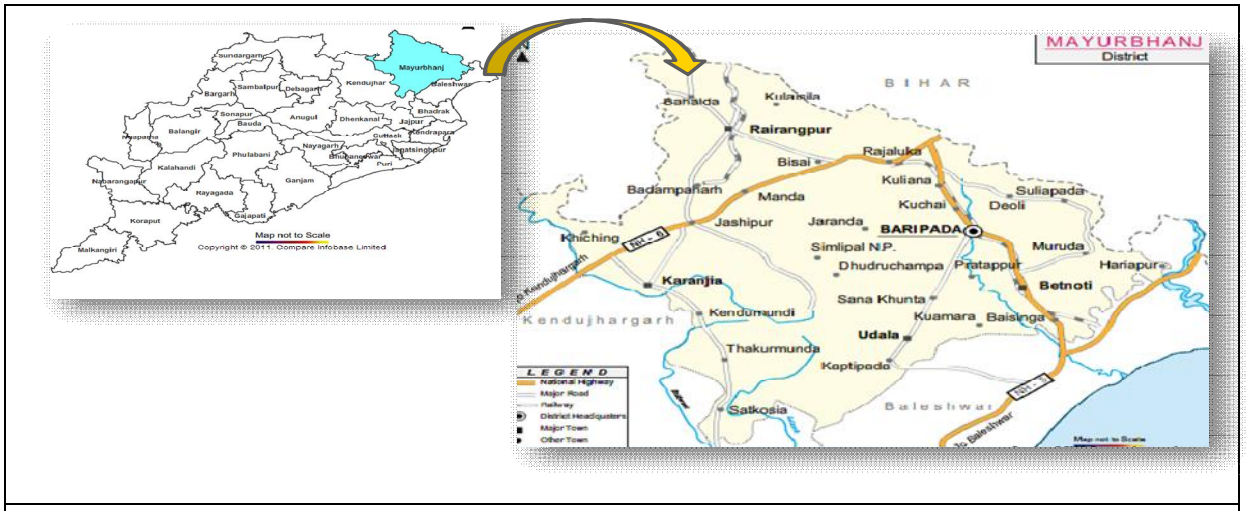
Inadequate availability of human resource in the district was cited as a huge challenge. A number of respondents the team met shared that there was reluctance on the part of many professionals to take a posting in Malkangiri, mainly because of the disturbance caused due to naxal activities. Due to insufficient emphasis given to higher education in the district in the past, it has resulted in a situation where there is very heavy dependence on human resource from other districts. Therefore it is of utmost importance that institutions of higher learning are set up in the district and support given to the youth in the form of career guidance, coaching for entrance exams so that local human resource base is strengthened. There are plans to utilize the BRGF fund to improve the condition of schools and colleges; provide drinking water facilities, undertake skill development for the BPL youth. There are some pockets of artisans who make handicraft items, but these are at a very small scale and there are challenges related to marketing.

The district is impacted by naxal activities which has had an impact of the pace of development. Disturbance and fear resulting from naxal activities are common in every discourse be it related to employment, infrastructure, productivity or any other issue related to development. There are very few means of recreation – a need articulated very strongly by the youth in the college visited – which reinforces the morbid environment. While it is very important to focus on development aspects including skill development and creating employment/self employment opportunities for people it is equally important, if not more important to also focus on initiating activities that instills a feeling of normalcy among the populace. In order to make this happen, simple things like organizing sports and cultural activities in the newly constructed stadium; supporting clubs that help in channelizing the energies of youth would be useful. It is also important to demonstrate some tangible signs of development which touch everyone's lives. Therefore, expediting the repair and construction of roads maybe done as a matter of priority.

- **Primary sector** – Skill development in integrated farming to help increase economic returns to the families.
- **Secondary sector** - Food processing especially to promote organic farming products which have a great demand.
- **Service sector** – Vocational courses in diverse areas to help the youth realize their potential. Human resource in the area of banking and financial services.

10.22 Mayurbhanj

Mayurbhanj District is the largest district in Odisha in terms of area at 10418 Sq Km which forms approximately 6.7 percent of the total geographical area of the State. Administratively, the district is divided into 4 subdivisions; Baripada, Kaptipada, Bamangathy and Panchmir, 26 blocks, 372 Gram Panchayats and 3748 villages. The central part of the district is covered by a group of hills known as the *Similipal* Range and the remaining portion is covered by undulating plains raising and falling in gentle slopes. Precisely the district may be divided into three distinct natural divisions. The central hill ranges as dividing line running due north and south and dividing the plains of the district into two halves eastern & western. The eastern division, which slopes gently from the foot of the hills towards the sea is served by a number of hill streams forming an ideal land for cultivation. The western division is mainly a plain rising and falling in gentle slopes studded with many rocky mounds and hills. The northern portion of this western division is very fertile for extensive cultivation Mayurbhanj is surrounded by Jharkhand in the North West, West Bengal in the north east, Keonjhar in the west and Balasore in the south.



Map Courtesy: Maps of India

District Information	Mayurbhanj	Odisha	Source
Area (in Sq Km)	10,418	155,707	Census 2011 provisional figures
% share of State Geographical area (Ranking)	6.69% (1)	100 (NA)	Census 2011 provisional figures
No of CD blocks	26	309	Census 2001
No of GPs	382	6234	Census 2001
Total no of inhabited villages	3748	47529	Census 2001
Forest area as % of total geographic area	42.13%	37.66	Census 2001

Figure 134: District Map of Mayurbhanj

10.22.1 Demography

As per Census 2011 (Initial provisional data), Mayurbhanj has a population of 25.14 lakhs of which males and females were 12.54 lakhs and 12.60 lakhs respectively. There is a change of 13.06 percent in the population compared to population as per 2001 census. In terms of population, the district constitutes 5.99 percent of the total population of the State and is 3rd highest, next only to Ganjam and Cuttack district. The initial provisional data (Census 2011) suggest a population density of 241 in 2011 making Mayurbhanj the 16th most densely populated district of Odisha. With

regards to sex ratio, the district fares favorably compared to other districts and the state average. The sex ratio for Mayurbhanj as per 2011 provisional census figures is 1005 females per 1000 males, much above the State average of 978 females per 1000 males.

In terms of social composition of the population, SCs constitute approximately 7.68 percent of the total population while STs forms only 56.6 percent of the total population. Mayurbhanj has a little over 6 percent of urban population (as per 2001 census). As per 2001 census, the population in the working age group constituted 56.54 percent of the total population. Work participation rate of the district 46.23 percent. Out of the total workers 60.17 percent are main workers and 39.83 percent are marginal workers.

With a human development index (HDI) of 0.639 (9), and Gender development index (GDI) of 0.621 (6), it ranks within the top ten of districts in Odisha. Key indicators on demography and human development are provided in the table below.

Population	Mayurbhanj	Odisha	Source
Total population (in lakh)	25.14	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	12.54	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	12.60	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	5.99% (3)	**NA**	Census 2011 provisional figures
Density of population	241	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	13.06%	**13.97%**	Census 2011 provisional figures
Urban population %	6.19%	**14.99%**	Census 2001
SC population %	7.68%	**16.53**	Census 2001
ST population %	56.60%	**22.13**	Census 2001
Sex ratio	1005	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	56.54%	**58.40%**	Census 2001
Worker participation rate	46.23	**40.03**	Census 2001
Share of primary sector to total workers	66.25%	**64**	Census 2001
Proportion of agriculture laborer in workforce	38.33%	**34.53**	Census 2001
Human Development Indicators	**Mayurbhanj**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.639 (9)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.621 (6)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	13292 (21)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.564 (7)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 75: Socioeconomic indicators for Mayurbhanj

10.22.2 State of Education

The state of education is poor compared to the State's average. Average literacy rate of Mayurbhanj in 2011 (as per provision census figures) is 63.98 percent compared to 51.91 percent in 2001. Gender wise male and female literacy is 74.92 percent and 53.18 percent respectively. For 2001 census, same figures stood at 65.76 and 37.84 showing a higher

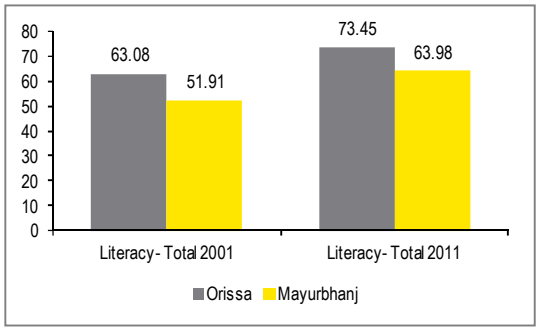


Figure 135: Literacy rate- Mayurbhanj District

proportionate increase in literacy level for female groups over last 10 years. There is a high level of disparity in literacy levels in some of the blocks like G.B Nagar and Bijetola. The proportion of out of school children is quite high (4.49 percent) in 2009.

As per the latest DHE data there are 79 junior colleges and higher secondary schools (10+2) in Mayurbhanj. Total sanctioned seats in Arts, Sciences and Commerce are 12288, 5474 and 1600 respectively. The admission detail for 2011 however shows a high rate of vacant seats even after completion of the admission cycle. Only half of the commerce seats were filled. There was 12 percent vacancy in arts and 23 percent in science courses. At the degree level, there are 45 colleges which offer different courses. As per most recent enrolment statistics, 666 seats out of the sanctioned 3632 remained vacant.

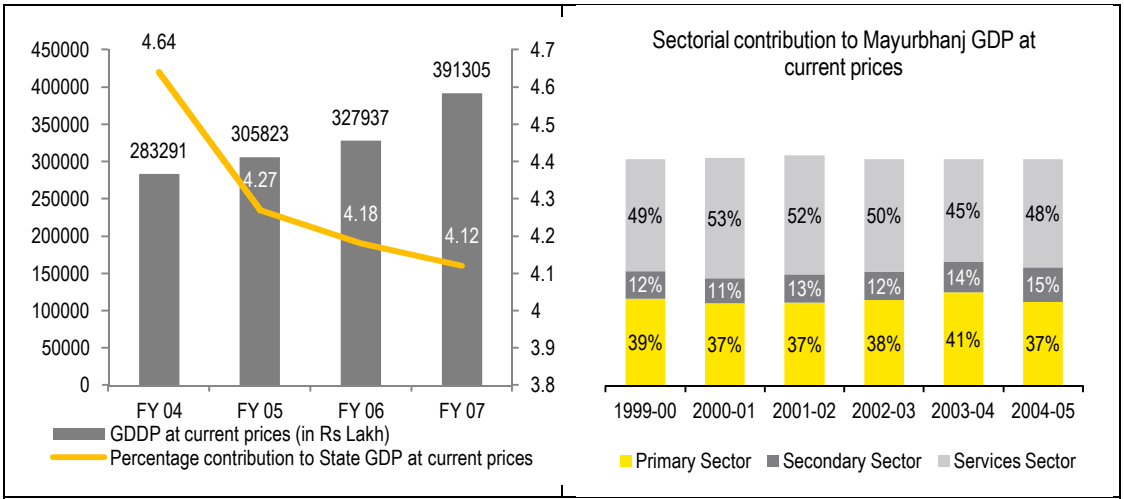
There is a private engineering (degree) college with an intake capacity of approximately 420 students per year. Major courses offered includes, electronics & telecom engineering, computer science & engineering, electrical engineering, instrumentation and electronics, mechanical engineering and civil engineering. In addition to engineering degree colleges, there are 2 polytechnic institutes (both private) offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 570 students per year. Major courses are mechanical and electrical among other courses.

Mayurbhanj has 3 Pharmaceutical colleges with an intake capacity of 60 seats each. There is an Ayurvedic college offering B.A.M.S degree with an intake capacity of 30 students per year. The homeopathy college, offering a B.H.M.S has 30 seats.

There are 2 Government ITIs, one in *Takatpur* and the other in *Baripada*. Takatpur has a total intake capacity of 274 seats, and the maximum seats are offered in courses such as fitter (42) and Welder (32). Baripada ITI has a total intake capacity of 84 seats offering electronic mechanic, stenographer and cutting & sewing courses. As per SCEVT figures, in 2010 only 74 percent of the seats were filled, 94 seats remained vacant in Government ITIs. The number of private ITCs is 51, offering 16 courses including fitter, electrician, COPA, stenographers, mechanical engineering and cutting and sewing etc. Almost 37 percent of the seats in the private training institutes were unutilized in 2010.

10.22.3 Economic Profile

With an annual average growth rate of 5.7 percent for the period 2000-01 to 2006-07, the economy of Mayurbhanj has been mostly stagnant. Its share in State GDP declined from 4.64 percent in 2004 to 4.12 percent in 2007. Mayurbhanj derives its gross domestic products from agriculture, industry and services. The economy is predominantly rural with limited role of the industry sector. The GDP of Mayurbhanj district at current prices (2004-05) is shown below:



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 136: Gross District Domestic Product (at current prices) of Mayurbhanj District

Agriculture

People of Mayurbhanj largely depend upon agriculture as their primary means of livelihood. 66 percent of the work force depends on Agriculture. Mayurbhanj ranks high in the State in terms of number of agricultural laborers, constituting 38.33 percent of total working force. As per Odisha agriculture statistics report 2008-09, 42 percent of the total geographical area or almost 437 thousand hectares of land was brought under cultivation in District. Out of the total cultivable area almost 44 percent constitute high land, nearly 27.9 percent middle land 28.4 percent low land. Paddy is the primary crop with a gross cropped area of 345 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops. While there has been slight reduction in area under *Kharif* paddy on highlands, area under pulses and oilseeds have seen a positive trend. Performance of Mayurbhanj district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 24th with a per capita agricultural output of 1152. Food grains contribute highest to the total agricultural output of Mayurbhanj with a value of 595 (2008-2009), followed by cereals (562) and vegetables with (473) (all figures in thousand metric tonnes).
With an average landholding of 1.13 hectare, landholding pattern in the District is appreciable. About 60 percent of the farmers have more than a hectare of land holding.

Industries

The district of Mayurbhanj is noted for its forest, mineral resources and other resources. The resources available in the district are of great importance in the context of economic development of an area. Mayurbhanj district has a huge potential for development of Industries because of its location, the rivers *Budhabalanga* and the *Salandi* flow through the district and *Baitarani* flows alongside the western boundary.

The district despite having rich in natural resources still remain behind as industrially backward district. Mayurbhanj notably has two large units, one into the production of sponge iron and the other into PVC cables. The investments in these two units are Rs. 965.25 and Rs. 1657.41 lakhs respectively.

In terms of attracting investments and setting up Micro and small scale industries, Mayurbhanj

holds 2.7 percent of the total investments made in the State till March 2010. A high value of this investment comes from the Glass and Ceramics industry, where the total investment is Rs. 1634 lakhs and others include Paper & Paper products, Forest & Wood based, Textiles etc.

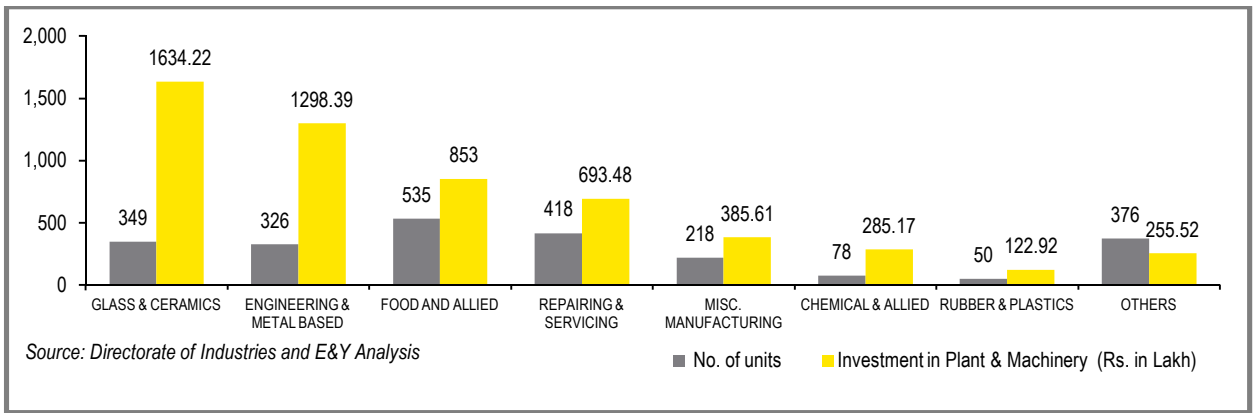


Figure 137: MSME Investments in Mayurbhanj till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Mayurbhanj GDP, the service sector remains the most important contributor constituting 48 percent of the district GDP. The contribution of various sectors to GDDP is shown in chart below.

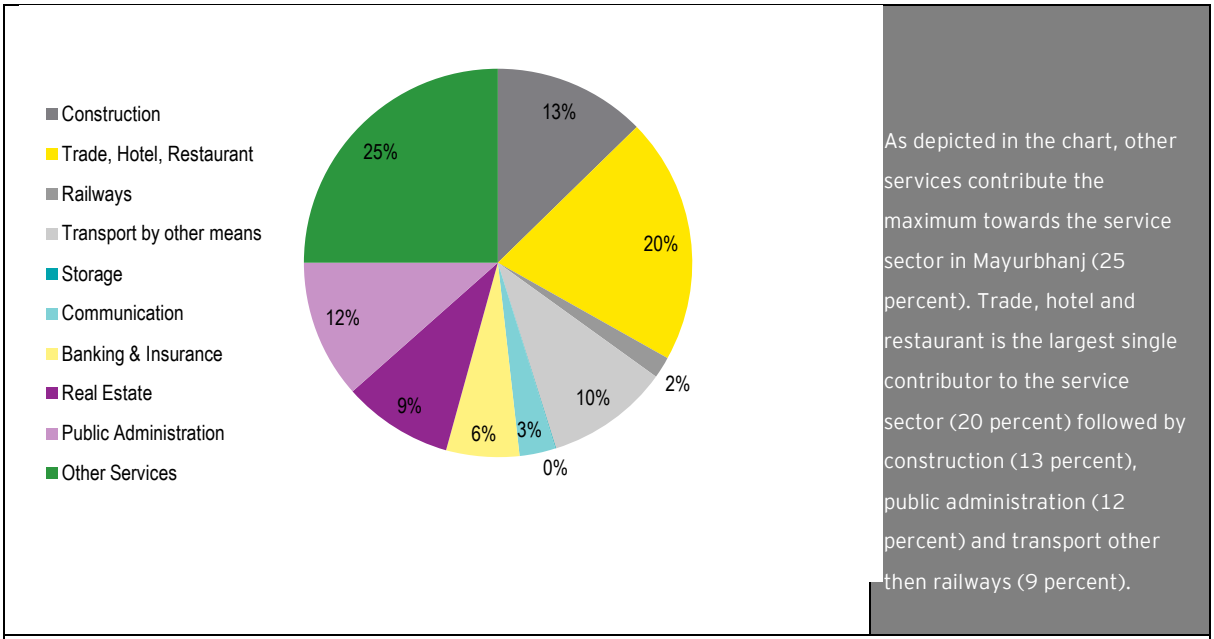


Figure 138: Composition of Service Sector- Mayurbhanj 2004-05

10.22.4 Skill Gap Assessment for Mayurbhanj District

Over the next 15 years, the total workforce demand for skilled jobs in Mayurbhanj district is expected to grow to 9.5 lakhs in 2026 from present levels of 5.3 lakhs in 2011. The total workforce demand is expected to be dominated by the tertiary sector (83 percent), followed by the primary (13 percent) and secondary sector (4 percent).

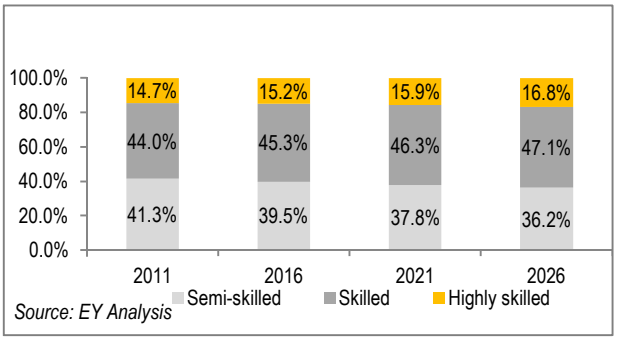


Figure 139: Proportion of demand for skilled jobs by skill categories- Mayurbhanj District

The major sectors from which the workforce demand for skilled jobs in 2026 is primarily expected are tourism, travel, hospitality and trade (1.7 lakh); agriculture (1.3 lakh); education & skill development (1.2 lakh); healthcare (1.2 lakh); IT & ITes industry (1.2 lakh) and banking, financial services and insurance (1.1 lakh).

The demand for semi-skilled workers is expected to reduce in the period 2011-2026, while that of skilled and highly-skilled workers is expected to show a robust growth during the same period.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade:					
Semi-skilled	45,845	58,140	73,733	93,507	
Skilled	30,379	38,527	48,859	61,962	
Highly skilled	4,971	6,304	7,995	10,139	
Total demand for skilled jobs	81,195	102,971	130,587	165,608	17
Agriculture					
Semi-skilled	67,187	66,014	64,860	63,728	
Skilled	44,791	44,009	43,240	42,485	
Highly skilled	22,396	22,005	21,620	21,243	
Total demand for skilled jobs	134,374	132,028	129,720	127,456	13
All sectors:					
Semi-skilled	219,299	250,909	291,903	345,346	
Skilled	233,612	287,412	357,689	449,563	
Highly skilled	77,830	96,499	122,807	160,083	
Total demand for skilled jobs	530,741	634,820	772,399	954,992	100

Source: E&Y Analysis

Table 76: Skill-wise demand for sectors where high demand is foreseen

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 3 lakhs during the period 2011-2026.

Skilled human resource (65 percent) is expected to account for the largest chunk of the widening demand-supply gap of skilled workforce, followed by highly-skilled jobs (27 percent) and semi-skilled jobs (8 percent).

The highest demand for **highly skilled** jobs is expected in case of banking, financial services & insurance jobs (57 percent) and IT & ITeS (20 percent).

As far as **skilled** workers are concerned, the major share of incremental gap is expected to come from sectors like education & skill development (27 percent); healthcare (27 percent); IT & ITeS (16 percent); travel, tourism, hospitality & trade (15 percent) and media & entertainment (10 percent) sectors.

The demand for **semi-skilled** workers would increase primarily in case of tourism, travel, hospitality & trade (37 percent); media & entertainment (22 percent); and banking, financial services & insurance (19 percent).

On an industry level, the banking, financial services & insurance sector is expected to account for 20 percent of this incremental demand supply gap. This gap in this sector is expected to come from highly-skilled (73 percent) and skilled workers (19 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(1,019)	(1,301)	(1,508)	(3,828)
Auto & Auto Components	1	1	2	4
Chemical & Pharmaceuticals	6	9	12	27
Construction materials & building hardware	342	470	606	1,418
Electronics & IT Hardware	10	14	19	43
Food Processing	38	40	42	120
Furniture & Furnishings	200	338	468	1,006
Leather & Leather Goods	1	1	1	3
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	98	235	358	691
Unorganised sector	11	17	22	50
Banking, Financial Services & Insurance	11,717	19,547	31,731	62,995
Building, Construction & Real Estate Services	46	154	243	443
Education & Skill Development	14,772	19,634	25,964	60,370
Healthcare	13,439	18,295	24,626	56,360
IT & ITES industry	11,832	16,682	23,016	51,530
Media & Entertainment	6,187	10,204	15,282	31,673
Tourism, travel, hospitality & trade	7,978	14,129	21,903	44,010
Transportation, logistics, warehousing & packaging	(166)	524	1,220	1,578
Total	65,492	98,992	144,007	308,491

Source: E&Y Analysis

Table 77: Total incremental demand supply gap for skilled jobs by sectors- Mayurbhanj District

Education & skill development is another major sector which accounts for the incremental demand gap (20 percent). This incremental gap in turn comprises of the need for skilled and highly-skilled human resource.

Significant incremental requirement is also expected to be witnessed in services like healthcare (18 percent) and IT & ITeS (17 percent) sectors. The highest proportion of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.22.5 Development potential and Stakeholder perception

Mayurbhanj is a tribal dominated area. Out of over 60 tribes in Odisha, Mayurbhanj alone houses 53 of these tribes. It is well endowed with natural resources. The economy is basically agrarian with very little industrial development taking place although the adjoining district Balasore is an industrial hub. The infrastructure for transportation and communication is not very well developed, which is also a reason for limited industries coming up in the area. According to the statistical handbook of the district, only about 72 percent of the total villages in the district have been electrified.

Despite having ample scenic beauty, it has not been used to the advantage of generating employment. Good hotels are difficult to find. The *Similipal* tiger sanctuary can be developed further as a tourist attraction. Two tourist complexes in the district – *Panthasala Bangiriposhi* and *Oanthasala Khiching* are registering losses for the last three years (Performance Budget, Department of Tourism, 2009-1010).

Agriculture and horticulture are the main sectors that provide means of livelihood for people. Interactions with various district officials, youth and women showed that there is a need to develop and demonstrate that these sectors can provide good economic returns. Mayurbhanj has very high mango production. The climate and soil are favorable for mango production. Since winter is less severe in the district, fruit ripens early and the farmers have the advantage of being early movers. Although farmers are planting mango trees, with adequate training, the productivity can increase substantially. Training in areas like sowing, grafting, post harvest plucking, grading, packaging are very important. The department of horticulture does undertake trainings and even sends select groups for further training to Phulbani and Khurda, but there is ample scope for further training programmes organized in the district. It was shared that despite high production of mango, there is only one processing unit that manufactures soft drinks and jams in Mayurbhanj. It is mostly transported to the neighbouring West Bengal and some parts of Bihar. In the absence of proper packaging, a large part of it gets destroyed. Therefore the potential for setting up food processing centre especially for mango is quite high.

Another upcoming area is rubber plantation. The Rubber Board along with the Odisha forest department is developing rubber plantations and providing skills to people to grow rubber plants, tapping of sap and processing of this sap to produce rubber. There are plans to develop it further.

An important point made, which is applicable for the other districts also, is that the state produces graduates in agriculture. There is no cadre of agriculturists below that, which is a big gap. In the absence of this cadre, the outreach to people is impacted. The KVKs have a mandate to improve agricultural output, however, there is need for human resource which can facilitate creation of a value chain. Developing a cadre of `para agriculturists' could be looked into which can bridge the

gap between the farmers and the opportunities to develop agriculture as an industry. Marketing linkages, access to capital and technical skills would need to be provided to enable this transition.

Although it did not come up during discussions, but animal husbandry appears to be another area that can be developed. Mayurbhanj has reasonably good production of milk and eggs as compared to other districts of Odisha. There would surely be the need to develop it further by setting up of co-operatives and diversification of milk products. Related to this would be developing skills of people to provide veterinary services.

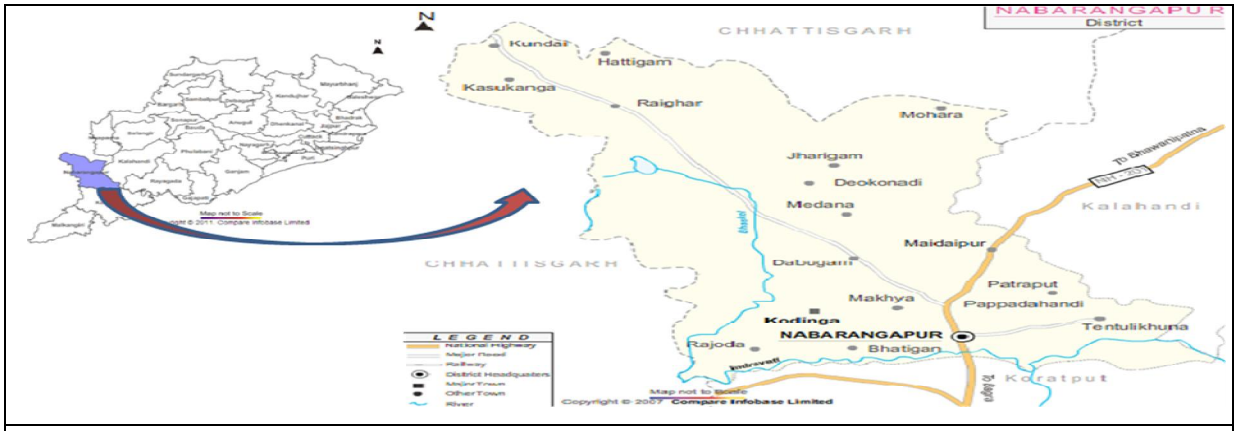
Placement linked training programmes have been organized in a number of areas – Sewing, Carpentry, Masonry etc. Job fairs are also organized to create awareness about other employment opportunities. There is reluctance on the part of youth to move out of their home district, therefore, much more work needs to be done to develop a comfort level among them.

There are two government ITIs and about 50 private ones. Some courses like electrician, fitter have a lot of demand and students get jobs easily after completion of their course. Being close to Balasore also helps in getting jobs. There are some other courses which had to be closed down due to lack of demand. Interestingly sewing, cutting and tailoring were cited as some examples of courses which have been discontinued.

- **Primary Sector** – Skill development to encourage integrated farming and get greater benefits from its mango production, which is of good quality.
- **Secondary Sector** – With limited industry in the district, skill development may be geared towards meeting the demands of skills required by the industry in the adjoining district of Balasore. Associated skills with the food processing industry maybe provided.
- **Service Sector** – There is scope for developing skills in areas like hospitality, transportation, construction and tourism.

10.23 Nabarangpur

Nabarangpur District is spread over an area of 5291 Sq Km which forms approximately 3.4 percent of the total geographical area of the State. The district is bound by Raipur and Bastar districts of Chhatisgarh in the north and the west, Kalahandi in the east and Rayagada and Koraput in the South. The river *Indravati* forms the border between Nabarangpur and Koraput districts. Administratively, the district is divided into one subdivision, 10 blocks, 169 Gram Panchayats and 876 villages.



Map Courtesy: Maps of India

District Information	Nabarangpur	Odisha	Source
Area (in Sq Km)	5,291	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	3.4% (14)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	10	**309**	Census 2001
No of GPs	169	**6,234**	Census 2001
Total no of inhabited villages	876	**47,529**	Census 2001
Forest area as % of total geographic area	46.50%	**37.66%**	Census 2001

Figure 140: District Map of Nabarangpur

10.23.1 Demography

As per Census 2011 (Initial provisional data), Nabarangpur has a population of 12.19 lakhs of which males and females were 6.04 lakhs and 6.15 lakhs respectively. There is a change of 18.81 percent in the population compared to population as per 2001 census. In terms of population, the district constitutes 2.9 percent of the total population of the State and ranks 17th among all the districts of the state. The initial provisional data (Census 2011) suggest a population density of 230 in 2011 making Nabarangpur the 17th most densely populated district of Odisha. With regards to sex ratio, the district lies amongst the top five districts of the state. The sex ratio for Nabarangpur as per 2011 provisional census figures is 1018 females per 1000 males, much above state average of 978 females per 1000 males.

More than two third of the population is tribal with STs constituting about 55 percent of the total population while SCs constitute approximately 14.1 percent of the total population. In terms of urbanization, Nabarangpur is far behind other districts of the state with only 5 percent urban population (as per census 2001).

As per 2001 census, the population in the working age group constituted 55 percent of the total

population. The population in the age group 0-4 years constitutes 10.18 percent and 5-14 years comprise 22.23 percent respectively. Work participation rate of the district is 49.46 percent. Out of the total workers 52.18 percent are main workers and 47.82 percent are marginal workers. The district is among the bottom five districts of Odisha in terms of HDI and GDI.

Population	Nabarangpur	Odisha	Source
Total population (in lakh)	12.19	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	6.04	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	6.15	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	2.91% (17)	**NA**	Census 2011 provisional figures
Density of population	230	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	18.81%	**13.97%**	Census 2011 provisional figures
Urban population %	5.75%	**14.99%**	Census 2001
SC population %	14.10%	**16.53**	Census 2001
ST population %	55.03%	**22.13**	Census 2001
Sex ratio	1018	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	55.18%	**58.38%**	Census 2001
Worker participation rate	49.46%	**40.03%**	Census 2001
Share of primary sector to total workers	83.04%	**64**	Census 2001
Proportion of agriculture laborer in workforce	52.27%	**34.53**	Census 2001
Human Development Indicators	**Nabarangpur**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.436 (26)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.422 (25)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	11358 (30)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.452 (14)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 78: Socioeconomic indicators for Nabarangpur

10.23.2 State of Education

Nabarangpur has the lowest rate of literacy in the State. Average literacy rate of Nabarangpur in 2011 (as per provision census figures) is only 48.20 percent compared to 33.92 percent in 2001. Gender wise male and female literacy is 59.45 percent and 37.22 percent respectively. For 2001 census, same figures stood at 47.04 and 20.67.

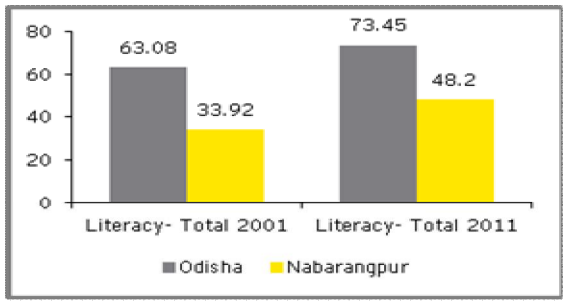


Figure 141: Literacy rate- Nabarangpur

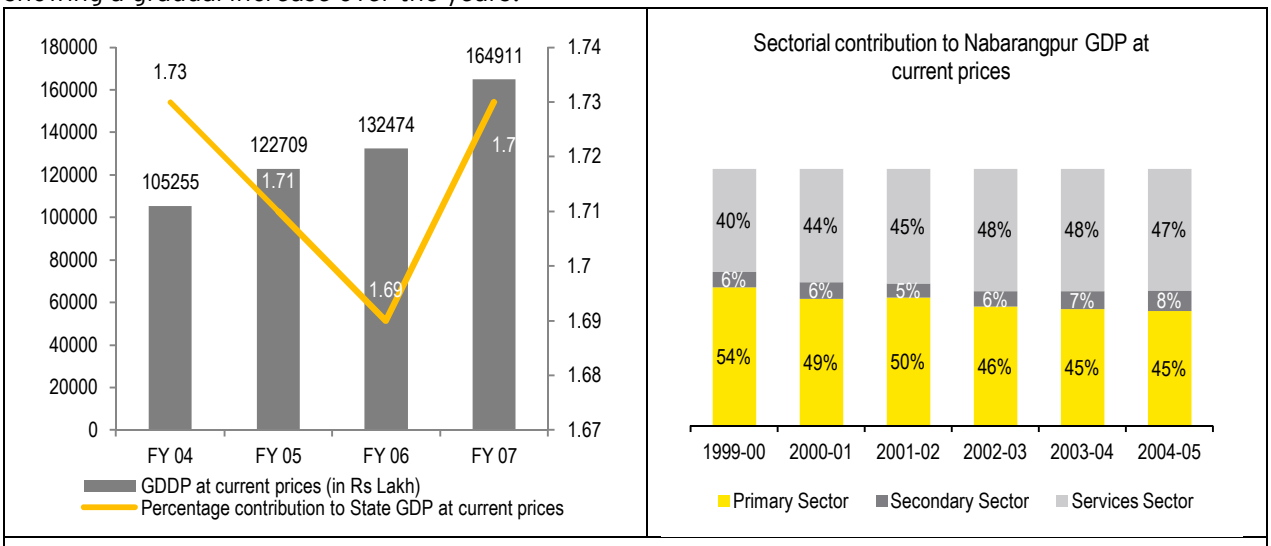
Out of the total number of children in school going age, 7.5 percent children were out of school in 2010.

For higher education there are 13 junior colleges and higher secondary schools. Seats in arts, science and commerce streams were 1888, 450 and 304 respectively in 2010 as per the data shared by DHE. In addition to the junior colleges there are 4 degree colleges in the district. The district does not have any college for imparting professional education. There are no medical colleges, pharmacy colleges, homeopathic colleges, ayurvedic and nursing colleges at present.

Though there is a Government ITI and a private ITC in the district, the utilization of seats has been very poor. As per SCVET data, during 2010, all the government ITI seats were vacant while in the private ITC, the vacancy was approximately 80 percent.

10.23.3 Economic Profile

As per economic survey 2010-11, Nabarangpur is among the bottom half districts in the State with a CAGR of 4.1 percent for the period 2000-01 to 2006-07. The contribution to the State's GDP remained more or less stagnant at 1.7 percent during this period. In terms of sectoral contribution, agriculture and services sector contributes to 92 percent of the GDDP with the industry sector showing a gradual increase over the years.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 142: Gross District Domestic Product (at current prices) of Nabarangpur

Agriculture

People of Nabarangpur largely depend upon agriculture as their primary means of livelihood. About 83 percent of total work force is either cultivators or agricultural laborers. As per Odisha agriculture statistics report 2008-09, thirty five percent of the total geographical area or almost 186 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 158.93 thousand hectares. Apart from paddy, other major crops include ragi, maize, niger, pulses and wheat. Maize is extensively grown Umerkote, Jharigan and Raighar blocks. With good production of animal feeds like maize, horse gram and oil cakes, the district has good potential for animal husbandry as well.

Performance of Nabarangpur district is fairly good in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 7th with a per capita agricultural output of 1752. Food grains contribute highest to the total agricultural output of Nabarangpur with a value of 464.79 (2008-2009), followed by cereals (449.65) and vegetables with (171.21) (all figures in thousand metric tonnes). With an average landholding of 1.24 hectare, landholding pattern in the District is appreciable with majority (more than 57percent) of the farmers having more than a hectare of land holding.

Industries

Nabarangpur is not an industrially developed district. The only medium scale industry present in the District is the Mangalam Timber Products Ltd. The growth of industries is constrained because of lack of raw materials, proper transportation, and power. Infrastructural constraints and averse topography are other impeding factors. Most of the land in the district is forested which makes it a potential source for forest based products. In terms of attracting investments and setting up Micro and small scale industries, Nabarangpur gets counted among the bottom few districts in the State. MSME investment in Nabarangpur was 3.5 percent of the total investments made in the State till March 2010.

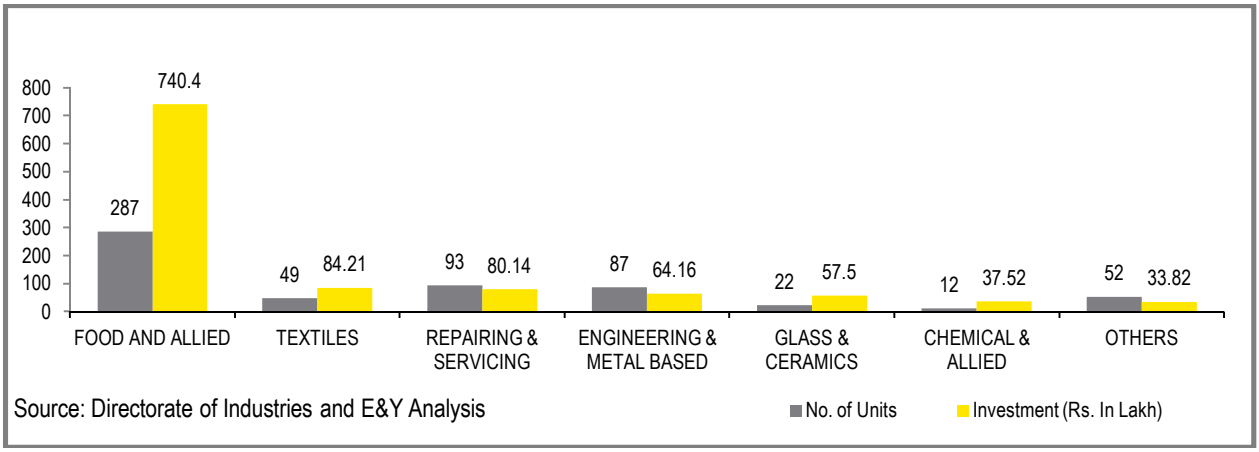
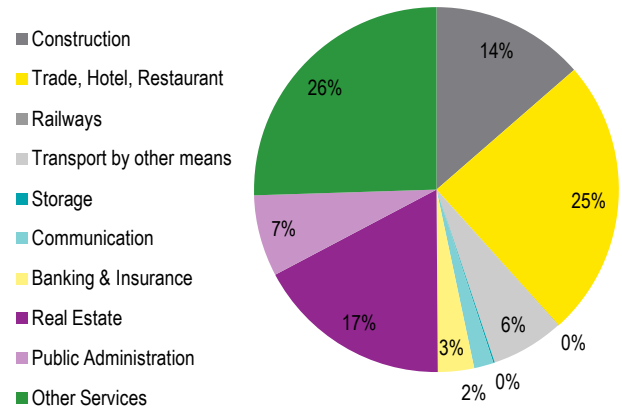


Figure 143: MSME Investments in Nabarangpur till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Nabarangpur GDP, the service sector remains the most important contributor constituting 47 percent of the district GDP.



As depicted in the chart, other services are the leading contributor to the service sector (26 percent) followed by trade, hotel and restaurant (18 percet), real estate (17 percent) and construction (14 percent). Transportation and Public Administration are also major contributors of GDP of Nabarangpur economy

Source: Planning Commission, Government of India

Figure 144: Composition of Service Sector- Nabarangpur 2004-05

10.23.4 Skill Gap Assessment for Nabarangpur District

Over the next 15 years, the total workforce demand for skilled jobs in Nabarangpur district is expected to grow to 5 lakhs in 2026 from present levels of 2.8 lakhs in 2011. The total workforce demand is expected to be dominated by the tertiary sector (82 percent), followed by the primary sector (14 percent) and secondary sector (4 percent). The top five sectors expected to create a demand for skilled workforce in 2026 are: tourism, travel, hospitality and trade (1.1 lakh); agriculture (0.7 lakh); education & skill development (0.6 lakh); healthcare (0.6 lakh) and IT & ITeS industry (0.6 lakh).

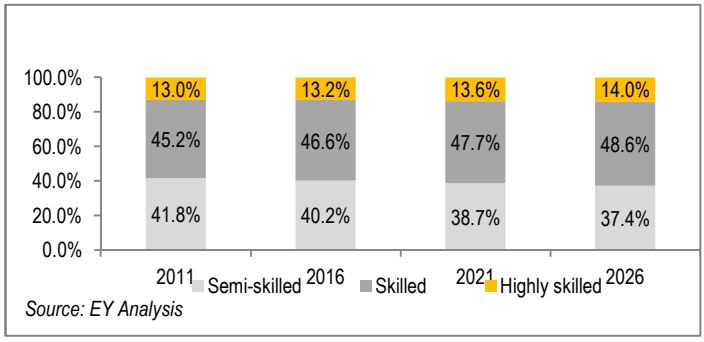


Figure 145: Proportion of demand for skilled jobs by skill categories- Nabarangpur District

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade:					
Semi-skilled	31,835	40,372	51,199	64,931	
Skilled	21,095	26,753	33,927	43,026	
Highly skilled	3,452	4,378	5,552	7,041	
Total demand for skilled jobs	56,382	71,503	90,678	114,998	23
Agriculture					
Semi-skilled	35,958	35,330	34,713	34,106	
Skilled	23,972	23,553	23,142	22,738	
Highly skilled	11,986	11,777	11,571	11,369	
Total demand for skilled jobs	71,916	70,660	69,426	68,213	14
All sectors:					
Semi-skilled	118,658	135,800	157,799	186,120	
Skilled	128,543	157,099	194,151	242,255	
Highly skilled	36,940	44,633	55,237	69,928	
Total demand for skilled jobs	284,141	337,532	407,187	498,303	100

Source: E&Y Analysis

Table 79: Skill-wise demand for sectors where high demand is foreseen - Nabarangpur District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 2 lakhs during the period 2011-2026.

Skilled manpower is expected to account for 56 percent of the widening demand-supply gap for the Nabarangpur district, followed by semi-skilled jobs (28 percent) and highly-skilled jobs (16 percent).

As for the **highly skilled** jobs, a higher requirement is expected in case of banking, financial services & insurance jobs (43 percent); IT & ITes (25 percent); and tourism, travel, hospitality & trade (11 percent).

The highest proportion of incremental gap for **skilled** workers is expected to come from services sectors like education and skill development (26 percent); healthcare (25 percent); and tourism, travel, hospitality & trade (19 percent).

Tourism, travel, hospitality & trade (49 percent); media & entertainment (21 percent), banking, financial services & insurance (10 percent), IT & ITes (10 percent) constitute the major sectors which are expected to create a demand for **semi-skilled** workers.

A variation is observed in the incremental demand supply gap for skilled jobs in different industries. Tourism, travel, hospitality & trade are expected to account for 26 percent of this incremental demand supply gap. The incremental gap in this sector is primarily expected to come from semi-skilled (52 percent) and skilled (41 percent) workers.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(1,117)	(1,128)	(1,131)	(3,376)
Auto & Auto Components	2	2	2	6
Chemical & Pharmaceuticals	17	20	24	61
Construction materials & building hardware	1,051	1,222	1,414	3,687
Electronics & IT Hardware	34	39	45	118
Food Processing	88	91	94	272
Furniture & Furnishings	95	106	117	317
Leather & Leather Goods	1	1	1	2
Gems & Jewellery	0	0	0	0
Organised Retail	0	0	0	0
Textile	58	64	70	192
Unorganised sector	9	10	11	30
Banking, Financial Services & Insurance	4,795	7,360	11,260	23,415
Building, Construction & Real Estate Services	539	587	632	1,758
Education & Skill Development	8,091	10,534	13,714	32,340
Healthcare	7,949	10,389	13,568	31,906
IT & ITeS industry	7,735	10,172	13,348	31,255
Media & Entertainment	6,395	8,332	10,788	25,516
Tourism, travel, hospitality & trade	13,238	17,315	22,485	53,038
Transportation, logistics, warehousing & packaging	632	757	894	2,283
Total	49,611	65,874	87,336	202,821

Source: E&Y Analysis

Table 80: Total incremental demand supply gap for skilled jobs by sectors- Nabarangpur District

The incremental demand supply gap is also expected to widen for education & skill development (16 percent). The incremental human resource gap in this sector largely comprises of need for skilled (~90 percent) and highly-skilled (~10 percent) human resource.

10.23.5 Development potential and Statekeholder persception

Nabarangpur district is among the districts with low human development index. It is primarily a tribal dominated area. Literacy levels are very low in the district (total literacy level is 33.93 percent; M- 47.04 percent and F-20.67 percent). About 94 percent of population lives in the villages and depends on agriculture. Forest area covers a substantial 47 percent of the geographic area. There is recognition that there needs to be convergence across various government departments to impart vocational training. Recently the district has developed an interactive website, one of the first districts in Odisha to do so, which would be one of the steps to bring a much needed synergy across different training and employment generation programmes.
As far as agriculture is concerned the main crop grown is paddy, sugarcane, millets and oil crop. Nabarangpura is also the highest producer of maize in Asia. Yet agriculture is at a subsistence stage and not a significant contributor to economy since there are very limited agro based industries at present although there are a number of proposals in the pipeline. Some of the challenges with regard to this sector are small landholdings with over dependence on agriculture, low crop insurance, absence of cold storage and warehousing which limit commercialisation of agriculture, expansion of agro forest based industries. The department of soil conservation organizes training for the farmers in agriculture and allied areas, but the duration of training is inadequate. The department does not have sufficient resources to impart intensive trainings with follow up interactions.

A similar situation is faced by the horticulture, animal husbandry and fishery sectors also. Although the climate and soil are favourable for growing fruit especially banana, mango, cashew but productivity is low due to lack of technical knowledge in management, low irrigation, lack of cold storage. About 90 percent of the existing domestic cattle results in low production. Lack of training, breed improvement centres, quality input supply centres are some reasons for this. There is high demand for milk, meat, egg. There is scope for promoting backyard poultry. As far as fisheries is concerned there is good scope for minor irrigation projects – farm ponds, reservoir. The yield is low due to unscientific pisci culture and technological gap in management of fish cultivation. Strengthening of veterinary institutes is required especially at the frontline level to create awareness, motivate fishermen and impart training. The officials reported inadequate human resources to engage with people on the ground. This has had an adverse impact on linking those engaged in the primary sector with the government schemes, creating awareness and mentoring.

Although most of the population is engaged in agriculture, the next generation is not very enthused about continuing with the occupation. An interaction with college students brought this to the fore. Out of the 50 odd students with whom the researcher had an interaction, about 10 percent belonged to families of agriculturists. None of them wanted to continue with farming like their parents. In fact many of them shared that their parents were encouraging them to leave farming since it is labour intensive, did not give adequate returns and was risky since it was dependent on rains. Therefore it is very important to promote non agriculture based production activities along with agriculture.

There are over 80 MSMEs in the district, mostly agro based industries and food processing units – maximum being rice mills and about 14 cashew processing units. There is ample scope to promote processing and semi processing unit, SMEs for agricultural products. The industries related to food processing would require support in terms of sorting out, grading of the raw material, packaging, hygienic handling of food items.

There are handicraft clusters of tribal jewellery, terracotta, dhokra, wrought iron craft, and wood craft in the district. 500 artisans have been trained mostly for skill upgradation and imparting new skills. Out of the trained artisans, only 10 percent are engaged in active production. Some groups working with the artisans shared that that the artisans require quick returns for their efforts and if they do not get it, they do not pursue it as a primary occupation. A facility centre is required to provide comprehensive support to them in terms of raw material, design inputs and ready cash purchase facility. The district is promoting the production of lacquer, which is of a high quality. At present the lac is sold in an unprocessed form. With some training given to people to process it, the returns could be much higher.

There are 44 bank branches in the district which includes 24 rural banks. In terms of financial inclusion, in remote areas where bank branches are located at a distance about 3-4 business correspondents would be required in each block. Therefore for the entire district about 40 business correspondents would be needed. This may not be a very significant number as far as this district is concerned. However, considering the importance of services which the business correspondents provide, developing this skill force for all districts maybe considered since this is likely to be a requirement in other districts also.

An interaction with individuals showed that there is a need to develop skills in areas like masonry, mobile repairing, IT, refrigeration, electrical repairing, plumbers and fitters. Lack of trained people affects the quality of civil work undertaken and repair of appliances. Placement linked training programmes employment fair was organized in which different organizations were invited to create awareness and select individuals for training after which employment was assured. About 940 youth were enrolled. There was greater interest in jobs like drivers, security guards. There is greater interest in occupations where they do not have to relocate themselves. At the time of the visit a training programme was being organized by the ITDA for tribal boys and girls in apparel making for the industry. The trained students were assured of employment in other states like Chennai. Although this is a good opportunity, there is a need to watch the outcome of the placement linked employment scheme and replicate what gives good results.

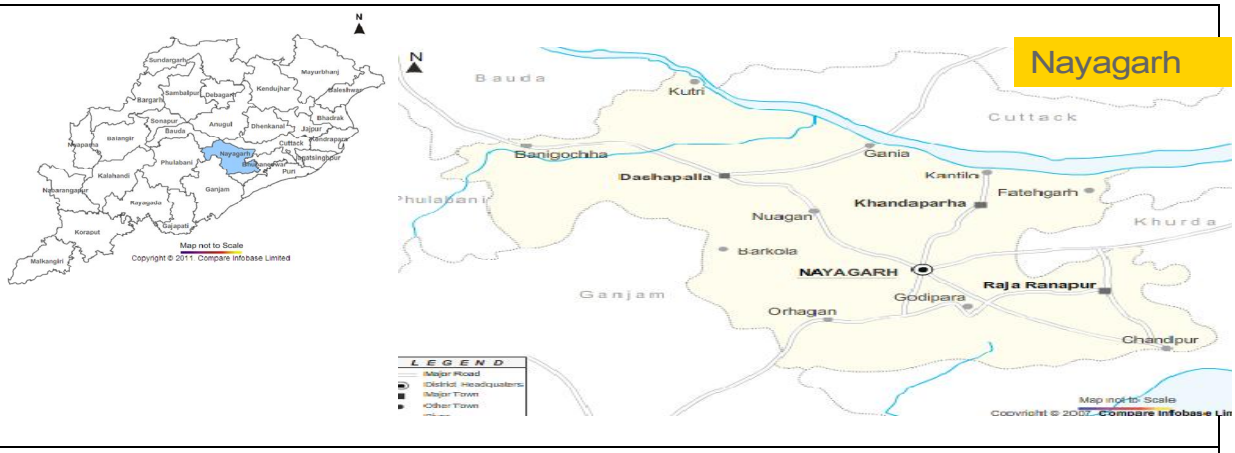
The government ITI is located about 60 km away from the district headquarters. A visit to a private ITI revealed that its infrastructure was highly inadequate and there were no students attending the classes. There is demand for training in areas like. The existing ITI is offering training opportunities for electronics and mechanical engineering. Awareness about agro based training is very low. The only Government ITI in Nabarangpura had initiated a course in food processing but had to be discontinued since there were no applicants. Thus there is a need for career guidance for the youth.

- **Primary Sector** – Skill development to promote integrated farming and improve fisheries would help to promote the primary sector

  Secondary Sector – At present there is a need to set up food processing industries especially to reap the benefits of high production of maize in the district. Training maybe given to the farmers to undertake pre processing such as sorting and grading of maize before it is sent for processing. The existing handicraft clusters require support in terms of a facilitation centre which will provide services like design inputs, credit facilities and buy back of products made by them.
- **Service Sector** – Skills required in areas like repair work, IT related occupations, banking and financial services, education and health care.

10.24 Nayagarh

Nayagarh District is spread over an area of 3890 Sq Km which forms approximately 2.49 percent of the total geographical area of the State. Administratively, the district is divided into one subdivision, 8 blocks, 179 Gram Panchayats and 1531 villages. Nayagarh is surrounded by Cuttack District in the north, Khurda in the east, Kandhamal in the west and Ganjam in south.



Map Courtesy: Maps of India

District Information	Nayagarh	Odisha	Source
Area (in Sq Km)	3,890	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	2.5% (18)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	8	**309**	Census 2001
No of GPs	179	**6,234**	Census 2001
Total no of inhabited villages	1,531	**47,529**	Census 2001
Forest area as % of total geographic area	53.47%	**37.66%**	Census 2001

Figure 146: District Map of Nayagarh

10.24.1 Demography

As per Census 2011 (Initial provisional data), Nayagarh has a population of 9.62 lakhs of which males and females were 5.02 lakhs and 4.6 lakhs respectively. There is a change of 11.30 percent in the population compared to population as per 2001 census. In terms of population, the district constitutes 2.29 percent of the total population of the State .The initial provisional data (Census 2011) suggest a population density of 247 in 2011 making Nayagarh the fifteenth most densely populated district of Odisha. With regards to sex ratio, the district fares poorly compared to other districts and the state average. The sex ratio for Nayagarh as per 2011 provisional census figures is 916 females per 1000 males, much below the State average of 916 females per 1000 males.
In terms of social composition of the population, SCs constitute approximately 14.04 percent of the total population while STs forms only 5.88 percent of the total population. With almost 4.3 percent urban population, Nayagarh is one of the least urbanized districts in Odisha (as per census 2001). As per 2001 census, the population in the working age group constituted 59.3 percent of the total population. The population in the age group 0-4 years constitutes 8.72 percent and 5-14 years comprise 21.63 percent respectively. Work participation rate of the district is 33.32 percent. Out of the total workers 72.97 percent are main workers and 28.6 percent are marginal workers. With a human development index (HDI) of 0.571 and a rank of 15 and Gender development index (GDI) of 0.452 and a rank of 23, the Nayagarh ranks among the bottom half districts of Odisha.

Population	Nayagarh	Odisha	Source
Total population (in lakh)	9.62	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	5.02	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	4.60	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	2.29% (21)	**NA**	Census 2011 provisional figures
Density of population	247	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	11.30%	**13.97%**	Census 2011 provisional figures
Urban population %	4.28%	**14.99%**	Census 2001
SC population %	14.04%	**16.53**	Census 2001
ST population %	5.88%	**22.13**	Census 2001
Sex ratio	916	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	59.28%	**58.38%**	Census 2001
Worker participation rate	33.32%	**40.03%**	Census 2001
Share of primary sector to total workers	62.50%	**64**	Census 2001
Proportion of agriculture laborer in workforce	32.64%	**34.53**	Census 2001
Human Development Indicators	**Nayagarh**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.571 (15)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.452 (23)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	11549 (29)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.708 (2)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 81: Socioeconomic indicators for Nayagarh

10.24.2 State of Education

Average literacy rate of Nayagarh in 2011 (as per provision census figures) is 79.17 percent compared to 70.52 percent in 2001. Gender wise male and female literacy is 86.63 percent and 71.08 percent respectively. For 2001 census, same figures stood at 82.66 and 57.64 showing a proportionate increase in literacy level for all the groups in Nayagarh District over last 10 years. Out of the total number of children in school going age, 1.717 percent children were out of school in 2008.

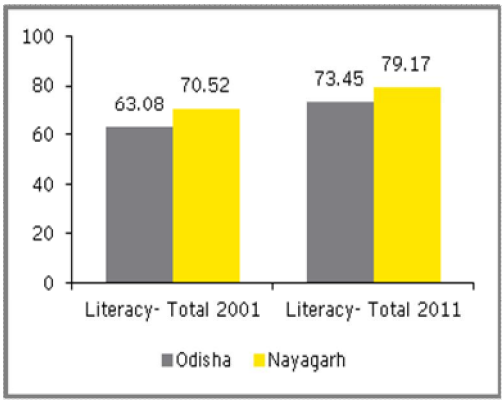


Figure 147: Literacy rates- Nayagarh District

Source: Census 2001 and Census 2011

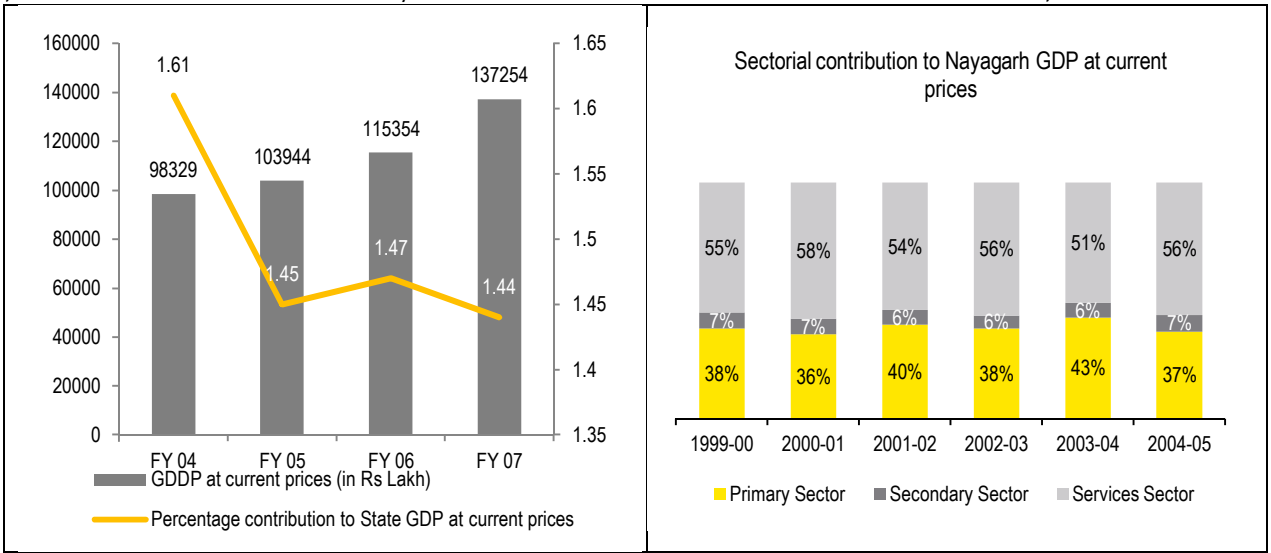
For higher Education there are 32 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 4684, 2176 and 256 respectively. At the degree level, there are 19 colleges which offer various courses.

For technical education, Nayagarh has no degree colleges. While there are 2 polytechnic institutes

offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 600 students per year. Major courses are electrical and mechanical, civil, among other courses. Nayagarh has no medical college or Pharmacy College nor any ayurvedic college. While there are no Government ITI, the number of private ITCs are 9 offering courses in fitter, electrician and data entry operator trades.

10.24.3 Economic Profile

As per economic survey 2010-11, Nayagarh is among the top fifteen districts in the State with a average annual growth rate of 6.5 percent for the period 2000-01 to 2006-07. The contribution to State GDP is however only 1.47 percent showing a declining trend between 2004 and 2007. 56 percent of the GDDP is catered by the services sector while industries are underdeveloped.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 148: Gross District Domestic Product (at current prices) of Nayagarh District

Agriculture

People of Nayagarh largely depend upon agriculture as their primary means of livelihood. About 63 percent of the total work force comprises of either cultivators or agricultural laborers. Nayagarh is ranked 18th in the State in terms of number of agricultural laborers, constituting 32.64 percent of total working force.

As per Odisha agriculture statistics report 2008-09, thirty four percent of the total geographical area or almost 134 thousand hectares of land was brought under cultivation in District. Food grains are the primary crop with a gross cropped area of 178.51 thousand hectares. Apart from food grains, other major crops include rice, pulses (*mung, biri* etc.), vegetables (potato, onions etc.), oilseeds and fruit crops.

About 40, 34 and 26 percent of the area under cultivation is comprised of highland, medium land and low land, respectively. Performance of Nayagarh district is however average in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 11th with a per capita agricultural output of 1481. Vegetables contribute highest to the total agricultural output of Nayagarh with a value of 177.37 (2008-2009), followed by food grains (169.76) and cereals with (139.80) (all figures in thousand metric tonnes).

With an average landholding of 1.03 hectare, landholding pattern in the District is appreciable with majority (more than 65.7 percent) of the farmers having more than a hectare of land holding.

Industries

With no major industries existing in Nayagarh the people are mainly dependent on agriculture. The district is known for the power project in *Budhbudhiani*.

In terms of Investments into large and medium scale industries, Nayagarh is currently ranked 21st in the State, with an investment of Rs. 9.72 Crore by 2010, which constitutes 0.01 percent of the total investment in large and medium scale industries. Nayagarh Sugar Complex is the only medium scale industry present there.

In terms of attracting investments and setting up Micro and small scale industries, Nayagarh is ranked 11th in the State. MSME investment in Nayagarh was 2.57 percent of the total investments made in the State till March 2010.

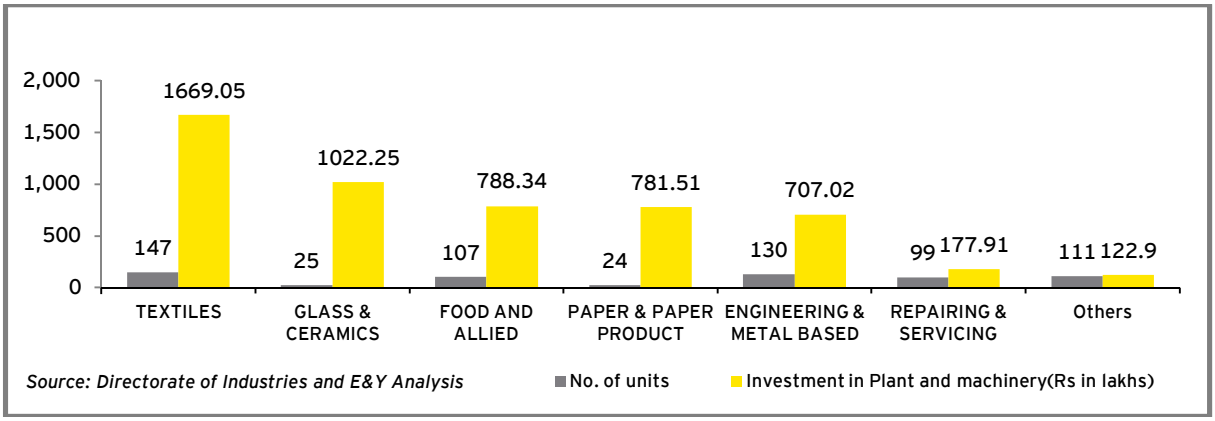


Figure 149: MSME Investments in Nayagarh till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Nayagarh GDP, the service sector remains the most important contributor constituting 56 percent of the district GDP.

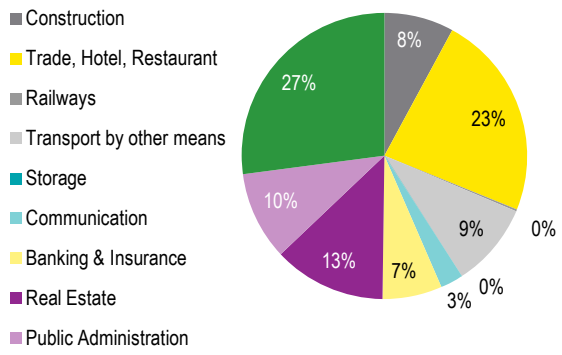


Figure 150: Composition of Service Sector- Nayagarh 2004-05

As depicted in the chart, other services are the leading contributor to the service sector (27 percent) followed by trade, hotel and restaurant (23 percent), real estate (13 percent) and public administration (10 percent).

Source: Planning Commission, Government of India

10.24.4 Skill Gap Assessment for Nayagarh District

Over the next 15 years, the total workforce demand for skilled jobs in Nayagarh district is expected to grow to 3 lakhs in 2026 from present levels of 1.7 lakh in 2011. The total workforce demand created in 2026 is expected to be dominated by the tertiary sector (83 percent), followed by primary (13 percent) and secondary (4 percent) sectors.

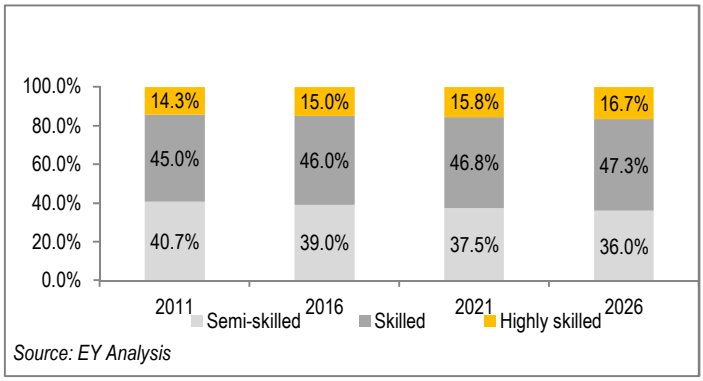


Figure 151: Proportion of demand for skilled jobs by skill categories- Nayagarh District

The top five sectors expected to create a demand for skilled workforce in 2026 are: tourism, travel, hospitality and trade (0.6 lakh); agriculture (0.4 lakh); banking, financial services & insurance (0.4 lakh); education & skill development (0.4 lakh); healthcare (0.4 lakh) and IT & ITes industry (0.4 lakh).

As per the CMIEs Capex database and secondary research, major projects have been announced in the power sector during the past two years. Hence, the sector's growth and the respective demand for labor are expected to surge in future.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade:					
Semi-skilled	15,875	20,132	25,532	32,379	
Skilled	10,520	13,341	16,919	21,456	
Highly skilled	1,721	2,183	2,769	3,511	
Total demand for skilled jobs	28,116	35,656	45,220	57,346	19
Agriculture					
Semi-skilled	20,377	20,021	19,671	19,328	
Skilled	13,585	13,347	13,114	12,885	
Highly skilled	6,792	6,674	6,557	6,443	
Total demand for skilled jobs	40,754	40,042	39,342	38,656	13
Banking, Financial Services & Insurance					
Semi-skilled	2,987	4,522	6,844	10,360	
Skilled	1,715	2,596	3,929	5,947	
Highly skilled	6,362	9,630	14,576	22,063	
Total demand for skilled jobs	11,064	16,748	25,349	38,370	13
All sectors:					
Semi-skilled	68,013	78,312	91,679	109,122	
Skilled	75,180	92,257	114,521	143,584	
Highly skilled	24,013	30,044	38,576	50,709	
Total demand for skilled jobs	167,206	200,613	244,776	303,415	100

Source: EY Analysis

Table 82: Skill-wise demand for sectors where high demand is foreseen - Nayagarh District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than one lakh during the period 2011-2026.

The district is likely to see an incremental demand of ~62,000 **skilled**, ~27,000 **highly skilled and** ~14,000 **semi-skilled** workers.

Within the incremental gap for **skilled** workers, a major portion is expected to come from services sectors like education and skill development (26 percent); healthcare (26 percent); tourism, travel, hospitality & trade (16 percent); and IT & ITes (16 percent).

Amongst the incremental **highly skilled** workforce requirement, around 59 percent of this requirement is expected to come from banking, financial services & insurance sector followed by IT & ITes (18 percent) sector.

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(362)	(434)	(488)	(1,284)
Auto & Auto Components	2	4	5	11
Chemical & Pharmaceuticals	4	5	7	16
Construction materials & building hardware	121	161	204	486
Electronics & IT Hardware	7	10	13	30
Food Processing	13	14	14	41
Furniture & Furnishings	4	5	7	16
Leather & Leather Goods	0	0	0	0
Gems & Jewellery	0	0	0	0
Organised Retail	0	0	0	0
Textile	6	11	14	31
Unorganised sector	266	368	466	1,100
Banking, Financial Services & Insurance	4,206	6,880	11,023	22,109
Building, Construction & Real Estate Services	54	99	137	290
Education & Skill Development	4,329	5,816	7,753	17,898
Healthcare	3,988	5,474	7,411	16,873
IT & ITES industry	3,686	5,170	7,108	15,964
Media & Entertainment	2,200	3,423	4,970	10,593
Tourism, travel, hospitality & trade	3,376	5,494	8,173	17,043
Transportation, logistics, warehousing & packaging	69	224	383	676
Total	21,968	32,724	47,200	101,892

Source: EY Analysis

Table 83: Total incremental demand supply gap for skilled jobs by sectors- Nayagarh District

Some of the major sectors where the incremental demand supply gap is expected to widen are banking, financial services and insurance (22 percent), education & skill development (18 percent), tourism, travel, hospitality & trade (17 percent).

10.24.5 Development potential and stakeholders perception

Nayagarh is situated 87 kms away from the state capital Bhubaneswar and is surrounded by Khurda, Phulbani, Cuttack, Ganjam and Angul districts. The district headquarters is at a distance of 73 Km from Khurdha-Road Railway junction. The nearest Commercial Center is at twin city of Bhubaneswar and Cuttack within a distance of 120 KMs. National Highway 224 passes through the district from Khurda to Bolangir..

Paddy and sugarcane are the major crops grown in Kharif. Other crops like pulses, maize, groundnut, vegetables and oilseeds are also grown. Different government schemes are being implemented in the district to increase the crop production. KVKs located at Panipolia and Nayagarh blocks play an important role in disseminating information to farmers. Training programs are organized by KVKs in association with the agriculture department. Agriculture in the district is however marred by many constraints. Most farmers in the district have marginal land holdings (78 per cent) which limit the use of mechanized farming. Even farmers having large landholdings follow traditional agriculture without using modern technology. The situation is further exacerbated by absence of cold storage and appropriate ware housing facilities limiting the commercialization of agriculture. The situation is also grim with regard to structured markets, as of now there is only one regulated market with many unregulated local markets - *"haats"* in many blocks. Necessary steps may need to be taken for setting up of markets at each block so that the farmers are able to sell the produce at remunerative prices. Nayagarh is well known for production of pulses of good quality. Introduction of HYV pulses can improve the productivity scenario in the district.

The agro-climatic diversity in the district with high rainfall and reasonably moderate winter is favorable for growing a variety of horticulture crops. The agro-climatic conditions are suitable for perennial fruit crops like mango, guava and annual fruit crops like banana, pineapple and papaya. However there is a huge gap in demand-supply in respect of good quality seeds, planting materials and other inputs. Government nurseries are mostly defunct as no funds have been allocated for maintenance. These nurseries need revamping to produce good quality planting material. Pineapple cultivation is also suitable for the district which has not received due attention.

With regard to fisheries, the district is endowed with a number of reservoirs and water harvesting structures that are ideal for fish farming. There are 4196 tanks covering an area of 2161 ha with 17 reservoirs occupying an area of 1607 ha. In addition, rivers and canals provide water area of 4522 ha for pisciculture. The district provides a good scope of pisciculture, as there are good number of water bodies and minor irrigation structures. These ponds can be utilized for polyculture of fresh water prawns along with fish. There is a shortage of fish hatcheries though. Nayagarh only has three fish hatcheries, all run by private players. There is not even a single prawn hatchery. The fish farmers depend on hatcheries outside the district for procuring fish and prawn seeds. Construction of a fish and a prawn seed hatchery should be given priority and private entrepreneurs should be encouraged.

There is a lot of potential for agro processing activities in the district particularly under food grains, fruits and vegetables. Paddy is one of the main crops of the district. At present milling of rice is the

major agro processing activity. There are 10 rice mills in the district with rice as the main product and rice bran as the byproduct. There is enough scope for establishment of new units as well as for capacity expansion of the existing mills.

The district produces an impressive amount of cashew. However there are only two cashew processing units in the district, which were established last year. In the absence of processing units cashew is sold as raw nuts to middle men who send it outside district for processing. Similarly, although maize is one of the major crops in the district with total production of 20275 mt during 2009-10, there is not even a single processing unit. Thus there is a scope for setting up cattle/poultry feed plants. Besides, the number of farmers taking up mushroom cultivation is gradually increasing. In view of its perishable nature, there is potential for establishment of processing unit at Nayagarh. There is also scope of setting up small processing units of oilseeds and fruits especially mangoes. The existing oilseed processing units at *Itamati* are old and there is an urgent need for technological up gradation and organized marketing. There is also a need for creation of awareness about potential for the activity and incentives offered by the Government.

Industrialization in Nayagarh is in a nascent stage. There are many reasons that have contributed to slow pace of industrialization in the district main amongst them are absence of marketing oriented communication like railway line and absence of power infrastructure/growth centers. Nayagarh has only one medium scale industry and around 958 MSME units. The MSMEs provide employment to approximately 4500 people. The existing MSMEs do not show any definite trend with industries belonging to many different sectors. There is however an ample scope to promote processing units for agricultural products. The district administration is also promoting ancillary and downstream industries based on the only medium scale industry present in the district.

The district has four categories of handicrafts clusters - cane/bamboo, brass and bell metal, coir craft and appliqué. Out of four, Brass and bell metal is followed by relatively large number of artisans and provides a scope of strengthening. Artisans as of now follow it mostly as traditional skill with very less product and design diversification. Many a times they also face problems in procuring raw material. Low return on the products is dissuading many artisans not to pursue it as a primary occupation. Though administration is training few artisans on a yearly basis, there is a need of designing training programs that train them on using new technology and new designs.

There is a potential to develop tourism in the district. Due to high altitude of land and dense forest cover interspersed with a wide range of inaccessible valleys, tourism can be developed especially around. *Kantilo, Jamupatna, Kuturi and Tarabalo*. Developing tourism however requires massive investments in hotels and hospitality industry along with proper branding and marketing. The district do not have any quality hotels and the hospitality infrastructure is grossly under developed. There is a need to develop quality hotels/guest houses and to train people on hospitality and related skills.

In terms of the healthcare, the district has one district hospital, four Community Health Centers (CHC) and 40 Primary Health Centers (PHC). The district however suffers a human resource crunch. Out of the total 127 sanctioned positions of doctors, 70 positions are lying vacant. The vacant positions are mostly in the rural areas. Absence of basic amenities to lead a quality life dissuades many young doctors to accept jobs in rural areas. District administration is combating the situation by appointing retired doctors to serve in the remote areas. The district also has shortage of ANMs, who are the first point of contact for villagers in time of medical urgency. Same is the

case of pharmacists and other medical staff. The district administration faces problems in finding trained nurses as per the Government regulations. The district lacks sufficient number of Government run nursing training institutes leading to a shortage of trained nurses.

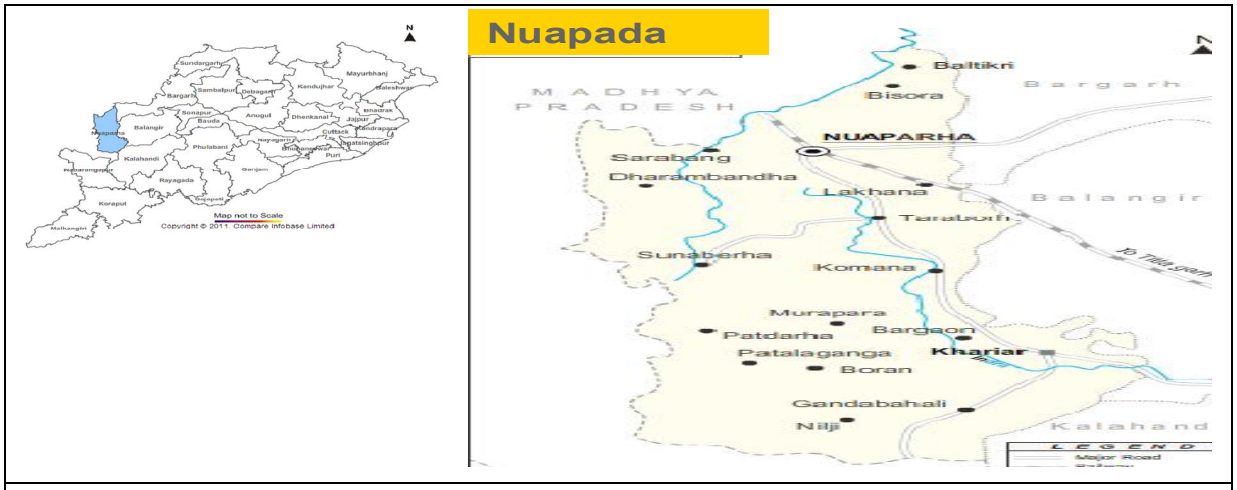
The district has adequate network of bank branches consisting of 44 branches of commercial banks, 25 branches of regional rural banks, 13 central co-opertaive bank branches and two private bank branches - ICICI bank and Axis bank. At present farmers clubs and SHGs are working as Business facilitators (BFs)/Business correspondents (BCs) of banks providing them information about potential customers in the area of operation and also helping them in recovery of loans. They however work in an informal manner and no Business facilitators or business correspondents have so far formally appointed. Realizing the role of BCs in attaining financial inclusion, employment office in Nayagarh under Placement linked training programmes sponsored a batch of 20 students to get trained on banking and financial services, the students who were trained through India Skills have successfully completed the course and were awaiting placements.

There are nine ITCs in the district offering courses in trades like fitters, electricians, cutting/sewing, mechanics etc. Even though the district is not industrially flourished, its proximity to cities like Bhubaneshwar and Cuttack motivate young people to get trained on trades offered in the ITCs. Many people trained through these ITCs also migrate to other States for doing jobs however on a very nominal salary. There is however a need of designing and introducing courses depending upon the requirement of the district e.g. courses on hospitality and food processing.

- **Primary Sector:** Food processing related skills; modern commercial farming especially introduction of HYV pulses.
- **Secondary sector:** Training in industrial trades will provide employment opportunities in nearby Khurda and Cuttack district. Handicrafts skills especially brass and bell metal- value addition, design and marketing
- **Services sector:** Tourism and hospitality management, business correspondents, health care- doctors and nursing, repair and servicing.

10.25 Nuapada

Nuapada district covers a geographical area of 3852 sq km i.e. 2.47 percent of the total land area of the state. The district has two distinct physiographic regions, the plane lands and the hilly tracts. The hilly tracks are mostly located in the western part and the plain regions cover the other part of Nuapada district. Administratively, the district is divided into one subdivision, 5 blocks, 109 Gram Panchayats and 648 villages. Its boundaries extend in the north, west and south to Raipur district in Madhya Pradesh and in the east to Bargarh, Bolangir and Kalahandi districts.



Map Courtesy: Maps of India

District Information	Nuapada	Odisha	Source
Area (in Sq Km)	3,852	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	2.47% (19)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	5	**309**	Census 2001
No of GPs	109	**6,234**	Census 2001
Total no of inhabited villages	648	**47,529**	Census 2001
Forest area as % of total geographic area	48.05%	**37.66%**	Census 2001

Figure 152: District Map of Nuapada

10.25.1 Demography

As per Census 2011 (Initial provisional data), Nuapada has a population of 6.06 lakhs of which males and females were 3.0 lakhs and 3.06 lakhs respectively. There is a change of 14.28 percent in the population compared to population as per 2001 census. In terms of population, the district constitutes 1.45 percent of the total population of the state and is ranked 25th among all the districts of Odisha. The initial provisional data (Census 2011) suggest a population density of 157 in 2011 making Nuapada the twenty third most densely populated district of Odisha. With regards to sex ratio, the district fares relatively better than other districts and the state average. The sex ratio for Nuapada as per 2011 provisional census figures is 1020 females per 1000 males, much above the State average of 978 females per 1000 males.

In terms of social composition of the population, STs constitute more than 34.71 percent of the total population while SCs form approximately 13.62 percent of the total population. Nuapada is the 27th urbanized district in the state having about 5.65 percent of its population living in urban areas (as per census 2001).

As per 2001 census, the population in the working age group constituted 55.95 percent of the total population. The population in the age group 0-4 years constitutes 10.78 percent and 5-14 years comprise 24.05 percent respectively. Work participation rate of the district is 46.05 percent. Out of the total workers 53.84 percent are main workers and 46.16 percent are marginal workers. Almost 66 percent of the population is non workers. With a Human Development Index (HDI) of 0.581, Nuapada ranks 14th in the State.

Population	Nuapada	Odisha	Source
Total population (in lakh)	6.06	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	3.00	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	3.06	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	1.45% (26)	**NA**	Census 2011 provisional figures
Density of population	157	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	14.28%	**13.97%**	Census 2011 provisional figures
Urban population %	5.65%	**14.99%**	Census 2001
SC population %	13.62%	**16.53**	Census 2001
ST population %	34.71%	**22.13**	Census 2001
Sex ratio	1020	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	55.95%	**58.38%**	Census 2001
Worker participation rate	46.05%	**40.03%**	Census 2001
Share of primary sector to total workers	80.33%	**64**	Census 2001
Proportion of agriculture laborer in workforce	46.31%	**34.53**	Census 2001
Human Development Indicators	**Nuapada**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.581 (14)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.561 (9)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	13224 (22)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.344 (26)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 84: Socioeconomic indicators for Nuapada District

10.25.2 State of Education

Average literacy rate of Nuapada in 2011 (as per provision census figures) is 58.20 percent compared to 42 percent in 2001. Gender wise male and female literacy is 71.55 percent and 45.21 percent respectively. For 2001 census, same figures stood at 58.46 and 25.79 showing a proportionate increase in literacy level for all the groups in Nuapada District over last 10 years. Out of the total number of children in school going age, 6.903 percent children were out of school in 2010.

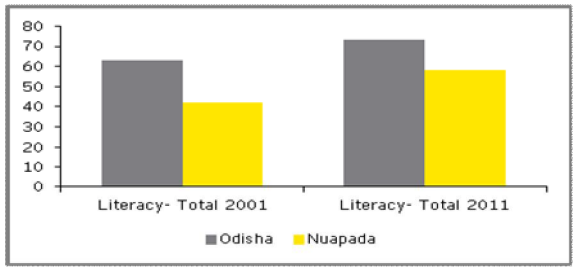


Figure 153: Literacy rate- Nuapada District

For higher Education there are 15 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education

(DHE), the total sanctioned strengths in each of these streams were 1792, 512 and 176 respectively. At the degree level, there are 7 colleges which mainly offer various engineering courses.

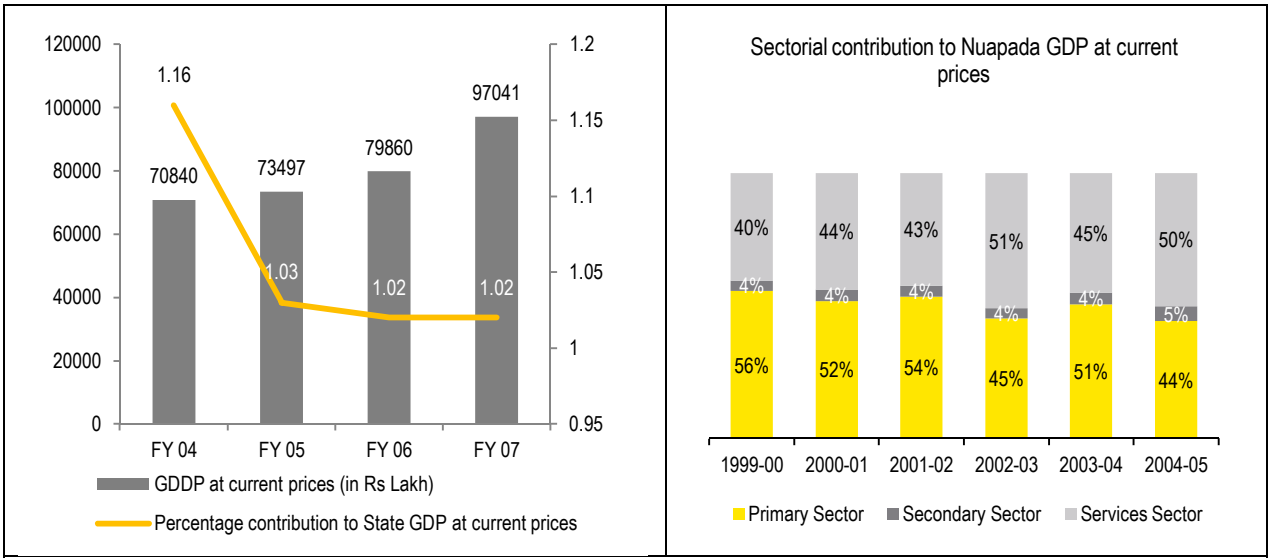
In terms of technical education, Nuapada is yet to progress. There is no government or private engineering college in Nuapada at present. However, there is a private polytechnic centre in the district offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 210 students per year. Major courses are electrical, mechanical and civil.

For Medical education, Nuapada has one pharmacy college that has the capacity to intake 40 students. In addition to this, there is a nursing college in the district that offers Diploma course in general nursing and midwifery training.

For vocational training, there is a Government ITI offering courses in COPA, wireman, fitter, electrician, mechanic, surveyor, welder and data entry operator.Likewise, there is one private ITC, which offers courses in fitter and electrician trades.

10.25.3 Economic Profile

As per economic survey 2010-11, Nuapada is among the bottom ten districts in the State with an annual average growth rate of 5 percent for the period 2000-01 to 2006-07. Nuapada derives its gross domestic products from agriculture, industry and services. Agriculture contributes 44% while the contribution of services sector is 50%.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 154: Gross District Domestic Product (at current prices) of Nuapada

Agriculture

People of Nuapada largely depend upon agriculture as their primary means of livelihood. The economy of the district is mainly dependent upon cultivation. About 80 percent of total work force is either cultivators or agricultural laborers. Nuapada is ranked 3rd in the State in terms of number of agricultural laborers, constituting 46.31 percent of total working force.

As per Odisha agriculture statistics report 2008-09, forty nine percent of the total geographical area or almost 189 thousand hectares of land was brought under cultivation in district. Paddy is the primary crop with a gross cropped area of 150.55 thousand hectares. Apart from paddy, other major crops include food grains, vegetables, and other cereals.

Performance of Nuapada district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the district is ranked 25th with a per capita agricultural output of 1145. Food grains contribute highest to the total agricultural output of Nuapada with a value of 203.26 (2008-2009), followed by cereals (161.94) and vegetables with (133.24) (all figures in thousand metric tonnes).

With an average landholding of 1.52 hectare, landholding pattern in the District depicts that majority (more than 41 percent) of the farmers have more than a hectare of land holding whereas approximately 34 percent of the farmers have small land holding.

Industries

The industrial infrastructure of Nuapada district is underdeveloped. There are no large & medium industrial units in existence. The weaknesses are its undulated land, deforestation, drought proneness, illiteracy and poor connectivity. The opportunities are the added emphasis of the Government for development of the district as part of KBK region, upcoming irrigation projects, availability of precious stone deposits and rich non-timber forest produce (NTFP).
In terms of attracting investments and setting up Micro and small scale industries, Nuapada is ranked amongst the bottom most districts of the State. MSME investment in Nuapada was 0.83 percent of the total investments made in the State till March 2010. Most of these units have come up in agro-based (rice mills, flour mills etc.) sectors, food processing (cashew, pickles, badi & papad, sauce, biscuits, corn flakes etc.,) engineering & allied (automobile repairing & servicing, mechanical workshops etc.), mineral based (granite cutting & polishing, stone chips etc.), textile based and servicing & repairing.

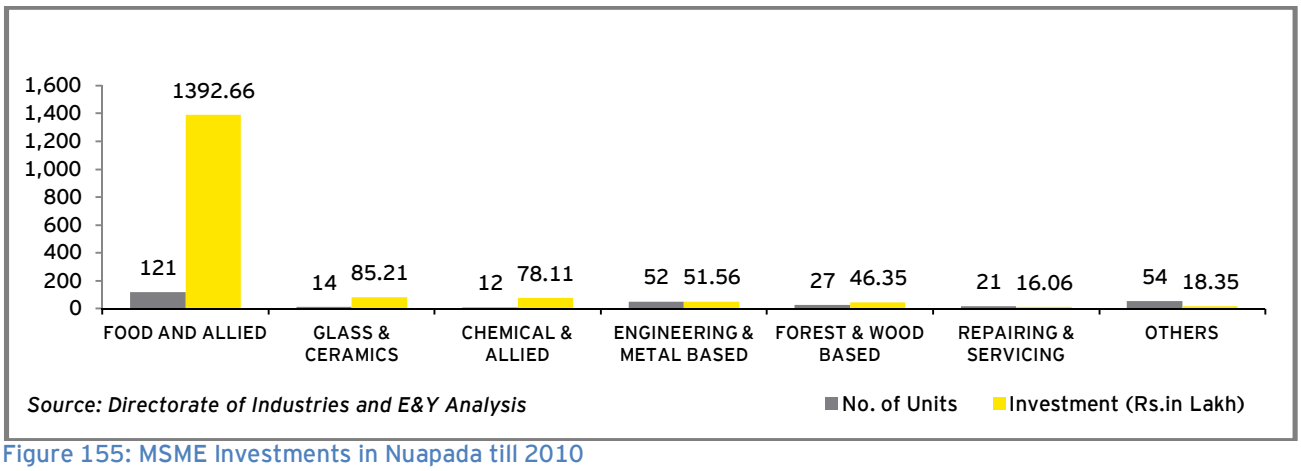
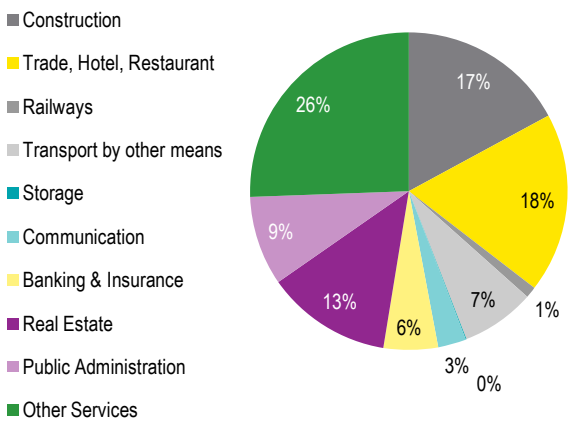


Figure 155: MSME Investments in Nuapada till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Nuapada GDP, the service sector remains the most important contributor constituting 50 percent of the district GDP..



As depicted in the chart, other services are the leading contributor to the service sector (26 percent) followed by trade, hotel and restaurant (18 percent), construction (17 percent) and real estate (13 percent). Public administration and transportation are also major contributors of GDP of Nuapada economy.

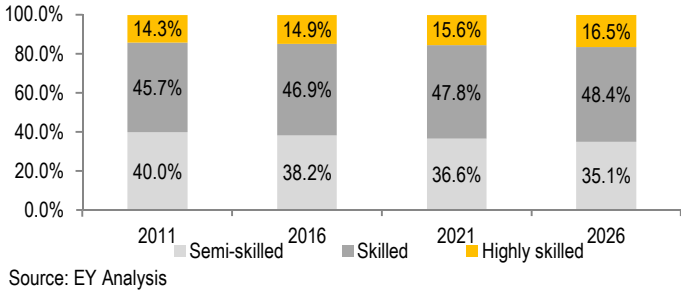
Source: Planning Commission, Government of India

Figure 156: Composition of Service Sector- Nuapada 2004-05

10.25.4 Skill Gap Assessment for Nuapada District

Over the next 15 years, the total workforce demand for skilled jobs in Nuapada district is expected to grow to 2.5 lakhs in 2026 from present levels of 1.4 lakhs in 2011. The total workforce demand is expected to be dominated by the tertiary sector (86 percent), followed by the primary (12 percent) and secondary sector (2 percent).

The major sectors from which the workforce demand for skilled jobs in 2026 is primarily expected are tourism, travel, hospitality and trade (0.4 lakh); agriculture (0.3 lakh); education & skill development (0.3 lakh); healthcare (0.3 lakh); IT & ITes industry (0.3 lakh) and media & entertainment (0.3 lakh).



Source: EY Analysis

Figure 157: Proportion of demand for skilled jobs by skill categories- Nuapada District

The proportion of demand for semi-skilled workers is expected to reduce in the period 2011-2026, while that of skilled and highly-skilled workers is expected to show a robust growth during the same period.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade:					
Semi-skilled	11,770	14,926	18,929	24,006	
Skilled	7,799	9,891	12,543	15,907	
Highly skilled	1,276	1,619	2,053	2,603	
Total demand for skilled jobs	20,845	26,436	33,525	42,516	17
Agriculture					
Semi-skilled	16,199	15,916	15,638	15,365	
Skilled	10,799	10,611	10,425	10,243	

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Highly skilled	5,400	5,305	5,213	5,122	
Total demand for skilled jobs	32,398	31,832	31,276	30,730	12
All sectors:					
Semi-skilled	54,785	62,992	73,653	87,570	
Skilled	62,557	77,149	96,186	121,048	
Highly skilled	19,650	24,572	31,506	41,327	
Total demand for skilled jobs	136,992	164,713	201,345	249,945	100

Source: E&Y Analysis

Table 85: Skill-wise demand for sectors where high demand is foreseen- Nuapada District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by around 1 lakh during the period 2011-2026.

Skilled manpower (56 percent) is expected to account for the largest chunk of the widening demand-supply gap of skilled workforce, followed by highly-skilled jobs (~22 percent) and semi-skilled jobs (~22 percent).

The highest demand for **highly skilled** jobs is expected in case of banking, financial services & insurance jobs (56 percent) and IT & ITes (20 percent).

As far as **skilled** workers are concerned, the major share of incremental gap is expected to come from sectors like education & skill development (27 percent); healthcare (27 percent); IT & ITes (16 percent); travel, tourism, hospitality & trade (14 percent) and media & entertainment (10 percent) sectors.

The demand for **semi-skilled** workers would be increasing primarily in case of tourism, travel, hospitality & trade (37 percent); media & entertainment (23 percent); and banking, financial services & insurance (18 percent).

On an industry level, the banking, financial services & insurance sector is expected to account for 19 percent of this incremental demand supply gap. This gap in this sector is primarily expected to come from highly-skilled workers (64 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(421)	(447)	(464)	(1,332)
Auto & Auto Components	2	2	2	6
Chemical & Pharmaceuticals	4	5	6	15
Construction materials & building hardware	212	258	307	777
Electronics & IT Hardware	8	10	12	30
Food Processing	32	34	36	102
Furniture & Furnishings	19	23	26	68
Leather & Leather Goods	0	0	0	0
Gems & Jewellery	0	0	0	0
Organised Retail	0	0	0	0
Textile	22	26	30	78
Unorganised sector	4	4	5	13
Banking, Financial Services & Insurance	3,810	5,974	9,287	19,071
Building, Construction & Real Estate Services	193	230	263	686
Education & Skill Development	4,063	5,387	7,111	16,561
Healthcare	3,909	5,232	6,957	16,098
IT & ITES industry	3,791	5,114	6,838	15,743
Media & Entertainment	2,888	3,956	5,309	12,153
Tourism, travel, hospitality & trade	3,989	5,527	7,472	16,988
Transportation, logistics, warehousing & packaging	292	392	498	1,182
Total	22,817	31,729	43,697	98,243

Source: E&Y Analysis

Table 86: Total incremental demand supply gap for skilled jobs by sectors- Nuapada District

Tourism, travel, hospitality & trade sector (17 percent) is another major sector which accounts for the major chunk of incremental demand-supply gap. This incremental gap, in turn, comprises of the need for semi-skilled (47 percent) and skilled (45 percent) human resource.

Significant incremental requirement is also expected to be witnessed in services like healthcare (16 percent) and IT & ITeS (16 percent) sectors. The biggest chunk of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.25.5 Development potential and stakeholders perception

Nuapada is amongst the most 'underdeveloped districts of Odisha. More than 70% of people lives below poverty line. District fares poorly on selected development indicators. Agriculture is the primary occupation of about 80 percent of the population. Only 24% of the total arable land is irrigated during Khariff & during Rabi it further reduces to 20%. Even though district has a share of 2.68% of total cropped area of the state i.e. 19th position in the state; it has a lower share (26th position) amongst the districts of Odisha as far as food production is concerned. Productivity of different crops is low and in order to meet the district requirements, food crops are imported. Within the district, the disparity is marked as Khariar and Boden block has a very low per hectare yield rate. Small & marginal farmers top the hierarchy of farmers' segments as they together constitute 73% of total farmers with less than 0.75 ha of land per family. A quarter of the population is either landless labourer or depends on the NTFP collection for survival. While SRI

method has been introduced recently in Paddy cultivation but it is not yet popularised. Likewise, area under cotton cultivation is increasing, but crop management practices are not adopted properly hence, low productivity results. In order to increase the agricultural productivity and create opportunity in livelihood sector, efforts need to be taken to bring in additional skill set to the communities by proper skill mapping.

Even though skill development is planned by agriculture & horticulture department through trainings and extension programmes, yet transfer of technology has been limited and mostly concentrated to the large farmers of irrigated lands. The small and marginal farmers lack the necessary skill of technological intervention and input application. Skill upgrading is highly required for these sections of people. Among the existing products, the only product that is processed in the district is Paddy. But there is no potential of increasing job opportunity in paddy processing because of use of modern technology in processing. Nuapada occupies one of the top two places amongst the districts of Odisha in production of Onion. But, unfortunately lack of storage facility causes loss resulting in distress sale

Even though coverage of area under vegetable crops is gradually increasing, lack of storage facility for vegetables acts as a major constraint. More than 2 thousands Self Help Groups are actively involved in small and micro business enterprises in the district. Hence, food processing for the district can be considered. Skill upgrading in product processing will bring a lot of change in the socio-economic profile of the district. Department of Agriculture has initiated a project named ATMA for training of women, which needs to be further strengthened. While the District fares better in terms of livestock development in comparison to other districts, though, productivity of milk and fish is poor. Cross breed cow, cross breed cattle and poultry are limited. Further, organised animal farming and dairying are almost non-existent. Fishery is also done at a limited scale. There is a thus huge requirement for skill improvement in the primary sector focusing on introduction of modern farming techniques and food processing industries.

The level of industrialization of the district is low with 30 industrial units existing till 2007-08. The capital investment hardly constituted 0.91% of the total capital investment of the state and 0.51% of the total labour employed in the state in small scale units. There is a growth in MSME after the Industrial Policy Resolution was taken in 2007 and subsequently after the passing of 2009 MSME policy. The present situation of MSME is as follows,

- Rice Mills – 45
- Fabrication Units – 100
- Stone crushers – 45
- Aluminium Utensils and scrap ingots – 4
- Granite Cutting – 1
- Graphite benefaction plant – 1
- Cottage and Handicrafts and service sector like rice huller, Ata chaki, Chuda mills, automobiles, electronics and electrical etc. – 500

The requirement for human resource in heath sector is high. Qualified candidate for Science and trained teacher posts is not at all available in the district. Most of the posts are filled in by candidates from other districts. Likewise, there is a dearth of qualified personnel for the posts of ANM and Pharmacists in the district.

Most posts remain vacant due to non-availability of technical personnel. On the contrary, the number of untrained manpower grows constantly. Whenever, the government has initiated any step to enhance trained man power, the people have come forward to grab the opportunity. Under PMEGP, hundreds of women and men have been trained. But, there is a lack of attempt to create suitable employment opportunities for the newly trained personnel & to absorb already existing trained manpower in the districts. The self-employment opportunities are only concentrated in trade and commerce but lacked proper guidance. Existing, marketing arrangements and institutional arrangement to promote skill mapping, gap analysis, skill promotion and skill absorption are neither adequate nor effective.

In spite of the potential, tourism sector is least developed. Patalganga, Upkaganga, Sunabeda and the streams from the plateau such as Maraguda, Risipiti, Patora and Lower Indra dams etc, are some of the important places that can be developed as tourist places. This in turn will generate employment opportunity in sectors like handicraft & cottage industries of the district.

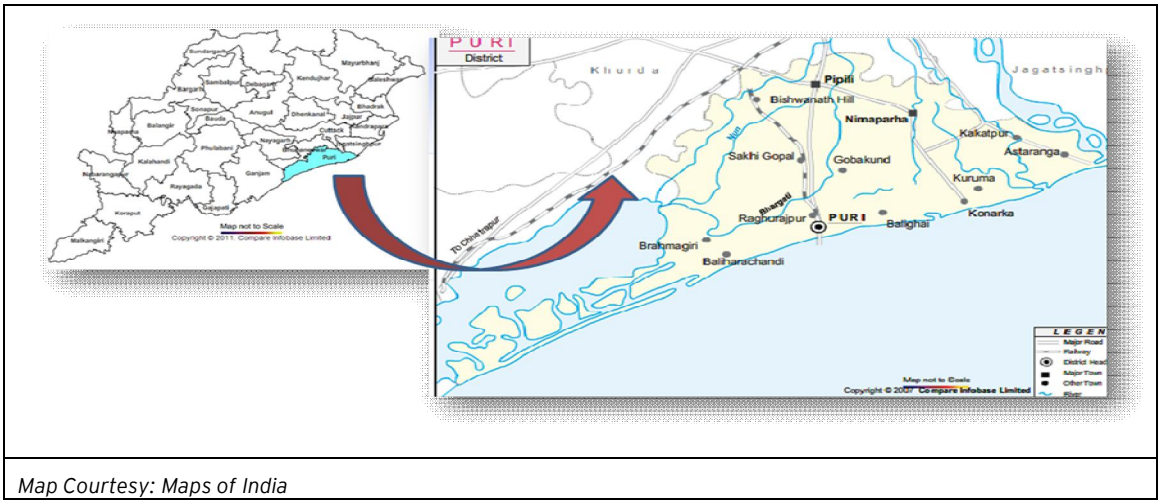
There are 2 ITIs in the district – one is government run, which has 4 trades with 200 seats. Another is privately run with 2 trades & 60 seats. As per the reports of SCVET, in 2010, almost 50% of the seats in the Government ITI remained vacant- indicating that the demand for the courses offered by the ITI is limited and there is a need for introducing other demand driven courses..

It is important to note that students are interested to study engineering / technical courses as general education is losing ground to provide opportunity to the degree holders as a result of which, general education seats in graduation level are remaining vacant. A course on computer is considered as a must add on. Parents also stress on summer courses and supplementary courses on technical education to encourage students to develop further carrier opportunities.

- **Primary Sector:** Low agricultural productivity indicates a strong need for creating skills focusing on technological adoption. Skill development required in food processing and marketing techniques. The skill development initiatives need to be backed up with supporting infrastructure like storage, communication and marketing facilities.
- **Secondary Sector:** Industrial sector is under developed. Skills related to ancillary industries and food processing industries (machine operators, automobile repair, electrical and electronics mechanics)
- **Services Sector:** Most important- Skills in tourism and hospitality management, health care and education, servicing and repair and banking correspondents etc

10.26 Puri

Puri District is spread over an area of 3479 Sq Km which forms approximately 2.23 percent of the total geographical area of the State. **The whole of the district may be divided into two dissimilar natural divisions** – the Littoral Tract and the Level Alluvial Tract. It is bound by Khurda in the North, Bay of Bengal in the South, Jagatsinghpur in the East and Ganjam in the West. Administratively, the district is divided into 11 blocks, 230 Gram Panchayats and 1591 villages.



Map Courtesy: Maps of India

District Information	Puri	Odisha	Source
Area (in Sq Km)	3,479	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	2.23 (21)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	11	**309**	Census 2001
No of GPs	230	**6234**	Census 2001
Total no of inhabited villages	1591	**47529**	Census 2001
Forest area as % of total geographic area	4.02%	**37.66**	Census 2001

Figure 158: District Map of Puri

10.26.1 Demography

As per Census 2011 (Initial provisional data), Puri has a population of 16.98 lakhs of which male and female numbers were 8.65 lakhs and 8.33 lakhs respectively. There is a change of 12.99 percent in the population compared to population as per 2001 census. In terms of population, the district constitutes 4.05 percent of the total population of the state. With a population density of 666 in 2011 Puri is the third most densely populated district of Odisha. Sex ratio of 963 is less than state's average. In terms of social composition of the population, SCs constitute approximately 18.23 percent of the total population while STs forms only 0.3 percent of the total population. As per 2001 census, Puri has the third highest proportion of population in the working age group constituting 60.32 percent of the total population. Work participation rate of the district is however low at 29.98 percent. Out of the total workers 82.82 percent are main workers and 17.18 percent are marginal workers.

With a human development index (HDI) of 0.657 and Gender development index (GDI) of 0.516, Puri is amongst the top ranked Districts of Odisha.

Population	Puri	Odisha	Source
Total population (in lakh)	16.98	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	8.65	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	8.33	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	4.05% (9)	**NA**	Census 2011 provisional figures
Density of population	488	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	13%	**13.97%**	Census 2011 provisional figures
Urban population %	12.02%	**14.99%**	Census 2001
SC population %	18.23%	**16.53**	Census 2001
ST population %	0.30%	**22.13**	Census 2001
Sex ratio	963	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	60.32%	**58.40%**	Census 2001
Worker participation rate	29.98%	**40.03**	Census 2001
Share of primary sector to total workers	60.09%	**64**	Census 2001
Proportion of agriculture laborer in workforce	25.06%	**34.53**	Census 2001
Human Development Indicators	**Puri**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.657 (7)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.516 (17)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	14918 (16)	**561969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.563 (8)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 87: Socioeconomic indicators for Puri District

10.26.2 State of Education

Puri ranks high in terms of education index and literacy. Average literacy rate of Puri in 2011 (as per provision census figures) is 85.37 percent compared to 77.96 percent in 2001. Gender wise male and female literacy is 91.84 percent and 78.67 percent respectively. For 2001 census, same figures stood at 88.08 and 67.57 showing a proportionate increase in literacy level for all the groups in Puri District over last 10 years. Out of school percentage was only 0.59 percent in 2009.

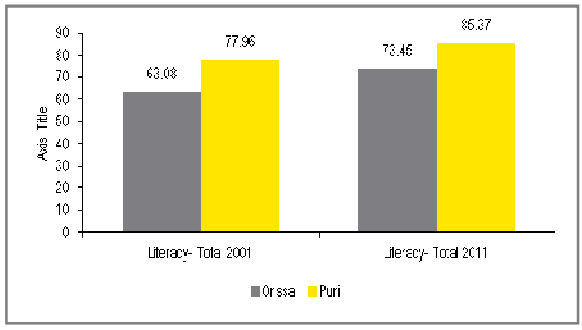


Figure 159: Literacy rates- Puri District

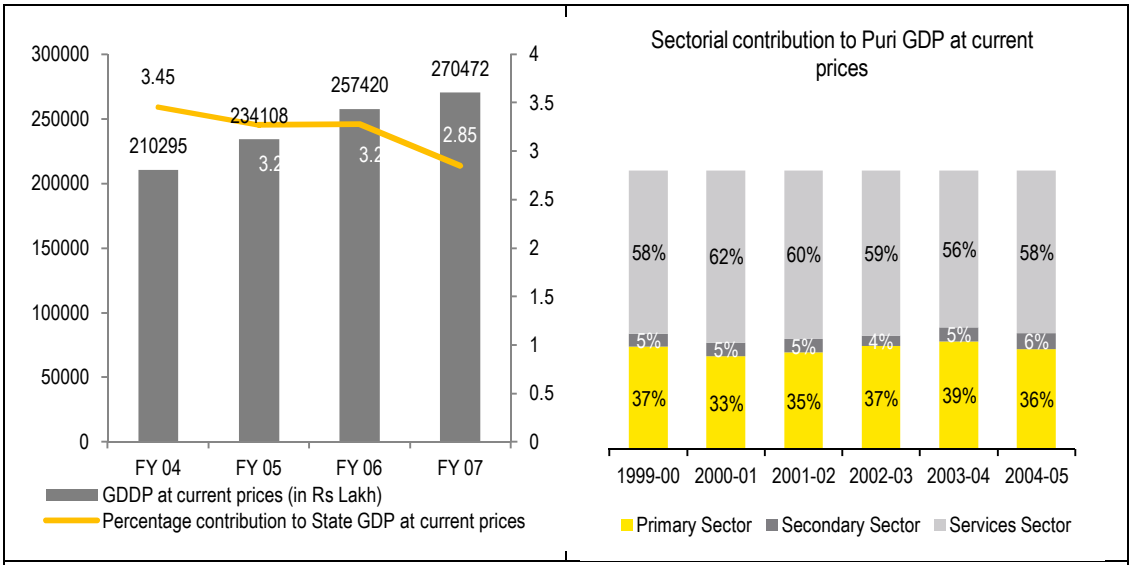
There are 57 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 8960, 4688 and 1536 respectively. There are

33 colleges which offer various courses. For technical education, Puri has a private engineering (degree) college[12]. The Engineering colleges offer various courses and have a combined intake capacity of approximately 240 students per year. Major courses offered include, electronics & telecom engineering, computer science & engineering, electrical engineering and mechanical engineering. In addition to engineering degree colleges, there is one government polytechnic. Total intake capacity in polytechnic center is approximately 300 students per year. Major courses are electrical, mechanical, civil and electronics and telecom. Puri has two pharmacy colleges that have an intake capacity of 60 each. There is one ayurvedic college offering B.A.M.S that has an intake capacity of 30 seats.

The district has one government ITI and 23 private ITCs spread over 8 of the 11 blocks of the District. The Government ITI offers trainings in 11 trades which include fitter, electrical, mechanics, wiremen and stenographers training. There are 23 private ITC, providing training in 13 different trades including fitter, electrical, cutting & sewing, F&L and data entry operator etc. As per the data shared by SCEVT, 34 percent of the seats in Government ITI remained vacant in 2010. Similarly in Private ITCs 62 percent of the seats remained vacant.

10.26.3 Economic Profile

As per economic survey 2010-11, Puri District has an average annual growth rate of 6.0 percent for the period 2000-01 to 2006-07. Agriculture and services sector contributes the most of the district GDP. Industries sector is not developed in Puri. The Gross Domestic Product through the years has been showed below.



Source: Economic Survey, Odisha: 2010-11 and Directorate of Economics and Statistics,

Figure 160: Gross District Domestic Product (at current prices) ofPuri District

[12] Directorate of Higher Education, Odisha

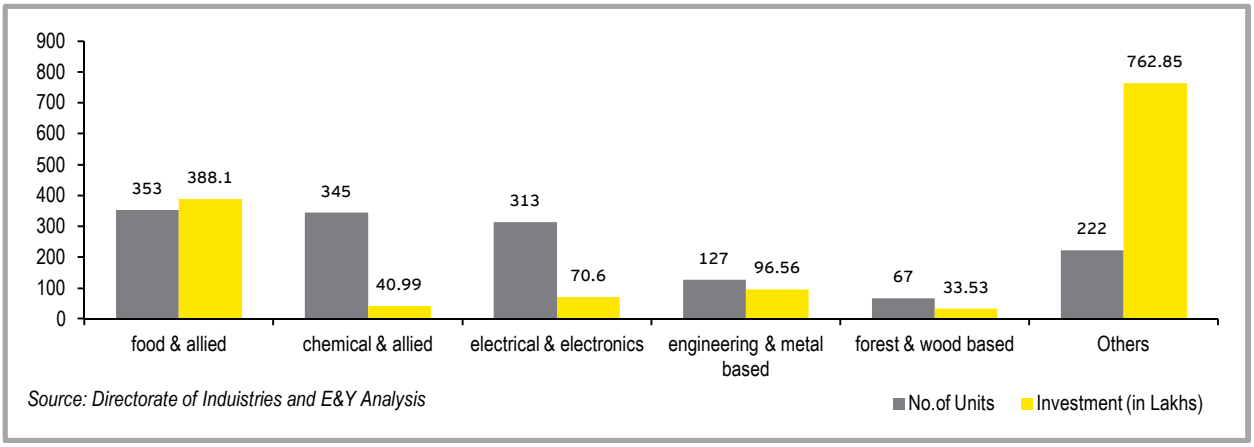
Agriculture

People of Puri largely depend upon agriculture as their primary means of livelihood. 39.8 percent of the district GDP is borne from this sector. As per Odisha agriculture statistics report 2008-09, 54 percent of the total geographical area or almost 189 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 170.77 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops. Performance of Puri district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 21st with a per capita agricultural output of 1205. Food Grains contribute highest to the total agricultural output of Puri with a value of 236.29 (2008-2009), followed by cereals (206.38) and Rice with (206.1) (all figures in thousand metric tonnes).

Agriculture has significant contributor to GDP of Puri District. As per 2004-05 data, agriculture contributed almost 30 percent of the total District GDP. Among the primary sector, fishery is an important contributor as well, contributing almost 5.5 percent of the total GDP. With an average landholding of 0.82 hectare, landholding pattern in the District is highly skewed with majority (more than 89 percent) of the farmers have only marginal (less than a hectare) land holding.

Industries

Puri does not have any large or medium scale manufacturing industry. Puri certainly is high in terms of factor endowments due to its proximity to State's capital, good railway network, long coast line and availability of water. The district has a huge potential in terms of development of MSMEs especially the food processing industries and handicrafts. Tourism is an important economic activity. In terms of investments into small and medium scale industries, the district holds value of investments at Rs. 1392 lakhs. Investments in repairing and services industry is maximum (Rs. 410 lakh) followed by food and allied (Rs.388 lakhs), engineering and metal based and electrical and electronics industries. Others include glass & ceramics and livestock & leather.

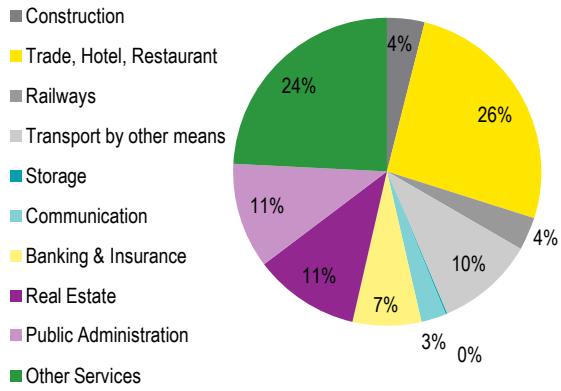


Source: Directorate of Industries and E&Y Analysis

Figure 161: MSME Investments in Puri till 2010

Services

Tourism is the most important economic activity of Puri accounting for 26 percent of the services sector. The district is known for *Lord Jagganath* Temple, the Sun temple of Konark and *Chilika* Lake. It is famous for its historic antiquities, religious sanctuaries, architectural grandeur, sea-scape beauty and moderate climate..



Tourism in all likeliness plays a large part in the development of this district. In addition to tourism (trade and hotels), other services (24.2 percent) and public administration & real estate (11.1 percent) and transportation (10 percent) are important contributors to the service sector

Source: Planning Commission, Government of India

Figure 162: Composition of Service Sector- Puri 2004-05

10.26.4 Skill Gap Assessment for Puri District

During the next 15 years, the total workforce demand for skilled jobs in Puri district is expected to grow to 4.5 lakhs in 2026 from present levels of 2.5 lakhs in 2011. Tertiary sector, employing higher number of skilled human resource is

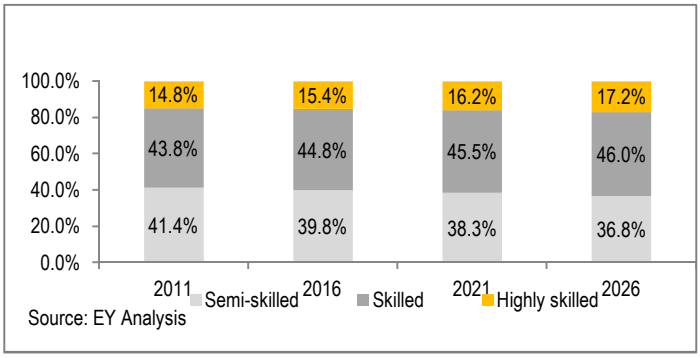


Figure 163: Proportion of demand for skilled jobs by skill categories- Puri District

expected to account for around 83 percent of this total skilled workforce demand, followed by primary (15 percent) and secondary sector (2 percent).

The major sectors from which the workforce demand for skilled jobs in 2026 is primarily expected comprises tourism, travel, hospitality & trade (0.9 lakh); agriculture (0.7 lakh); banking, financial services & insurance (0.6 lakh); education & skill development (0.5 lakh); healthcare (0.5 lakh) and IT & ITeS industry (0.5 lakh).

Puri, part of the Odisha's golden triangle, is expected to witness significant incremental demand-supply gap in its tourism sector even in 2026. The secondary research and CMIEs Capex database indicates districts' continued focus on the tourism and travel, along with increased announced projects in hotels, construction services, education and hospitals during the past two years.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Tourism:					
Semi-skilled	25,905	32,852	41,662	52,836	
Skilled	17,166	21,769	27,608	35,012	
Highly skilled	2,809	3,562	4,518	5,729	
Total demand for skilled jobs	45,880	58,183	73,788	93,577	21
Agriculture					
Semi-skilled	36,803	36,160	35,529	34,908	
Skilled	24,535	24,107	23,686	23,272	
Highly skilled	12,268	12,053	11,843	11,636	
Total demand for skilled jobs	73,606	72,320	71,058	69,816	16
Banking, Financial Services & Insurance sector					
Semi-skilled	4,687	7,094	10,738	16,254	
Skilled	2,691	4,073	6,165	9,331	
Highly skilled	9,981	15,108	22,869	34,616	
Total demand for skilled jobs	17,359	26,275	39,772	60,201	13
All sectors:					
Semi-skilled	103,688	119,151	139,329	165,777	
Skilled	109,778	134,073	165,851	207,449	
Highly skilled	37,205	46,206	59,017	77,328	
Total demand for skilled jobs	250,671	299,430	364,197	450,554	100

Source: E&Y Analysis

Table 88: Skill-wise demand for sectors where demand is foreseen- Puri District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (i.e. for highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 1.3 lakh during the period 2011-2026.

The skilled human resource is expected to constitute around 68 percent of this widening gap in 2026, followed by highly skilled jobs (30 percent) and semi-skilled jobs (2 percent). A major part of this incremental gap for **skilled** workers is expected to come from sectors such as education & skill development (25 percent); healthcare (25 percent) and tourism, travel, hospitality and trade (18 percent).

Amongst the **highly skilled** jobs, a higher requirement is forecasted in case of banking, financial services & insurance jobs (61 percent), it & ites (17 percent) and tourism, travel, hospitality and trade (7 percent).

The incremental need for **semi-skilled** workers is foreseen to be majorly required in sectors such as tourism, travel, hospitality & trade (38 percent); banking, financial services & insurance (29 percent), media & entertainment (17 percent) and IT & ITES industry (9 percent).

Sector-wise, the highest incremental demand and supply gap is expected in the banking, financial services & insurance sector (24 percent). The incremental gap in this sector is expected to come from highly skilled workers (78 percent) and skilled workers (20 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(408)	(603)	(746)	(1,757)
Auto & Auto Components	5	14	23	42
Chemical & Pharmaceuticals	5	9	12	26
Construction materials & building hardware	121	181	245	547
Electronics & IT Hardware	7	11	16	34
Food Processing	36	38	40	114
Furniture & Furnishings	7	18	28	53
Leather & Leather Goods	1	1	1	3
Gems & Jewelry	-	-	-	-
Organized Retail	-	-	-	-
Textile	(1)	14	26	39
Unorganized sector	3	5	8	16
Banking, Financial Services & Insurance	5,559	9,616	15,963	31,138
Building, Construction & Real Estate Services	(22)	43	97	118
Education & Skill Development	6,141	8,222	10,931	25,294
Healthcare	5,466	7,547	10,259	23,272
IT & ITES industry	4,642	6,729	9,449	20,820
Media & Entertainment	1,930	3,688	5,898	11,516
Tourism, travel, hospitality & trade	2,916	6,482	10,963	20,361
Transportation, logistics, warehousing & packaging	(364)	34	428	98
Total	26,044	42,049	63,640	131,733

Source: E&Y Analysis

Table 89: Total incremental demand supply gap for skilled jobs by sectors- Puri District

The incremental demand supply gap is also expected to widen for education & skill development sector (19 percent), which in turn, would comprise of the demand for skilled (90 percent) and highly skilled (10 percent) workforce.

Significant incremental requirement is also expected to be witnessed in services like healthcare (18 percent), IT & ITeS (16 percent) and tourism, travel, hospitality & trade (15 percent) sectors. A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.26.5 Development potential and Stakeholder perceptions

Puri is a unique district which offers opportunities in many areas including tourism, agriculture, handicraft and fisheries. Its location near the State capital gives it an advantage of connectivity by air, rail as well as road.

Puri is one of the most important tourist destinations because of its religious importance, presence of the vast *Chilka* Lake and the famous *Konark* temple. There is an inflow of domestic as well as foreign tourists visiting the State. Although there is no data available of the visitors coming to Puri, but it is likely that a large number of them would visit the district. Among the foreign tourists, maximum tourists come from France although there are tourists from several other countries from all parts of the world. One of the biggest challenges is to provide them with interpreters or tourist guides who understand their language. At present only a handful of them are learning foreign language. The state government has taken up a number of projects to further develop Puri as a tourist destination. Most noteworthy is the development of *Raghurajpur* as a rural tourist destination. Other important projects include development of *Chilika* lake and destination development of Puri. A discussion with men and women in *Raghurajpur* projected a positive picture. There are about 3000 families in the village and the adjoining hamlets out of which about 80 percent families are involved in handicraft. Skills are learnt traditionally and marketed largely through ORMAS and through SHG groups in other states. The women expressed the desire to learn designing to improve the range of their products, packaging and marketing.

Being such an important tourist destination throws open several possibilities of employment generation in the district. There are over 350 hotels in the district and there are plans to develop more hotels. A look at the performance of state run hotels suggests that these will need to be managed more professionally. According to the performance budget 2009-10 of the department of tourism, all the 24 hotels and units being run by the tourism department are running at a loss. This includes the Open Air *Konark* Auditorium.

Puri is also known for its handicraft sector. Appliqué work, stone carving, wood carving, paper wood, terracotta, coir products, palm leaf painting, tussar painting are major handicraft activities taking place in the district. There is room for developing these further and providing marketing linkages. Thus tourism and handicraft sectors offer a wide range of employment opportunities – housekeeping, front desk, ticketing, tourist guide, drivers to name a few. During discussions it was shared that the hotels find it difficult to find people for housekeeping. Some individuals had very strong views with regard to housekeeping, which they find a demeaning activity. It was shared that there would be less resistance to taking up housekeeping related employment in other states than it is within the state. This shows a strong mindset that creates barriers in the minds of people.

Availability of coir in the district is not being utilized fully. Despite easy availability of raw material the coir industry seems to be under stress. The cost of production has increased owing to the increase in minimum wage rate. Due to lack of mechanization there is greater dependence on labour force which makes it unviable for the entrepreneurs.

In addition to tourism, Puri has good potential to develop agriculture also. There is either middle or low land in Puri. This makes it very suitable for growing paddy during *Kharif*f. During *Rabi*, growing pulses has good potential. Pulse production in the district is increasing over the years. Mushroom cultivation is quite advanced. Puri supplies most of the mushroom requirements of the state. About 9000 acres of land is covered by coconut plantation. The climate is conducive for growing fruits and vegetables but lack of cold storage facilities limits the growth of this sector. There is room for food processing units to come up in this area.

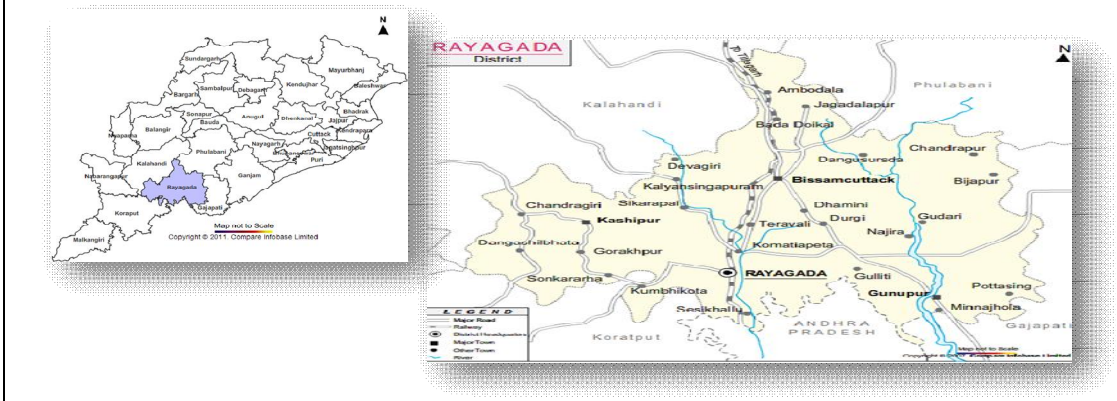
The district offers unique opportunities for developing pisciculture. The district has fresh water, brackish water as well as marine water. There are about 86 fishing villages with more than 75000 fishermen. The sector faces a lot of problems including lack of mechanization, lack of infrastructure (jetty, boat yards, and drying units). Some respondents shared that fishermen register themselves in district fishery office but go to Paradip for fishing since it is more viable. Marketing linkages are weak. There is greater demand for river fish. With proper marketing linkages, fish can be exported to other states or even internationally.

The opportunities for training are limited to government training schools in stone carving, cane and bamboo, sea shell carving and coir handicraft. The ITI provides training in skills suited to the industry. The Government run ITI has been converted into a centre of excellence opportunities for skill development in the hospitality, food processing would be very useful. Skill development in the hospitality sector may include different modules in language, front desk, ticketing, travel guide and other related areas. Up gradation of existing skills (design, marketing, and packaging) would be useful.

- **Primary sector:** Well endowed for fresh water, brakish water and marine fishery. Skill development in fishery sector focusing on commercial production, value addition, packaging and marketing. In addition, skill development in dairy, mushroom cultivation and processing of fruits and vegetables
- **Secondary sector:** Handicrafts is a thriving sector with immence growth opportunity. Skill development to focus on commercial design, packaging and marketing skills. Coir industry can grow if skills are developed in modern technology of production.
- **Service sector:** Skill development in tourism and hospitality is highly required. Skills- both technical and soft skills required for the entire value chain of the tourism and hospitality industry including support services like health care, travel operators, auto mechanics and drivers.

10.27 Rayagada

Rayagada District is spread over an area of 7073 Sq Km which forms approximately 4.54 percent of the total geographical area of the State. Topographically, most of the area of the district remains covered under forests while it is largely surrounded by small hill ranges. Administratively, the district is divided into 2 subdivisions, 11 blocks, 171 Gram Panchayats and 2467 villages. Rayagada is surrounded by Kalahandi and Kandhamal Districts in the north, Kandhamal and Gajapati in the east, Kalahandi and Koraput in the west and the state of Andhra Pradesh in south.



Map Courtesy: Maps of India

District Information	Rayagada	Odisha	Source
Area (in Sq Km)	7,073	155,707	Census 2011 provisional figures
% share of State Geographical area (Ranking)	4.54% (8)	100 (NA)	Census 2011 provisional figures
No of CD blocks	11	309	Census 2001
No of GPs	171	6234	Census 2001
Total no of inhabited villages	2467	47529	Census 2001
Forest area as % of total geographic area	39.75%	37.66	Census 2001

Figure 164: District Map of Rayagada

10.27.1 Demography

Total population of Rayagada as per census 2011 is 9.62 lakhs of which male and female were 4.70 lakhs and 4.92 lakhs respectively. There is a change of 15.74 percent in the population compared to population as per 2001 census. The District constitutes 2.29 percent of the total population of the State and is 8th highest. The initial provisional data (Census 2011) suggest a population density of 136 in 2011 making Rayagada the fifth most sparsely populated district of Odisha. With regards to sex ratio, the district fares better compared to all the other districts of the state. The sex ratio for Rayagada as per 2011 provisional census figures is 1048 females per 1000 males, much higher than the State average of 978 females per 1000 males.

The district is predominantly tribal with STs constituting more than half of the population i.e. 55.76 percent and SCs constituting about 14 percent. With 88 percent rural population, Rayagada is one of the most rural districts in Odisha (as per census 2001). As per 2001 census, the population in

the working age group constituted 57.28 percent of the total population. Work participation rate of the district is 31.2 percent. Out of the total workers 62.6 percent are main workers and 37.4 percent are marginal workers. Almost 52 percent of the population is comprised of non workers. With a human Development Index (HDI) of 0.443 and Gender Development Index (GDI) of 0.428, Rayagada ranks among the lowest performing districts of Odisha.

Population	Rayagada	Odisha	Source
Total population (in lakh)	9.62	419.47	Census 2011 provisional figures
Total population (Male) (in lakh)	4.70	212.01	Census 2011 provisional figures
Total population (female) (in lakh)	4.70	207.45	Census 2011 provisional figures
District Share in State's population (Ranking)	2.29% (22)	NA	Census 2011 provisional figures
Density of population	136	269	Census 2011 provisional figures
Decadal growth of population (2001-2011)	15.74%	13.97%	Census 2011 provisional figures
Urban population %	12%	14.99%	Census 2001
SC population %	13.92%	16.53	Census 2001
ST population %	55.76%	22.13	Census 2001
Sex ratio	1048	978	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	57.28%	58.40%	Census 2001
Worker participation rate	31.20%	40.03	Census 2001
Share of primary sector to total workers	75.19%	64	Census 2001
Proportion of agriculture laborer in workforce	46.12%	34.53	Census 2001
Human Development Indicators	**Rayagada**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.443 (25)	0.579	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.428 (24)	0.546	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	19326 (11)	561969	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.302 (27)	NA	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 90: Socioeconomic indicators for Rayagada

10.27.2 State of Education

In terms of average literacy Rayagada is ranked 27th in the State. Only Koraput, Nabarangpur and Malkangiri districts have poorer literacy rates than Rayagada. Average literacy rate of Rayagada in 2011 (as per provision census figures) is only 50.88 percent compared to 36.15 percent in 2001. This is still much below the state average of 73.45 percent. Gender wise male and female literacy is 62.61 percent and 39.87 percent respectively. For 2001 census, same figures stood at 48.18 percent and 24.56 percent showing a proportionate increase in literacy level for all the groups in Rayagada District over last 10 years.

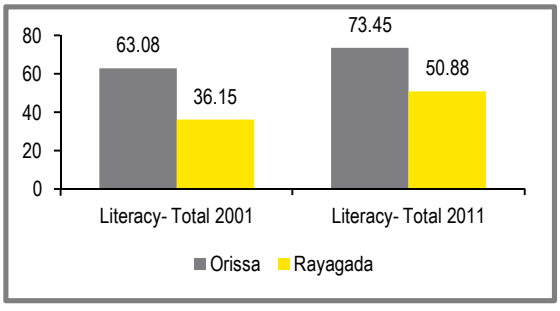


Figure 165: Literacy rate- Rayagada District

11.72 percent children in school going age were out of school in 2009. This figure is the highest among all the other districts in Odisha.

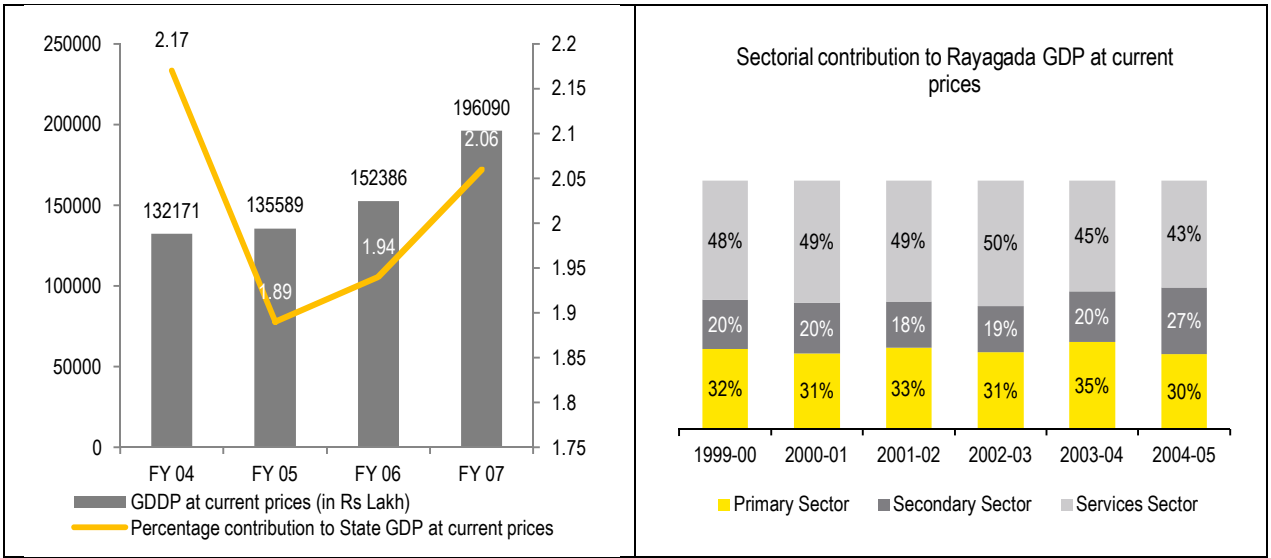
For higher Education there are only 20 junior colleges and higher secondary schools with sanctioned strengths 1692 seats in arts, 1154 seats in science and 496 seats in commerce. At the degree level, there are 13 colleges which offer various courses including some professional courses at the graduate and the post graduate levels.

For technical education, Rayagada has 2 private engineering (degree) colleges. Together, these engineering colleges offer various courses and have a combined intake capacity of approximately 1300 students per year. Major courses offered include electronics & telecom engineering, computer science & engineering among various other areas. In addition to engineering degree colleges, there are 2 polytechnic institutes including one government polytechnic centre offering engineering and other diploma courses. Total intake capacity in polytechnic institutes is approximately 470 students per year. Major courses are mechanical and electrical. Rayagada has one pharmacy college with an intake capacity of 40 students per year.

There are 13 private vocational training centers in the district offering primarily courses in fitter, electrician and welder trades. The utilisation rate is however very low in these ITCs. In 2010 only 36 percent of the seats were filled indicating that the demand of the courses is not high. Rayagada does not have any government ITI.

10.27.3 Economic Profile

As per economic survey 2010-11, Rayagada is among the top half districts in the State with a CAGR of 6.2 percent for the period 2000-01 to 2006-07. Rayagada derives its gross domestic products from agriculture, industry and services. The composition of the service sector in terms of contribution to the District GDP of Rayagada at current prices (2004-05) is shown below:



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 166: Gross District Domestic Product (at current prices) of Rayagada District

Agriculture

A large section of population of Rayagada depends upon agriculture as their primary means of livelihood. About 75 percent of total work force is either cultivators or agricultural laborers. Rayagada is ranked 4th in the State in terms of number of agricultural laborers, constituting 26.12 percent of total working force. As per Odisha agriculture statistics report 2008-09, twenty seven percent of the total geographical area or almost 193 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 63.09 thousand hectares. Apart from paddy, other major crops include vegetables, pulses, oilseeds and fruit crops. Performance of Rayagada district is however poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 19th with a per capita agricultural output of 1219. Vegetables contribute highest to the total agricultural output of Rayagada with a value of 206.68 (2008-2009), followed by rice (98.82) and pulses with (37.7) (all figures in thousand metric tonnes).

Mango is the most important food crop with 10,190 hectares under cultivation for the same. Marigold is the most important floricultural crop with 42 hectares of land under cultivation, followed by rose with 35 hectares of land. With an average landholding of 1.53 hectare, landholding pattern in the District is appreciable with majority (more than 67 percent) of the farmers having more than a hectare of land holding.

Industries

Rayagada district is rich in mineral resources like bauxite, manganese, graphite etc. however, it is not an attractive location from the industries perspective because of its weak connectivity via road and railway networks. The district boasts of many handicraft and cottage industries. The availability of resources in the district makes it a potential high growth industrial area in the state.

In terms of Investments into large and medium scale industries, Rayagada is currently ranked 17th in the State, with an investment of Rs. 895 million by 2010 and which constitute 0.1 percent of the total investment in large and medium scale industries. There are only 4 large/medium scale industries in the district viz, IMFA Limited, JK Paper Limited, Fimachem India Limited and Ganon Dunkerly & Co. The details of the same are depicted in chart given below:

In terms of investments in Micro and small scale industries, Rayagada is ranked 13th in the State. MSME investment in Rayagada was 1.98 percent of the total investments made in the State till March 2010.

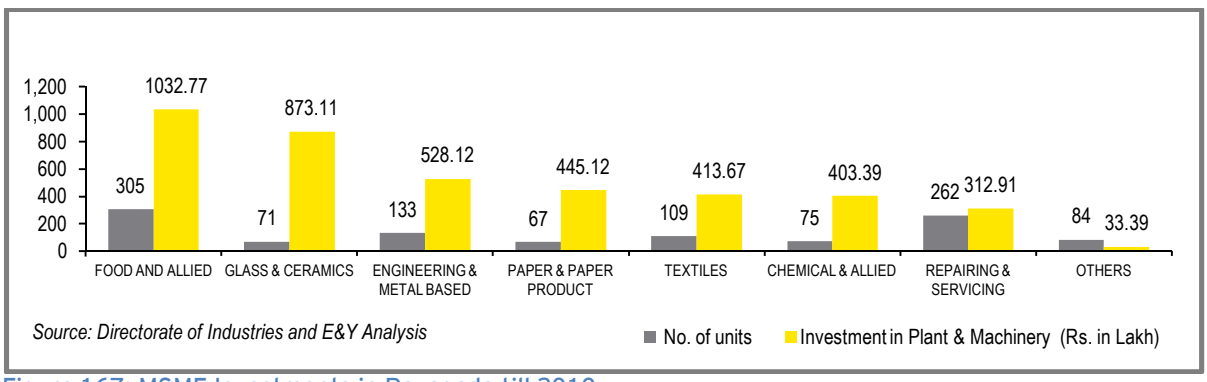
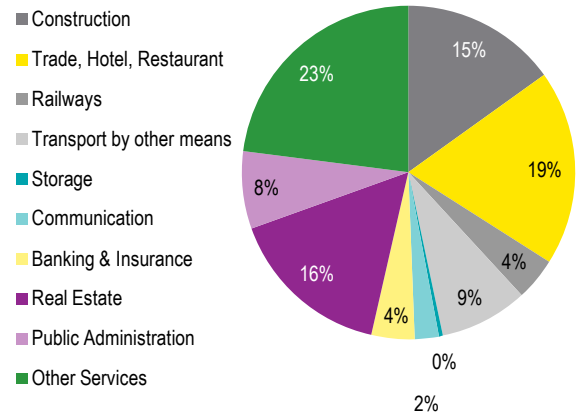


Figure 167: MSME Investments in Rayagada till 2010

Services

The services sector includes construction, trade, hotels and restaurants, transport, storage, communication, banking and insurance, real estate, public administration and other services. The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Rayagada GDP, the service sector remains the most important contributor constituting 71 percent of the district GDP.



As depicted in the chart, Other Services are the leading contributor to the service sector (23 percent) followed by trade, hotel and restaurant (19 percent), real estate (16 percent) and construction (15 percent). Transportation including railways is also an important contributor of GDP of Rayagada economy (14 percent).

Source: Planning Commission, Government of India

Figure 168: Composition of Service Sector- Rayagada 2004-05

10.27.4 Skill Gap Assessment for Rayagada

Over the next 15 years, the total workforce demand for skilled jobs in Rayagada district is expected to grow to 3 lakhs in 2026 from present levels of 1.9 lakh in 2011. The total workforce demand is expected to be dominated by the tertiary sector (68 percent), followed by the primary sector (19 percent) and secondary sector (13 percent).

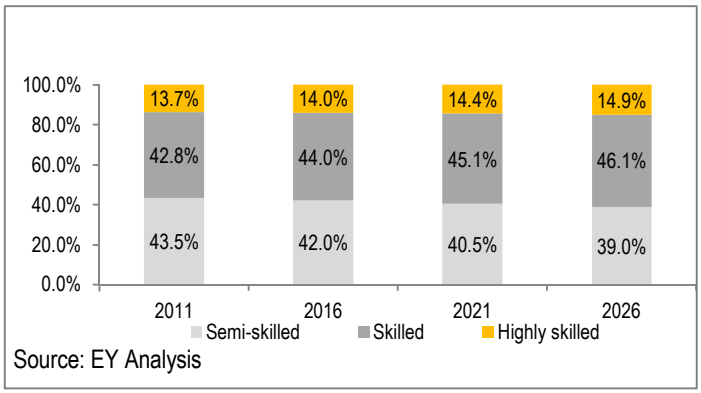


Figure 169: : Proportion of demand for skilled jobs by skill categories- Rayagada District

The top five sectors expected to create a demand for skilled workforce in 2026 are: agriculture (0.6 lakh); tourism, travel, hospitality and trade (0.5 lakh); education & skill development (0.3 lakh); healthcare (0.3 lakh) and IT & ITes industry (0.3 lakh).

As per the CMIEs Capex database and secondary research, major projects have been announced in Construction and Textile sectors. The resultant increased industry growth rates including these sectors have been factored in to arrive at skill-wise demand across the sectors. The proportion of demand gap for semi-skilled workers shows a downtrend in the period 2011-2026, while it shows a

continuous uptrend in the same period for skilled and highly-skilled workforce.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Agriculture					
Semi-skilled	29,829	29,308	28,796	28,293	
Skilled	19,886	19,539	19,197	18,862	
Highly skilled	9,943	9,769	9,599	9,431	
Total demand for skilled jobs	59,658	58,616	57,592	56,586	19
Tourism, travel, hospitality & trade:					
Semi-skilled	12,746	16,165	20,500	25,998	
Skilled	8,446	10,712	13,584	17,227	
Highly skilled	1,382	1,753	2,223	2,819	
Total demand for skilled jobs	22,574	28,630	36,307	46,044	15
All sectors:					
Semi-skilled	80,950	90,093	101,743	116,659	
Skilled	79,624	94,335	113,321	137,867	
Highly skilled	25,469	29,904	36,058	44,652	
Total demand for skilled jobs	186,043	214,332	251,122	299,178	100

Source: E&Y Analysis

Table 91: Skill-wise demand for sectors where high demand is foreseen - Rayagada District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled human resource (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 0.6 lakh during the period 2011-2026.

Skilled human resource is expected to account for 52 percent of the widening demand-supply gap for the Rayagada district, followed by highly-skilled jobs (27 percent) and semi-skilled jobs (21 percent).

As for the **highly skilled** jobs, a higher requirement is expected in case of banking, financial services & insurance jobs (50 percent); IT & ITeS (21 percent); and education & skill development (8 percent).

The highest proportion of incremental gap for **skilled** workers is expected to come from services sectors like education and skill development (25 percent); healthcare (25 percent); IT & ITeS industry (15 percent) and tourism, travel, hospitality & trade (15 percent).

Tourism, travel, hospitality & trade (37 percent); media & entertainment (19 percent), banking, financial services & insurance (13 percent) constitute the major sectors which are expected to create a demand for **semi-skilled** workers.

A variation is observed in the incremental demand supply gap for skilled jobs in different industries. Banking, Financial Services & Insurance are expected to account for 19 percent of this incremental demand supply gap. The incremental gap in this sector is primarily expected to come from highly-skilled workers (73 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(392)	(526)	(626)	(1,544)
Auto & Auto Components	1	2	3	6
Chemical & Pharmaceuticals	20	32	44	96
Construction materials & building hardware	601	942	1,304	2,847
Electronics & IT Hardware	17	27	37	81
Food Processing	193	256	315	764
Furniture & Furnishings	76	107	137	320
Leather & Leather Goods	1	1	2	4
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	106	194	288	588
Unorganised sector	132	212	292	636
Banking, Financial Services & Insurance	2,130	3,680	6,107	11,917
Building, Construction & Real Estate Services	52	89	120	261
Education & Skill Development	1,890	3,090	4,660	9,640
Healthcare	1,692	2,884	4,447	9,023
IT & ITES industry	1,971	3,168	4,737	9,876
Media & Entertainment	1,265	2,248	3,497	7,010
Tourism, travel, hospitality & trade	1,915	3,578	5,691	11,184
Transportation, logistics, warehousing & packaging	152	338	531	1,021
Total	11,821	20,323	31,587	63,731

Source: E&Y Analysis

Table 92: Total incremental demand supply gap for skilled jobs by sectors- Rayagada District

The incremental demand supply gap is also expected to widen for tourism, travel, hospitality & trade (18 percent). The incremental human resource gap in this sector largely comprises of need for skilled (44 percent) and semi-skilled human resource (44 percent).

Significant incremental requirement is also expected to be witnessed in services like IT & ITeS (16 percent) and education & skill development (15 percent). A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.27.5 Development potential and Stakeholder perceptions

Rayagarha is one of the Southern districts of Odisha. It has over 2600 villages including 200 uninhabited villages. The literacy level in the district is quite low although there has been a significant increase in literacy levels since the last census. The district is quite underdeveloped in

terms of infrastructure. As per the district statistical handbook (2007) only half the number of villages had been electrified. The situation may have improved since then, but there is still a lot of scope for development.

The district has good reserve of mineral resources including precious and semi precious stones. A large part of the land is devoted to agriculture. Most people are still engaged in agriculture although the recent trend is to seek employment in the industrial units which have started coming up in the district. Unfortunately the level of preparedness of the local youth is low to benefit from the industrial development. The levels of education are still low which creates barriers for them to get skilled.

Questions were raised about the capacity of the existing vocational training institutes to provide need based trainings. Ill-equipped vocational training institutes make it difficult for the industry to source workers from the district. Its proximity to Vizag creates opportunities for the youth there that have a higher level of education and are willing to come and work in the industries. The Central tool room and training centre has initiated training in 20 trades which are all geared towards providing skills to meet the modern market demands. There is a need to set up institutes of this standard. Generally the training institutes face problems related to getting appropriate faculty and adequacy of infrastructure. Since the district is still dependent on the primary sector, the ITIs need to consider offering courses like agro servicing units, food processing, animal husbandry and fisheries which would be found attractive by the youth.

An interaction with some of the youth groups revealed that there is willingness among them to learn certain skills which will help them get self employed. They were aware about the demand of certain trades like hospitality, broiler farming, laundry, mobile repairing and two wheeler servicing. Training in these skills as well as availability of finances would help them get self employed in their own district rather than go to other states where they face issues like finding a place of residence, health care and insecurity. Issues of illegal hiring of labour and exploitation by them have been reported. Through interactions one also gathered that there was very limited demand for skill development in areas like civil works but there has been a sudden rise in demand for masons, plumbers, electricians due to increase in construction work in the district.

It is seen that mines and mineral based industries which make use of raw materials like bauxite, graphite, quartz and manganese are coming up due to enhanced industrialization. In addition a number of small and medium scale industries/services are coming up especially in the area of food processing, repair work and servicing, metal based engineering, textiles, electrical and electronic based industries. Glass and ceramic based industry is generating employment too.

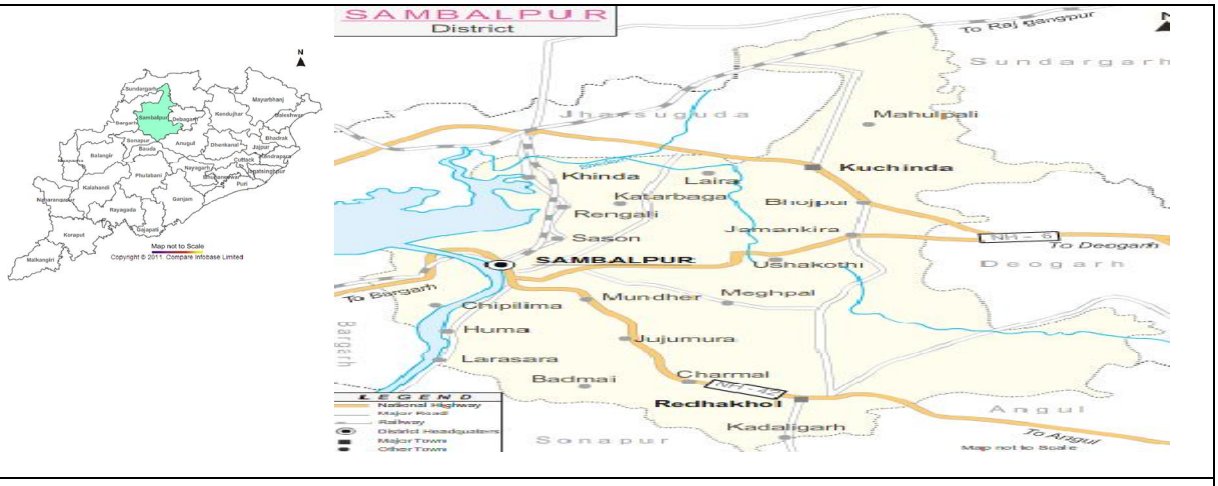
Since agriculture is rainfed it does not provide employment round the year which makes people look for other opportunities of employment. ORMAS has been providing training to the rural youth and SHG members in a number of areas – hill broom production, dal processing, cashew processing, *chhatua* processing and saura painting. According to them there is a lot of demand for skilled workers for diamond cutting. While they learn these skills, they are attracted to seeking employment in the industry since it gives them better salaries. Better income to people for engaging in activities that add value to the agricultural products would be useful in sustaining their interest. Queen variety of pineapple is available in the district which is a superior quality of pineapple. Its potential has not been tapped adequately.

A sizeable section of population is also engaged in handicraft and cottage industry related occupations like lacquer and bell metal products, tribal jewellery, dhokra casting, bamboo craft, paper machie, theatrical dresses, terracotta, pottery, appliqué work, soft toys, bonsai and sisal fiber products. Women are engaged in spice grinding, pickle making, *papad* making, candle and making dals and pulses. However these are pursued at a small scale.

- **Primary Sector:** Skill development training in food processing industries especially related to processing of pulses, fruits (especially pineapple) and cashew processing.
- **Secondary Sector:** Proximity to vizag and presence of of few small and medium scale industries has created the need for skill development in repair work and servicing, metal based engineering, textiles, electrical and electronic and Glass and ceramic based industry. Mason, plumbers and electricians are in high demand
- **Services Sector:** Hospitality, laundry, mobile repairing and two wheeler servicing etc.

10.28 Sambalpur

Sambalpur District is spread over an area of 6624 Sq Km which forms approximately 4.25 percent of the total geographical area of the State. Topographically, the district has three prominent divisions- Hilly Terrain of *Bamra* and *Kuchinda* in the north, plateau and ridges of *Rairakhol* in the south-east and valley and plains of Sambalpur Sub-division in the south east. Administratively, the district is divided into 3 subdivisions, 9 blocks, 148 Gram Panchayats and 1238 villages. Sambalpur is surrounded by Sudargarh and Jharsuguda Districts in the north, Sundargadh, Deogarh and Angul Districts in the east, Jharsuguda, Bargarh and Sonepur Districts in the west and Sonepur, Boudh and Angul Districts in south.



Map Courtesy: Maps of India

District Information	Sambalpur	Odisha	Source
Area (in Sq Km)	6,624	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	4.25% (9)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	9	**309**	Census 2001
No of GPs	148	**6,234**	Census 2001
Total no of inhabited villages	1,238	**47,529**	Census 2001
Forest area as % of total geographic area	54.50%	**37.66%**	Census 2001

Figure 170: District Map of Sambalpur

10.28.1 Demography

As per Census 2011 (Initial provisional data), Sambalpur has a population of 10.44 lakhs of which males and females were 5.29 lakhs and 5.15 lakhs respectively. There is a change of 12.24 percent in the population compared to population as per 2001 census. In terms of population, the district constitutes 2.49 percent of the total population of the state and is ranked 20th in the State. The initial provisional data (Census 2011) suggest a very low population density of 158 in 2011 making Sambalpur the ninth most sparsely populated district of Odisha. With regards to sex ratio, the district fares poorly compared to other districts and the state average. The sex ratio for Sambalpur as per 2011 provisional census figures is 973 females per 1000 males, which is even below the state average of 978 females per 1000 males.

In terms of social composition of the population, Sambalpur is largely a tribal district with as much as 34.5 percent ST population while SCs constitute approximately 17 percent of the total

population of the district. With almost 27 percent urban population, Sambalpur is one of the most urbanized districts in Odisha (as per census 2001).

As per 2001 census, the population in the working age group constituted 60 percent of the total population. The population in the age group 0-4 years constitutes 9.02 percent and 5-14 years comprise 22.36 percent respectively. It has a work participation rate of 45.03 percent. Out of the total workers 66.97 percent are main workers and 33.03 percent are marginal workers. With a Human Development Index (HDI) of 0.589 and Gender Development Index (GDI) of 0.56, the Sambalpur ranks among the top half districts of Odisha.

Population	Sambalpur	Odisha	Source
Total population (in lakh)	10.44	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	5.29	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	5.15	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	2.49% (20)	**NA**	Census 2011 provisional figures
Density of population	158	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	12.24%	**13.97%**	Census 2011 provisional figures
Urban population %	27.14%	**14.99%**	Census 2001
SC population %	17.04%	**16.53**	Census 2001
ST population %	34.50%	**22.13**	Census 2001
Sex ratio	973	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	59.98%	**58.38%**	Census 2001
Worker participation rate	45.03%	**40.03%**	Census 2001
Share of primary sector to total workers	53.44%	**64**	Census 2001
Proportion of agriculture laborer in workforce	31.83%	**34.53**	Census 2001
Human Development Indicators	**Sambalpur**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.589 (13)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.560 (10)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	21577 (8)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.422 (16)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 93: Socioeconomic indicators for Sambalpur

10.28.2 State of Education

Average literacy rate of Sambalpur in 2011 (as per provision census figures) is 76.91 percent compared to 67.25 percent in 2001. Gender wise male and female literacy is 85.17 percent and 68.47 percent respectively. For 2001 census, same figures stood at 78.99 percent and 55.16 percent showing a proportionate increase in literacy level for all the groups in Sambalpur District over last 10 years. Out of the total number

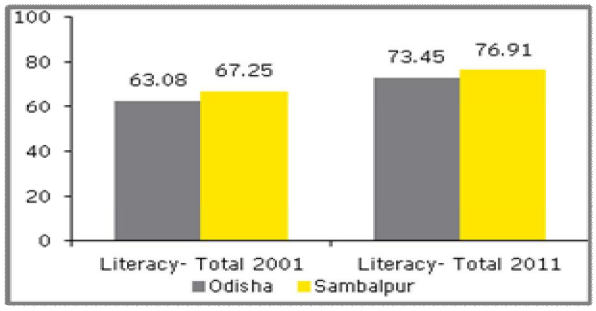


Figure 171: Literacy rate- Sambalpur District

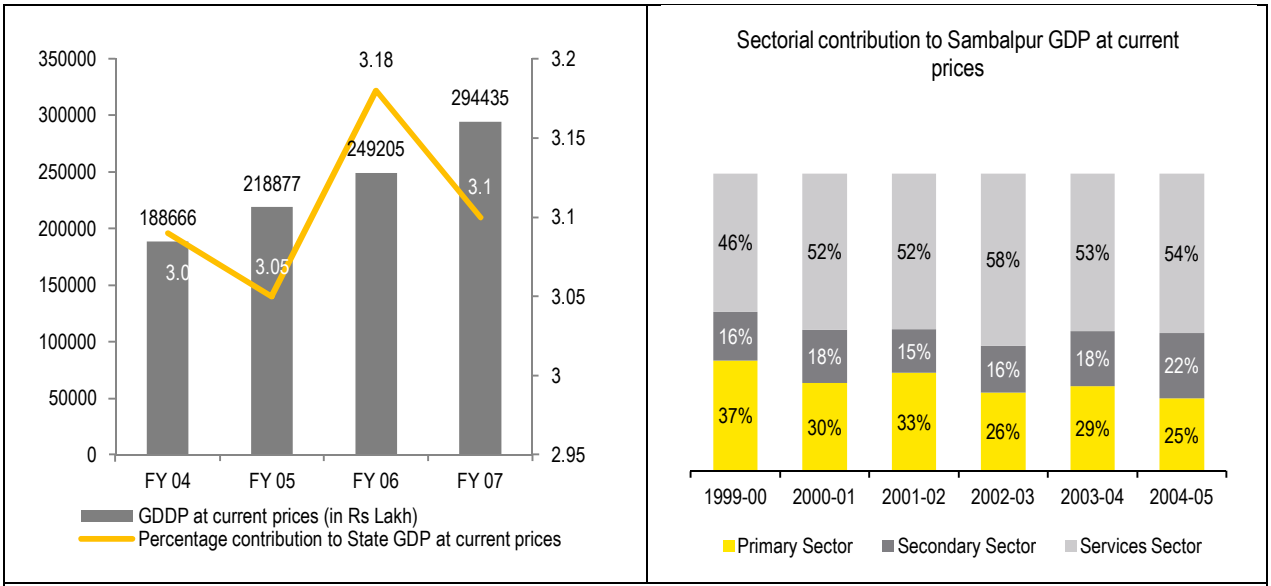
of children in school going age, 3.993 percent children were out of school in 2010.

Sambalpur is a hub for higher education in the region and has University as well. There are 44 junior colleges and higher secondary schools and 17 degree colleges in the district. For technical education, Sambalpur has a government engineering (degree) college with an intake capacity of approximately 486 students per year. This college offers a range of engineering courses including computer science & engineering and civil, electrical and mechanical engineering. In addition to engineering Degree College, there is a private polytechnic institute offering engineering and other diploma courses. Total intake capacity in the polytechnic institute is approximately 210 students per year. Major courses are civil, electrical and mechanical engineering. Sambalpur has one medical college with a capacity of 150 MBBS students. The pharmacy college has an intake capacity of 60. The homeopathy college has 25 seats offering BHMS degree.

For vocational training, there is a Government ITI offering training in 10 courses including, Stenographer (English), Wireman and Electrician. The ITI has been upgraded to a centre of excellence last year. There are 13 private ITCs in the district offering 4 courses- fitter, electrician, computer operator and programming assistance and cutting and sewing.

10.28.3 Economic Profile

As per economic survey 2010-11, Sambalpur is ranked 5th in the State with a annual average growth rate of 8.5 percent for the period 2000-01 to 2006-07. The district contributes 3.1 percent of the State GDP. Services sector is most important contributor to the district GDP.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 172: Gross District Domestic Product (at current prices) of Sambalpur

Agriculture

While the agriculture sector contributes only around 10-12 percent to the GDDP, it is the main source of livelihood for people of Sambalpur. Approximately 70 percent of the people are engaged in agriculture and allied activities (pisciculture, horticulture, forestry and animal husbandry). More than 31 percent of the people engaged in agriculture are agricultural labourers.

As per Odisha agriculture statistics report 2008-09, twenty nine percent of the total geographical area or almost 194 thousand hectares of land was brought under cultivation in District. Paddy is the primary crop with a gross cropped area of 151.33 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops.

In terms of per capita agriculture output, the district has performed well. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 5th with a per capita agricultural output of 1992. Rice contributes highest to the total agricultural output of Sambalpur with a value of 337.13 (2008-2009), followed by vegetables (185.95) and pulses with (23.82) (all figures in thousand metric tonnes).

Industries

Sambalpur District is among the industrially developed districts of the State with highest investments in large and medium scale industries. It boasts of a number of big as well as SSI and cottage industries. It has a flourishing textile industry and the district is famous for its handloom. It also has a large number of rice mills that contribute to the district's economy. It is forward in terms of trade. National Highway 6 passes through the district connecting it to the important cities of Surat and Kolkata. National highway 42 connects it to the state capital, Bhubaneshwar. It is also, one of the Divisional Headquarters of East Coast Railway and is well connected via railway to all metros and other important cities. The river Mahanadi also passes through the district and is home to *Hirakud* Dam, one of the longest dams in the world. It generates about 307 MW of energy.

In terms of Investments into large and medium scale industries, Sambalpur is currently ranked 1st in the State, with an investment of Rs. 170 billion by 2010 which constitutes 18.43 percent of the total investment in large and medium scale industries. Some of major large scale industries include Aditya Aluminium Limited, Hindal Co., Bhushan Steel and Power etc. with investments of about 75, and 40 billion rupees each, respectively. Some of the upcoming industries include Hindal Co. Ind. Limited (Captive Power Plant), Mahanadi Coal Fields Limited and Samaleshwari Ferro Metals Private Limited etc. The composition of the Large Scale industrial sector in the district is given below. In terms of attracting investments and setting up micro and small scale industries, Sambalpur is ranked 19th in the State. MSME investment in Sambalpur was 1.68 percent of the total investments made in the State till March 2010.

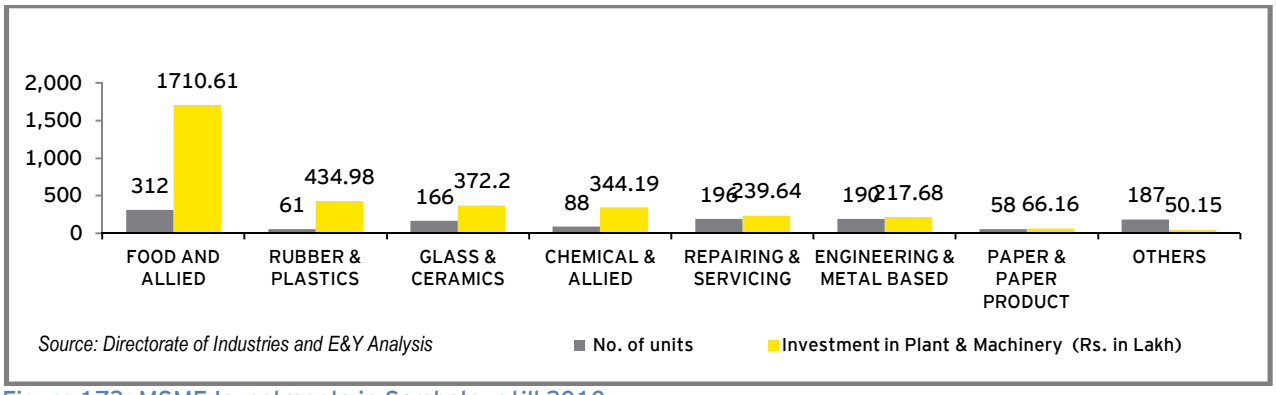
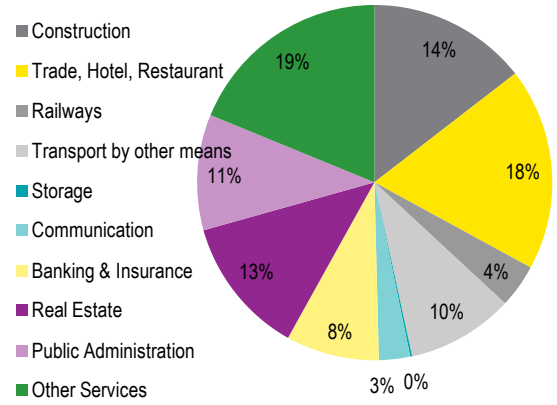


Figure 173: MSME Investments in Sambalpur till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Sambalpur GDP, the service sector remains the most important contributor constituting 77 percent of the district GDP.



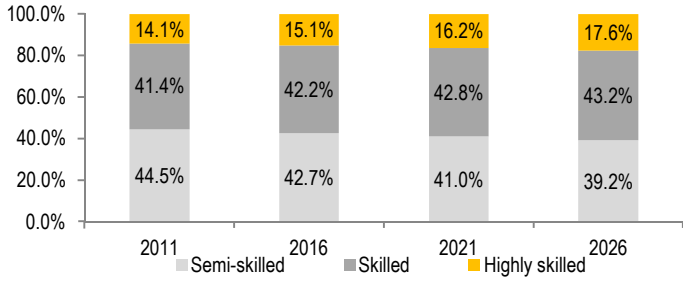
As depicted in the chart, other service is the leading contributor to the service sector (19 percent), closely followed by trade, hotel and restaurant (18 percent), construction (14 percent) and real estate (13 percent). Transportation including railways is also an important contributor of GDP of Sambalpur economy as far as the service sector is concerned

Source: Planning Commission, Government of India

Figure 174: Composition of Service Sector- Sambalpur 2004-05

10.28.4 Skill Gap Assessment for Sambalpur

Over the next 15 years, the total workforce demand for skilled jobs in Sambalpur district is expected to grow from the present levels of 2.4 lakhs in 2011 to 4.3 lakhs in 2026. On a macroeconomic level, the tertiary sector is expected to account for 75% of the total workforce demand, followed by secondary sector (15%) and primary sector (10%).



Source: EY Analysis

Figure 175: Proportion of demand for skilled jobs by skill categories- Sambalpur District

An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon. Some of the prominent sectors from which the workforce demand for skilled jobs in 2026 is primarily expected include banking, financial services & insurance (0.7 lakh); tourism, travel, hospitality & trade (0.6 lakh); and unorganized (0.6 lakh) sector.

The secondary research on the district of Sambalpur indicates power and warehousing projects being announced in the district.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Banking, financial services & insurance					
Semi-skilled	5,275	7,985	12,086	18,294	
Skilled	3,028	4,584	6,938	10,502	
Highly skilled	11,234	17,004	25,739	38,960	
Total demand for skilled jobs	19,537	29,573	44,763	67,756	16
Tourism, travel, hospitality & trade					
Semi-skilled	17,661	22,397	28,404	36,021	
Skilled	11,703	14,841	18,822	23,869	
Highly skilled	1,915	2,429	3,080	3,906	
Total demand for skilled jobs	31,279	39,667	50,306	63,796	15
Unorganized					
Semi-skilled	26,731	28,736	30,891	33,208	
Skilled	16,707	17,960	19,307	20,755	
Highly skilled	3,341	3,592	3,861	4,151	
Total demand for skilled jobs	46,779	50,288	54,059	58,114	14
All sectors:					
Semi-skilled	108,317	123,320	142,486	167,226	
Skilled	100,601	121,628	148,898	184,393	
Highly skilled	34,291	43,451	56,525	75,305	
Total demand for skilled jobs	243,209	288,399	347,909	426,924	100

Source: E&Y Analysis

Table 94: Skill-wise demand for sectors where high demand is foreseen - Sambalpur District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 1.2 lakhs during the period 2011-2026.

It is expected that a major proportion of this widening gap would be accounted by skilled manpower (61 percent), followed by highly skilled jobs (30 percent) and semi-skilled jobs (9 percent).

Within the **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (68 percent) and IT & ITeS (14 percent) sectors.

The **skilled** workers would be increasingly required in case of education & skill development (24 percent), healthcare (24 percent); and IT & ITes (15 percent) industries. The **semi-skilled workers** belonging to the tourism, travel, hospitality & trade (31 percent); banking, financial services &

insurance (25 percent); media & entertainment (16 percent) sectors would form a major part of this incremental gap in 2026.

By sector, the banking, financial services & insurance sector is expected to account for 28 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from highly skilled workers (72 percent) followed by the skilled workers (19 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(300)	(395)	(468)	(1,163)
Auto & Auto Components	1	1	2	4
Chemical & Pharmaceuticals	6	9	12	27
Construction materials & building hardware	185	260	341	786
Electronics & IT Hardware	13	19	25	57
Food Processing	39	42	45	126
Furniture & Furnishings	18	34	48	100
Leather & Leather Goods	1	1	2	4
Gems & Jewelry	0	0	0	0
Organized Retail	0	0	0	0
Textile	6	15	23	44
Unorganized sector	1,160	1,801	2,416	5,377
Banking, Financial Services & Insurance	6,024	10,557	17,680	34,261
Building, Construction & Real Estate Services	36	126	205	367
Education & Skill Development	4,764	6,456	8,660	19,880
Healthcare	4,364	6,041	8,235	18,640
IT & ITES industry	3,733	5,416	7,621	16,770
Media & Entertainment	1,971	3,337	5,087	10,395
Tourism, travel, hospitality & trade	2,844	5,149	8,108	16,101
Transportation, logistics, warehousing & packaging	(74)	244	575	745
Total	24,793	39,113	58,618	122,524

Source: E&Y Analysis

Table 95 : Total incremental demand supply gap for skilled jobs by sectors- Sambalpur District

The incremental demand supply gap is also expected to widen for tourism, travel, hospitality & trade sector (13 percent). The incremental human resource gap in this sector largely comprises of need for skilled (67 percent) and semi-skilled work force (22 percent).

Significant incremental requirement is also expected to be witnessed in social sectors like education & skill development (16 percent) and healthcare (15 percent). A major part of the incremental skill gap requirement in these services is expected to be for skilled workers.

10.28.5 Development potential and Stakeholder perception

Sambalpur district is one of the more economically developed districts of Odisha and is also the most prominent commercial and industrial center of Western Odisha. Sambalpur is one of the divisional headquarters of East Coast Railway. It is strategically located on the Mumbai - Howrah rail route and also connects the rest of Odisha with western and northern India by rail. It is also a prime

road junction with NH-6, NH-42 and SH-10 passing through the city. The economy of Sambalpur is basically dependent on agriculture and forestry in terms of contribution to employment and on services in terms of contribution to domestic product. Sambalpur is famous for its handloom textile works popularly known as Sambalpuri textile.

Around 33 percent of the total cultivated area is irrigated with 70 percent of the irrigated area concentrated in only Dhankauda and Maneswar blocks. 85 percent of the total cultivated land comprises of small and marginal land holding and are mostly fragmented. Due to this reason the mechanization of agriculture to improve productivity has been a challenge. Currently, the District Administration is providing training to farmers in the area of line sowing, pest management and water management (including provision of channels and drainage) for improving agricultural productivity.

Paddy is the primary crop, accounting for more than 70 percent of the total cultivated area. Apart from paddy other major crops include pulses (moong, black gram, arhar, cow pea), vegetables (brinjal, tomato, ginger, mushroom) and spices (primarily chilli). The main fruit crops include mango, banana and litchi. The potential growth areas include cashew, custard apple, mosambee and citrus fruits. Infact, horticulture provides opportunity for improving the income generation capacity of people. Forest produce includes mahua seeds and flowers, sal & siyali leaves, kusum seeds, medicinal plants and kendu leaves. Infact, Sambalpur accounts for 30 percent of the total kendu leaves production of western Odisha, used in the production of *beedi*.

However, there are several challenges faced by the agriculture and allied sectors including shortage of cold storages, dependence on traditional farming methods, lack of technological upgradation, small land holding, lack of proper market linkage and transport facilities. Specifically, the horticulture sector is faced with lack of infrastructure, availability of credit, lack of processing industries, irrigation and cold storage. There is also shortage of skilled staff for technological dissemination at block and village level. The educated youth do not prefer working in agriculture.

Skill development in agriculture and allied sectors has been a weak area. While the respective departments provide various training and extension services under the Agricultural Technology Management Agency (ATMA) and District Supply and Marketing Society (DSMS), it is still insignificant in terms of total requirement. The DSMS provides skill upgradation training, infrastructure & credit support and marketing linkage to Self Help Groups in villages for agricultural produce and non timber forest produce. Further, the district administration has approved setting up a 'Terminal Market' facility for the horticulture sector. This facility will consist of a 700 acres farmland with integrated farming, harvesting and storage facilities with 14 acres dedicated to a Center of Excellence.

Based on the discussions with the Deputy Director Agriculture and Deputy Director Horticulture, we understand that there is significant potential for establishing value addition projects, for example, processing, packaging and grading of farm produce including pickles, chilli powder and ginger powder. There is also a scope for providing training to farmers on alternate crops to improve productivity. Floriculture also provides growth opportunity in the horticulture sector particularly with respect to marigold and rose. Agricultural research is another potential focus area since there is shortage of agronomists in the district.

Further, with the implementation of the scheme for giving record of rights to the scheduled tribes (STs) and other forest dwellers, there is an opportunity to provide training to the ST in value addition of forest products and horticultural products, setting up nursery, producing ayurvedic medicines from medicinal plants. However, due to the lack of better market linkage they sell their products at a very minimal price. Therefore, it is critical to build their capacity and provide better market linkage to improve the income earning capacity of the people. Further, there is scope of generating employment opportunity by setting up a small scale industry and involving the local community. Some of the areas that can be focused on include leaf cup & plate making (*sal* & *siyali* leaves), siyali rope making, and bee keeping.

The *Hirakud* Dam Hydel Project provides immense opportunity for the fisheries sector. There are 6 reservoires in the project with 45,000 hectares of fish farmland with abundance of *katla, rohu, nrigal*, commoncarp, silvercarp, major and catfish. The fishery department provides support for integrated fish farming, fish seed rearing, hatchery and panjues culture. However, there are several challenges facing the sector including low investment, lack of technical knowledge and skills, lack of intrastructure for drying and preservation of fish, lack of marketing linkage.

Sambalpur has a more positive employment trend compared to other districts. According to the data provided by the emplyment exchange, 26,743 candidates had registered with the exchange as on September 30, 2011 (since inception) of which around 65 percent were matriculates and intermediates. However, only 1,300 people have been successfully employed till date. Further, based on the employment data from DIC, we noted that close to 4,850 people (15 percent managerial, 33 percent supervisory, 26 percent skilled and 26 percent unskilled) were employed in 6 large and mega industries with Bhushan Power & Steel being the largest employer with 2,775 employees as on December 31, 2010.

Major industries in Sambalpur consist of sponge iron, aluminum, steel and powerincluding Bhushan Power & Steel, Hindalco, Aditya Aluminium, Rathee Steel, Viraj Steel & Energy and Shyam Metallica. The growth of large and mega industries has in turn fuelled the growth of anciliary and downstream industries related to aluminium and steel sector. Some of the potentially viable anciliary industries include caustic soda, chemicals, spare parts, cast iron, refractory bricks, fly ash bricks, grease, helmets etc. Some of the potential downstream industries include coal tar, fused alumina, conductors, casting, foil, utensil, furniture & fittings, steel utensils, fertilizer etc.

The handicraft and cottage industries have been traditionally flourishing in the district, providing employment opportunity for number of people. Some of the major crafts in the districy include brass and bell metal (Rengali block), Dhokra casting (Dhakauda Block), Terrcota (Dhankauda block) and Bamboo craft (Maneswar Block) and garments and textiles including sarees, handkerchiefs and bed linen. However, the growth of these traditional industries has been affected by the establishment of large scale industries, on account of better income generation capacity. Despite the high export potential of handicrafts and handloom, lack of credit facilities and market linkage have impacted the growth of the sector. The DIC provides skill upgradation and design development training to the people along with export oriented schemes and craft village program. However, these are not sufficient to push the growth in the sector to its potential.

During our discussion with the district officials and industry representatives, we noted that although employment opportunities exist in the industrial sector, the industries prefer to recruit from outside the district, due to better quality and availability of skilled people. Since the land

affected families have to be necessarily recruited, they generally get employment at the lowest levels on account of lack of skills. There is an opportunity to skill these people to improve their income earning capacity. Some of the high demand areas in which these people can be skilled include automobile engineers, pump mechanic, diesel mechanic, refrigeration and AC, motor mechanic, machinist, turner and welder. Further, since the district is dominated by aluminium, steel and power industries, there is shortage of metallurgists, geologists, mine managers, boiler attendant, chartered accountants and cost accountants.

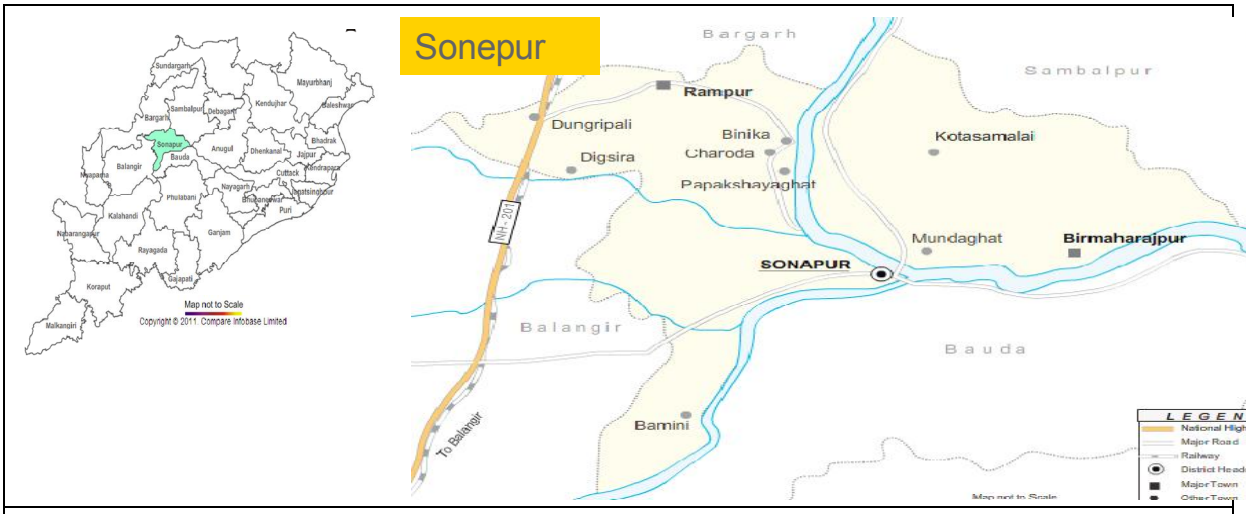
There has been significant progress in services sector in the district. The major sources of employment in the service sector include hotels and restaurants, tourism, banking, real estate and construction. Currently, there are 46 banks in Sambalpur town. The rapid development of Sambalpur district provides employment opportunity in the construction sector (retail, commercial and residential). Further, the proposed development of Jhasuguda-Sambalpur twin city by 2020 provides tremendous potential for growth of industries and hotels & restaurants in and around the area.

During our discussions with the representatives in the service sector, we were informed that there is scope for improving the quality of skilled people as well as for upskilling people. Further, there is a shortage of people with managerial and supervisory skills. In terms of the healthcare scenario, there are 11 Community Health Centers (CHC), 31 Primary Health Centers (PHC) and 167 sub centers. During the visit at District Hospital in Sambalpur, we were informed by the CDMO that 16 percent of the vacancies for doctors were lying vacant. The shortage of specialized doctors is most severe with 25 posts lying vacant. These include specialists in surgery, paedaitrics, eye, orthopedic, pathology, anaethsia etc. Other staff including nurses, lab technicians and bedside attendants was also not available within the District. Moreover, low salary and lack of basic living amenities are the main reasons for the high vacancy rate. There are 60 ANMs against a vacancy of 120 in the villages.Apart from the ANM Training Center in the District Hospital; the quality of nurses from private nursing colleges is not up to the mark. Further, there is a shortage in administrative staff such as district accounts manager.

- **Primary sector:** Skill Development required in the area of technical farming. There is shortage of technical staff in the area of horticulture and Pisciculture also. Further skill can be upgraded for value addition of forest products and horticultural products, setting up nursery, producing ayurvedic medicines from medicinal plants.
- **Secondary sector:** Need skill up gradation in the area of handicraft, garments and textile which includes brass and bell metal, Dhokra casting, Terrcota and Bamboo craft, sarees, handkerchiefs and bed linen. Skill development training can be provided for automobile mechanic, engineers, pump mechanic, diesel mechanic, refrigeration and AC, motor mechanic, machinist, turner and welder, metallurgists, geologists, mine managers, boiler attendant, chartered accountants and cost accountants in a demand.
- **Services Sector:** Skill manpower like Doctors, Nurse, ANM, bed side attendant, lab technician, housekeeping, chef, waiter, accountants, civil engineers, mason, plumber would be required in large scale

10.29 Sonepur

Sonepur district is spread over an area of 2337 Sq Km which forms approximately 1.5 percent of the total geographical area of the State. Sonepur district constitutes two subdivision viz. Sonepur and Birmaharajpur. Further, the district is divided into 6 blocks, 96 Gram Panchayats and 829 villages. Sonepur is surrounded by Bargarh districts in the north, Sambalpur in the north east, Bolangir in the west and Boudh in the south.



Map Courtesy: Maps of India

District Information	Sonepur	Odisha	Source
Area (in Sq Km)	2,337	155,707	Census 2011 provisional figures
% share of State Geographical area (Ranking)	1.5% (28)	100 (NA)	Census 2011 provisional figures
No of CD blocks	6	309	Census 2001
No of GPs	96	6,234	Census 2001
Total no of inhabited villages	829	47,529	Census 2001
Forest area as % of total geographic area	17.52%	37.66%	Census 2001

Figure 176: District Map of Sonepur

10.29.1 Demography

As per Census 2011 (Initial provisional data), Sonepur has a population of 6.52 lakhs of which males and females were 3.33 lakhs and 3.19 lakhs respectively. There is a change of 20.35 percent in the population compared to population as per 2001 census. In terms of population, the District constitutes 1.55 percent of the total population of the state. The initial provisional data (Census 2011) suggest a population density of 259 in 2011. With regards to sex ratio, the district fares poorly compared to other districts and the state average. The sex ratio for Sonepur as per 2011 provisional census figures is 959 females per 1000 males, which is lower than the 2001 census figures of 966 and much below the state average of 978 females per 1000 males. In terms of social composition of the population, SCs constitute approximately 23.62 percent of the total population while STs forms only 9.78 percent of the total population. Urban population is only around 7.4 percent.

As per 2001 census, the population in the working age group constituted about 58 percent of the total population. The population in the age group 0-4 years constitutes 9.66 percent and 5-14

years comprise 23.46 percent respectively. Work participation rate of the district is 43.74 percent. Out of the total workers 62.75 percent are main workers and 37.25 percent are marginal workers. With a Human Development Index (HDI) of 0.566 and Gender Development Index (GDI) of 0.543, the Sonepur ranks in the bottom half of districts in Odisha.

Population	Sonepur	Odisha	Source
Total population (in lakh)	6.52	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	3.33	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	3.19	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	1.55% (24)	**NA**	Census 2011 provisional figures
Density of population	279	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	20.35%	**13.97%**	Census 2011 provisional figures
Urban population %	7.38%	**14.99%**	Census 2001
SC population %	23.62%	**16.53**	Census 2001
ST population %	9.78%	**22.13**	Census 2001
Sex ratio	959	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	57.74%	**58.38%**	Census 2001
Worker participation rate	43.74%	**40.03%**	Census 2001
Share of primary sector to total workers	77.64%	**64**	Census 2001
Proportion of agriculture laborer in workforce	44.73%	**34.53**	Census 2001
Human Development Indicators	**Sonepur**	**Odisha**	**Source**
Human Development Index (HDI)- (Ranking)	0.566 (16)	**0.579**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.543 (11)	**0.546**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	12667 (26)	**561,969**	Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.422 (17)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 96: Socioeconomic indicators for Sonepur District

10.29.2 State of Education

Average literacy rate of Sonepur is at par with the State's average. The literacy rate in 2011 (as per provision census figures) is 74.42 percent compared to 62.84 percent in 2001. Gender wise male and female literacy is 84.78 percent and 63.63 percent respectively. For 2001 census, same figures stood at 78.94 and 46.17 showing a proportionate increase in literacy level for all the groups in Sonepur District over last 10 years.

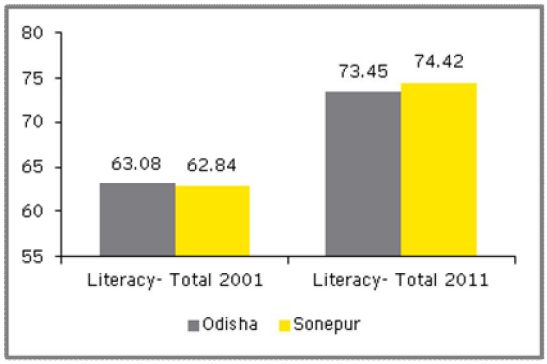


Figure 177: Literacy rate- Sonepur District

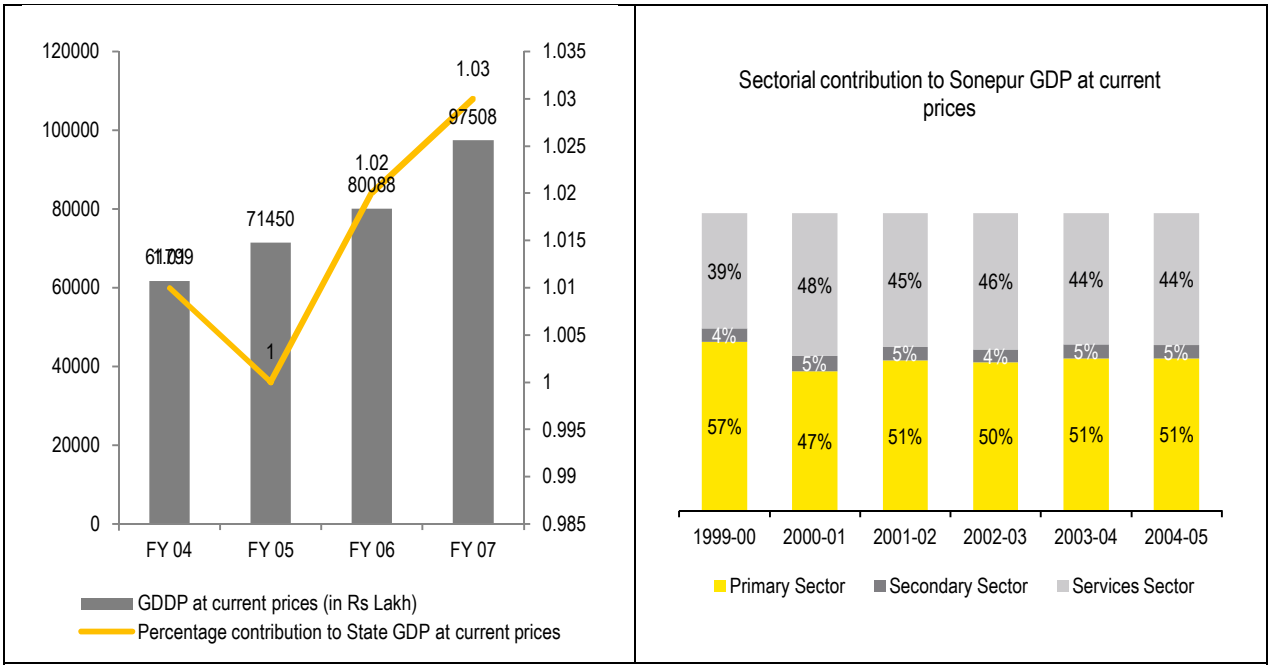
Notably, the literacy rate for females has risen by over 15 percent, which is commendable and very important for the progress of the District and State. Out of the total number of children in school going age, 4.82 percent children were out of school in 2010.

For higher Education there are 25 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce streams. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 3360, 432 and 160

respectively. At the degree level, there are 11 colleges in the district. Sonepur District does not have any technical or professional institution. There are 2 private ITCs offering courses in electrical and fitter trades.

10.29.3 Economic Profile

While the economy grew at an annual average rate of 6% for the period 2000-01 to 2006-07, the districts contribution to the State GDP remained low at 1.03%. The districts economy is primarily agrarian with more than half of its GDP contribution coming from the agriculture sector.



Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 178: Gross District Domestic Product (at current prices) of Sonepur District

Agriculture

People of Sonepur largely depend upon agriculture as their primary means of livelihood. About 78 percent of total main work force is either cultivators or agricultural laborers. Sonepur, in relative terms, is ranked 6th in the State in terms of number of agricultural laborers, as a percentage of total main working force.

As per Odisha agriculture statistics report 2008-09, 54 percent of the total geographical area or almost 128 thousand hectares of land was brought under cultivation in district. Paddy is the primary crop with a gross cropped area of 125.63 thousand hectares. Apart from paddy, other major crops include pulses, vegetables, oilseeds and fruit crops.

Performance of Sonepur district is commendable in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 4th with a per capita agricultural output of 2188. Food grains contribute highest to the total agricultural output of Sonepur with a value of 267.45 (2008-2009), followed by cereals (249.47) and other vegetables (190.24) (all figures in thousand metric tonnes). With an average landholding of 1.42 hectare, landholding pattern in the District is slightly misleading as most of the farmers have only marginal (less than a hectare) land holding.

Industries

Sonepur District is not developed in terms of industry, and this can be seen as there is no large scale investment in this district. The area is not suitable due to lack of resources, natural as well as in human capital. Sonepur does not have qualities as a district to be able to invite large scale and long terms investment. Therefore in terms of industry it largely depends on MSME.

In terms of attracting investments and setting up Micro and small scale industries, Sonepur is rakes in Rs. 960 Lakhs. The highest investment avenue in Sonepur has been the food & allied industry which draws in approximately Rs. 750 lakhs, followed by textiles at Rs. 90 Lakhs. Others include repairs and misc. manufacturing. The sources of investment can be seen in the chart below:

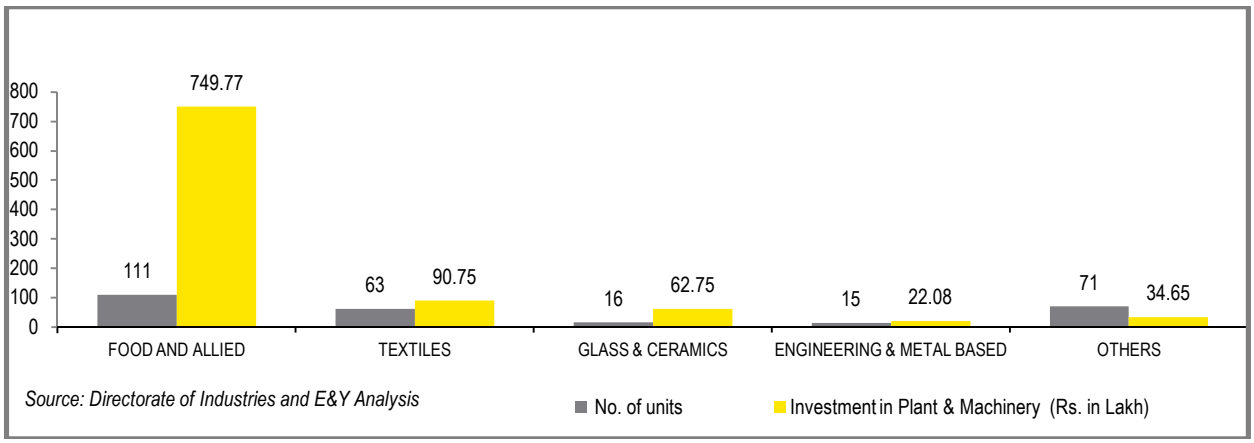
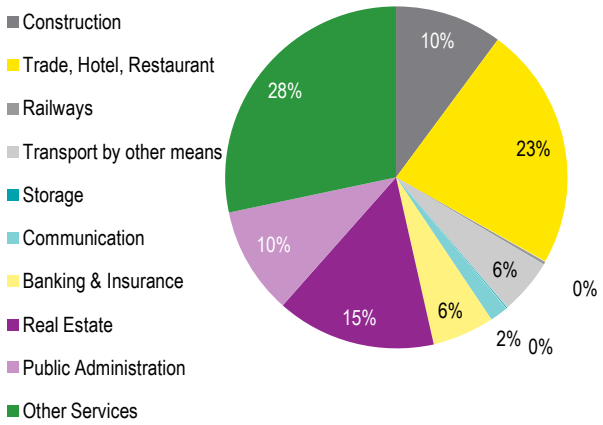


Figure 179: MSME Investments in Sonepur till 2010

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Sonepur GDP, the service sector remains the most important contributor constituting 51 percent of the district GDP.



Overall, other services contribute the maximum towards the services GDP at 28 percent. As depicted in the chart, trade, hotel and restaurant is the second largest contributor to the service sector (23 percent) followed by real estate (15 percent), and construction (10 percent) and public administration (10 percent) respectively. Transportation including railways is also major contributor of GDP of Sonepur economy at 6 percent.

Source: Planning Commission, Government of India

Figure 180: Composition of Service Sector- Sonepur 2004-05

10.29.4 Skill Gap Assessment for Sonapur District

Over the next 15 years, the total workforce demand for skilled jobs in Sonapur district is expected to grow from present levels of 1.4 lakh in 2011 to 2.5 lakhs in 2026. An increasing shift towards highly skilled and skilled jobs is expected during this 15 year time horizon. On a macroeconomic level, the maximum workforce demand in 2026 is expected to be accounted by the tertiary sector (84 percent), followed by primary (14 percent) and secondary sector (2 percent).

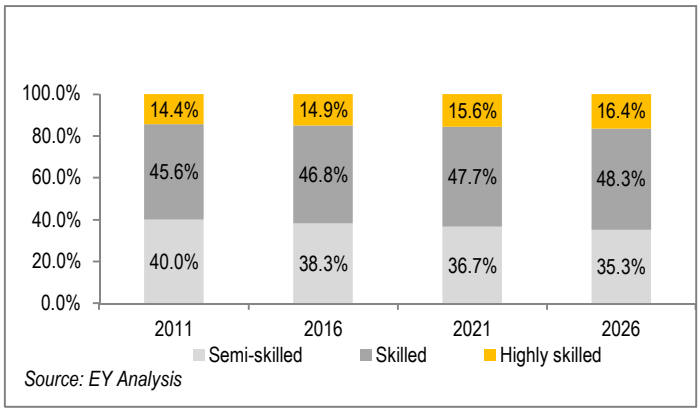


Figure 181: Proportion of demand for skilled jobs by skill categories- Sonepur District

Some of the prominent sectors from which the major demand for skilled workforce is expected in 2026 are: tourism, travel, hospitality & trade (0.5 lakh); agriculture (0.4 lakh); education & skill development (0.3 lakh); healthcare (0.3 lakh) and IT & ITeS (0.3 lakh).

The CMIEs Capex database and secondary research shows that majority of the capital projects announced in the district in the last two years is in the power sector.

	2011	2016	2021	2026	% of total demand for skilled jobs in 2026
Tourism, travel, hospitality & trade					
Semi-skilled	13,655	17,317	21,962	27,852	
Skilled	9,049	11,475	14,553	18,456	
Highly skilled	1,481	1,878	2,381	3,020	
Total demand for skilled jobs	24,185	30,670	38,896	49,327	19
Agriculture					
Semi-skilled	19,193	18,858	18,529	18,205	
Skilled	12,796	12,572	12,352	12,137	
Highly skilled	6,398	6,286	6,176	6,068	
Total demand for skilled jobs	38,387	37,716	37,057	36,410	14
All sectors:					
Semi-skilled	56,346	64,644	75,470	89,649	
Skilled	64,186	78,833	97,955	122,936	
Highly skilled	20,330	25,178	32,013	41,692	
Total demand for skilled jobs	140,863	168,656	205,438	254,278	100

Source: E&Y Analysis

Table 97: Skill-wise demand for sectors where high demand is foreseen - Sonepur District

On the supply side, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period. As the district experiences growth, an increasing shift is expected towards jobs requiring enhanced skill sets.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for skilled manpower (highly skilled, skilled and semi-skilled jobs) is expected to widen by more than 1 lakh during the period 2011-2026.

The major proportion of this widening gap is expected to be of skilled manpower (58 percent), followed by semi-skilled jobs (21 percent) and skilled jobs (21 percent).

Within **highly skilled** jobs, a higher requirement is foreseen for banking, financial services & insurance (56 percent) and IT & ITes (20 percent) sectors.

The **skilled** workers' proportion in the incremental gap is expected to surge in case of education & skill development (27 percent), healthcare (26 percent); IT & ITes (16 percent); and tourism, travel, hospitality & trade (16 percent) industries.

The **semi-skilled workers** belonging to the tourism, travel, hospitality & trade (42 percent); media & entertainment (22 percent); banking, financial services & insurance (17 percent) sectors would form a major part of this incremental gap in 2026.

By sector, the tourism, travel, hospitality & trade is expected to account for 20 percent of this incremental demand supply gap. The incremental gap in this sector is expected to come from skilled (47 percent) and semi-skilled workers (46 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(514)	(541)	(559)	(1,613)
Auto & Auto Components	0	0	1	1
Chemical & Pharmaceuticals	4	5	6	15
Construction materials & building hardware	121	146	172	439
Electronics & IT Hardware	2	2	2	6
Food Processing	12	12	12	36
Furniture & Furnishings	8	9	11	28
Leather & Leather Goods	0	0	0	0
Gems & Jewellery	0	0	0	0
Organised Retail	0	0	0	0
Textile	58	70	81	209
Unorganised sector	4	5	5	14
Banking, Financial Services & Insurance	3,757	5,876	9,117	18,750
Building, Construction & Real Estate Services	150	179	205	534

Sector	2012-16	2017-21	2022-26	2012-26
Education & Skill Development	4,330	5,637	7,339	17,307
Healthcare	4,169	5,477	7,180	16,825
IT & ITES industry	3,928	5,236	6,940	16,103
Media & Entertainment	2,952	4,009	5,345	12,306
Tourism, travel, hospitality & trade	4,783	6,570	8,828	20,181
Transportation, logistics, warehousing & packaging	172	233	297	702
Total	23,937	32,926	44,984	101,846

Source: E&Y Analysis

Table 98: Total incremental demand supply gap for skilled jobs by sectors- Sonepur District

The incremental demand supply gap is also expected to widen for education & skill development (17 percent). The incremental human resource gap in this sector largely primarily comprises of need for skilled human resource (90 percent).

10.29.5 Development potential and Stakeholder perception

Sonepur, also known as Subarnapur, is one of the more backward districts of the state with almost 80 percent people falling in the BPL category. Area wise, it is one of the smallest districts in the state and does not have good rail and road connectivity into it. It was noted that there is a very high level of migration of unskilled and semi-skilled workers across the district. Workers usually migrate after the harvesting season (October) to work in brick kilns or as domestic/ construction workers. As mentioned earlier, Sonepur is largely an agrarian district, with the handlooms and handicraft sector being the other single largest employer in the district. It was a part of undivided Sambhalpur until 1993 and is a vibrant and highly productive hub of Sambhalpuri handloom and handicrafts works. Despite the dependence on agriculture, irrigation is a challenge given the fact that of 6 blocks in the district, only 2 are irrigated as they come in the *Hirakud* Dam Command Area.

With respect to the primary sector, Sonepur is a paddy surplus district and paddy is grown both for sustenance and as a cash crop. There are about 23 rice mills in the district, however there is seen a potential in adding value to the raw rice sold. Food processing can be developed in a big way through value addition for making products like chiwda, puffed rice etc. Other than paddy, they also grow vegetables, pulses and sugarcane. The district holds immense potential for 'betel wine' cultivation which can be tapped through impetus on training and marketing. Most agricultural produce is bought by the government and it is seen that if marketing capacities of farmers are developed to tap private buyers, it will give their profit margins a tremendous boost. Since decreasing soil fertility poses a challenge, through increased mechanization to improve productivity and quality of produce. It was mentioned that the new generation in the families involved in agriculture, are not very keen on taking up agriculture themselves.

Sericulture was noted to have potential for growth given the fact that almost a Rs. 2 crore business in silk was done in the district- with the silk being acquired from outside the district. Adequate financing and training in sericulture could help the handloom sector to be more self-sustained and profitable.

Sonepur has a lot of potential in pisciculture given the high return on investment wherein there is a chance to earn Rs. 1- 1.5 lakhs on an investment of Rs. 20000. About 5000 people are engaged in capturing fishes and 1000 in their culture. However, because of drought in the recent years, the number of people engaged in this sector has gone significantly down. A major issue is that there are no insurance facilities in this sector. Also, because of poor repayment, banks are reluctant to give loans. It was noted that availability of resource personnel to impart training is a problem. Also, exposure visits to complement trainings given were seen necessary. Currently training activities in this sector are undertaken only by the government. There is a need to involve private players in training wherein the government would act only as a facilitator.

In the handloom sector, Sonepur is the hub for the *Sambhalpuri Sarees* production. It houses highly-skilled craftsmen engaging in *saree* weaving, terracotta crafts and bamboo making among others. Though admittedly, there is little scope of skill development in the in terms of artistry of the craftsmen, market linkages, and infrastructure. However, even though there are established routes for the marketing and selling of the handicraft products, it is considered the need of the hour that capacities of the artisans be developed towards innovative methods of marketing. Even though the artisans are highly skilled in traditional designs and weaving, the expanding markets increasingly demand innovations in designs. Thus it is seen as the need of the hour to upgrade designing skills and develop design technology in the sector. The District Supply and Marketing Society has employed a CAD (Computer-aided Design) consultant to assist the artisans in the CFC with new designs. There is seen a need to introduce new technologies in handicraft production and thus developing the skills of artisans in this respect. A recent example of this, was the introduction of Jackquard Technology in the handloom sector. With the introduction of the technology, the DSMS also trained artisans in it.

Sonepur has tremendous potential to develop its tourism sector, if given the adequate impetus. Popularly known as the 'Temple City', has over a 100 temples of relevance to the *Hindu* religion. Its positioning at the confluence of the *Mahanadi* and the *Tel Nadi*, makes it an ideal spot to set up water sports, boating and scenic resorts. Crocodiles in the rivers and gorges, make it a potential site for development of eco-tourism. The district was noted to have a cultural appeal with many regional festivals being celebrated with great pomp and show. Poor connectivity of Sonepur from Bhubaneshwar (no air connectivity, few rail options and poor road infrastructure) are a significant impediment for the growth of the Tourism Sector in the district.

There are no major industries in the district which may be a reason for the high migration. Also, in the interaction with students, it was noted that youth have aspirations to take up careers in the field of banking, civil services, textile engineering, defence, and medical. However, the lack of skilling and educational facilities in the district present a glaring gap between the aspirations of the youth and the choices they have to fulfill the same. It was significant to note that for preparation for entrance examinations, students had to go to Bhubaneshwar, Sambhalpur or Rourkela. The students expressed that given the high costs of living away from home, the decision to pursue their career aspiration takes a back seat. Those who can afford it, prefer to go out of Sonepur due to lack of facilities there, but expressed that if appropriate opportunities are given they would rather stay back in Sonepur.

The interest among students for joining ITI is also limited because of the lack of god employment opportunities after completion of the course. Vocational training options are very limited since there is only one NCVT certified ITC in the district and one other. Both ITCs offer training only in the

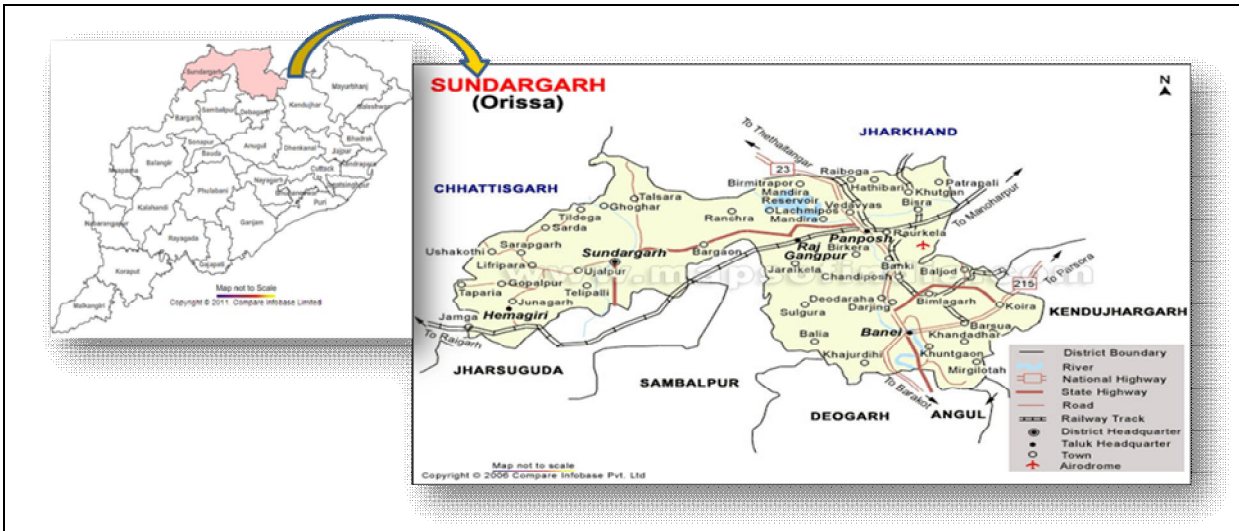
'electrical' trade. There is demand for trades like fitters, drivers and skills of cutting and sewing but no training option. Also, there is need for a good computer training institute in the district.

In the health sector, it was noted that there were vacancies in the service provision set-up at all- the district, block and village levels. At the DHS level, against 34 nos. of sanctioned posts only 21 medical officers are filled. A particular disadvantage was felt in the lack of staff nurses and ANMs. The authorities stated that it was difficult to find the right candidate given the state guidelines for the eligibility criteria for these positions. It was imperative for candidates to have a qualification from a government institution and if not, registration from the Nursing Council was required. It was noted that there is no medical college in the district and it was difficult for students from private institutions to register themselves with the Nursing Council. Therefore, it was difficult to find the right candidates to fill positions. Lack of accommodation options for health employees was also regarded a reason for their lack of applying for the vacant positions.

- **Primary Sector:** Skill development for food processing and commercial agriculture. Paddy processing and betel wine are the key potential sectors
- **Secondary Sector:** Known for Sambalpuri Sarees- Sericulture is an important for skill development along with advanced design and marketing skills for textile and handloom products
- **Services Sector**: Potentil for growing the tourism sector- requires skills upgradation in tourism value chain along with key services like repairing services, healthcare,banking etc. Aspirations of the youth to be met through more number of coaching institutes for civil services and preparation for competitive examinations.

10.30 Sundargadh

The district lies in the north western portion of the State. It is bound on the north by Jharkhand State, on the south by Jharsuguda, Sambalpur and Deogarh districts, on east and north-east by Keonjhar and west Singhbhum districts of Odisha and Jharkhand respectively, and on the west and north-west Raigarh district of Chhattisgarh. The district headquarters is located at Sundargadh and Rourkela is the industrial town of the district. Geographically the district is not a compact unit and consists of inaccessible forests, extensive river valleys and mountainous terrain. Broadly speaking, it is an undulating tableland of different elevations broken up by rugged hill ranges and cut off by torrential hill streams and the rivers Ib and Brahmani. Spread over an area of over 9712 Sq Km and constituting approximately 6.24 percent of the total geographical area of the State, Sundargadh is the second largest district of Odisha in terms of geographical spread. Administratively, the district is divided into 3 subdivisions, 17 blocks, 262 Gram Panchayats and 1723 villages.



Map Courtesy: Maps of India

District Information	Sundargadh	Odisha	Source
Area (in Sq Km)	9,712	**155,707**	Census 2011 provisional figures
% share of State Geographical area (Ranking)	6.24 (2)	**100 (NA)**	Census 2011 provisional figures
No of CD blocks	17	**309**	Census 2001
No of GPs	262		Census 2001
Total no of inhabited villages	1,723		Census 2001
Forest area as % of total geographic area	51.08	**37.66**	Census 2001

Figure 182: District Map of Sundargadh

10.30.1 Demography

The population of Sundargadh stood at 20.81 lakhs in 2011 as per Census 2011 (Initial provisional data). Male and female population was 10.56 lakhs and 10.25 lakhs respectively. The change in the population compared to population as per 2001 census for Sundargadh is 13.66 percent closely resembles the state's average (13.97 percent). The district constitutes 4.96 percent of the total population of the state and is 6th highest in terms of population. The initial provisional data (Census 2011) suggest a population density of 214 in 2011 much below the state average. High concentration of STs (50 percent) and more than 50 percent forest area may have contributed to lower density of population in the district. In terms of sex ratio, the district figure of 971 is

comparable with the state's average of 978 females per 1000 males.

The district has one of the highest concentrations of urban population (30.24 percent) residing in 9 towns and 4 municipalities including Rourkela, Birmitrapur, Rajgangpur and Sundargadh. As per 2001 census, the population in the working age group constituted 52.50 percent of the total population. Work participation rate of the district is 40.36 percent. Out of the total workers 64.90 percent are main workers and 35.10 percent are marginal workers.

Sundargadh ranks well in the State in terms of human development indicators. It is ranked 2nd in terms of GDI and 4th in terms of overall HDI. The demographic and human development indicators of the district and its comparison with the State is provided in the table below

Population	Sundargadh		Source
Total population (in lakh)	20.81	**419.47**	Census 2011 provisional figures
Total population (Male) (in lakh)	10.56	**212.01**	Census 2011 provisional figures
Total population (female) (in lakh)	10.25	**207.45**	Census 2011 provisional figures
District Share in State's population (Ranking)	4.96% (6)	**NA**	Census 2011 provisional figures
Density of population	214	**269**	Census 2011 provisional figures
Decadal growth of population (2001-2011)	13.66%	**13.97%**	Census 2011 provisional figures
Urban population %	30.24%	**11.51**	Census 2001
SC population %	8.62%	**16.53**	Census 2001
ST population %	50.19%	**22.13**	Census 2001
Sex ratio	971	**978**	Census 2011 provisional figures
Population in working age group (15-59) as % to total population	52.50%	**47.85**	Census 2001
Worker participation rate	40.36%		Census 2001
Share of primary sector to total workers	59%	**64**	Census 2001
Proportion of agriculture laborer in workforce	29.77%	**34.53**	Census 2001
Human Development Indicators	**Sundargadh**		**Source**
Human Development Index (HDI)- (Ranking)	0.683 (4)	**NA**	State Human Development Report 2004
Gender Development Index (GDI) - (Ranking)	0.659 (2)	**NA**	State Human Development Report 2004
Per capita income (DDP) in 2004-05 at current prices (Ranking)	24581 (5)		Directorate of Economics and Statistics, Govt. of Odisha
Food security outcome index (Ranking)	0.418 (18)	**NA**	Food Security Atlas of Rural Odisha, UN WFP, 2008

Table 99: Socioeconomic indicators for Sundargadh

10.30.2 State of Education

While the literacy figures of Sundargadh district is slightly better than that of the State as a whole, the figures also points out to wide disparity in literacy in urban and tribal dominated rural areas. Average literacy rate of Sundargadh in 2011 (as per provisional census figures) is 74.13 percent compared to 64.86 percent in 2001. Breakup of literacy figures as per census 2001 shows that while the total average literacy

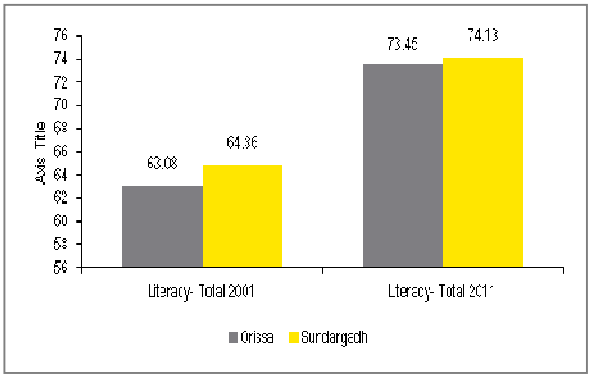


Figure 183: Literacy rates- Sundargadh District

level for the district was 64.86 percent, in the cities of Rourkela and Sundargadh it was 84.6 percent and 83.9 percent respectively. On the other hand literacy in some rural tribal dominated

blocks like Bonaigarh, Koida, Lahunipara and Nuagaon was below 50 percent. There is a high divergence in male and female literacy levels. In 2001 while male literacy was 75.34 percent, female literacy was just 53.88 percent. Similarly in 2011, male literacy was 82.13 percent while the female literacy was just 65.93 percent.

As per OPEPA, there are more than 4600 schools in Sundargadh District. Out of the total number of children in school going age, 3.81 percent children were out of school in 2009.

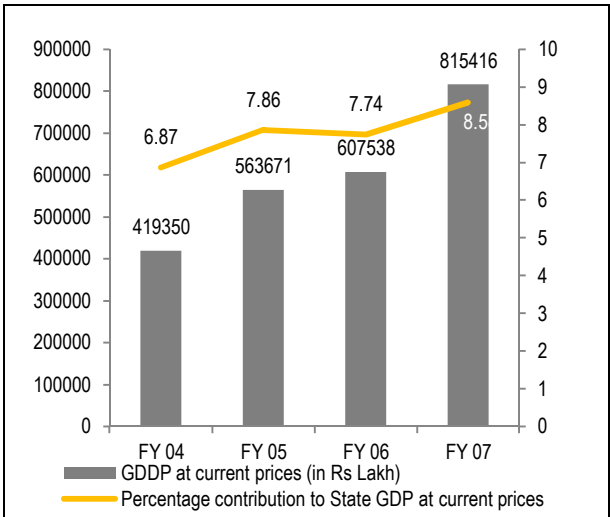
For higher education there are 62 junior colleges and higher secondary schools (10+2) offering courses in Arts, Sciences and Commerce stream. As per the Department of Higher Education (DHE), the total sanctioned strengths in each of these streams were 8274, 5226 and 2240 respectively. At the degree level, there are 37 colleges.

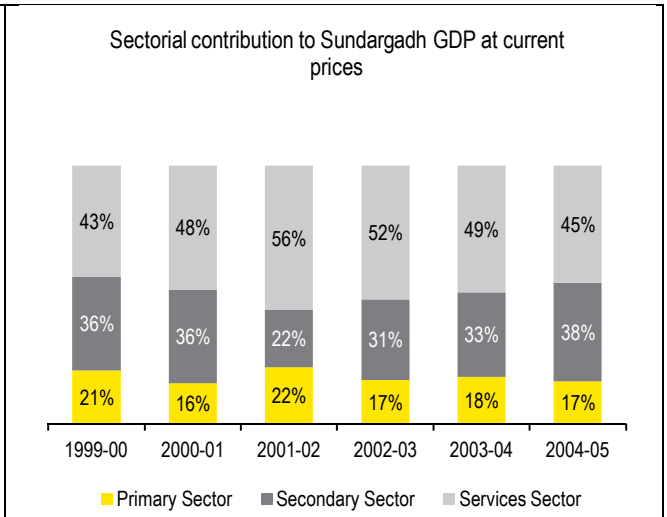
In terms of technical education, the district has a good concentration of institution mainly concentrated in Rourkela. National Institute of technology, a regional engineering college and one of the prestigious colleges in the eastern part of the country is located in Rourkela. In addition there are three other private engineering (degree) colleges. Together, the engineering colleges offer various courses and have a combined intake capacity of approximately 1095 students per year. Major courses offered include, civil (environmental science) engineering, computer engineering and electrical & electronics engineering. In addition to engineering degree colleges, there is a private polytechnic institute offering engineering and other diploma courses. Total intake capacity in polytechnic institute is approximately 420 students per year. Major courses are electrical, mechanical and civil among other courses. Sundargadh has one pharmacy college that has the capacity to intake 60 students. There are no nursing colleges or homeopathy colleges in the district.

For vocational training, the Rourkela ITI is one of largest Government ITIs in the State covering 16 trades that includes building maintenance, fitter, electrician and COPA and IT ESM. There are 37 private industrial training centers offering 21 courses. The most important ones include fitter, electrician and welder. None of the ITIs provides training in skills related to the primary sector. Even though there is a good number of ITIs in the district, as per the figures compiled by IPICOL, 8 blocks of the district does not have any vocational institutions.

10.30.3 Economic Profile

In terms of economic growth, Sundargadh is among the leading districts of Odisha. Currently the district is ranked 3rd in the State with an average annual growth rate of 10.2 percent for the period 2000-01 to 2006-07. The district is also the highest contributor to the State GDP in 2006-07 contributing 8.58 percent of the GDP. While services sector is the major contributor to the district GDP, the contribution of industry sector shows a steady increase and is an integral part of the District economy. The Gross district domestic product of Sundargadh at current prices (2004-07) is shown below:





Source: Economic Survey, Odisha: 2010-11, Government of Odisha and Directorate of Economics & Statistics

Figure 184: Gross District Domestic Product (at current prices) of Sundargadh

Agriculture

About 59 percent of the total workforce in Sundergarh is involced in agriculture. 29.77 percent of the workforce is comprised of agricultural labourers. Even though services and industry sector contributes most to the district growth, in terms of livelihood, almost 60 percent depend on agriculture. As shared by the district level officials, out of 3.13 lakhs hectares of cultivated land, 52 percent is upland, 30 percent is medium land and 18 percent is low land. As paddy is the main crop, 75 percent of land is covered with paddy during *Kharif* even in the up land. Due to limited irrigation facilities, 24 percent land is irrigated during *Kharif* and 8 percent of land is irrigated during *Rabi*.

Development of Agriculture has lagged behind due to several constraints, such as- traditional method of cultivation, inadequate capital formation and low investment, inadequate irrigation facilities and uneconomic size of holdings. Apart from food grains, other major crops include pulses (*mung, arhar* etc.), vegetables (potato, onions etc), oilseeds and fruit crops. Performance of Sundargadh district is poor in terms of per capita agricultural output. As per the Food Security Atlas of Odisha published by World Food Programme, the District is ranked 26th with a per capita agricultural output of 1120.

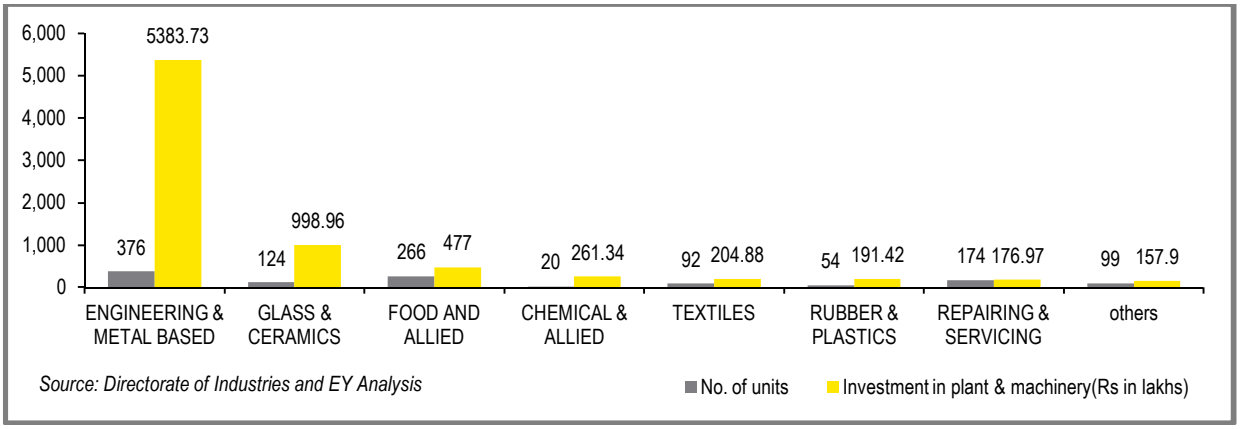
Vegetables contribute highest to the total agricultural output of Sundargadh with a value of 369.42 (2008-2009), followed by food grains (345.56) and other cereals with (315.73) (all figures in thousand metric tonnes). With an average landholding of 1.49 hectare, almost 47 percent of the farmers have more than a hectare of land holding.

Industries

Sundargadh district occupies a prominent position in the mineral map of the state. The important minerals available in the district are iron-ore, limestone, manganese, dolomite, and fire-clay. Besides a few other minerals like mica, bauxite, lead copper, and zinc are also found. The District is well connected with other important cities and industrial centers and ports through a good network of national and state highways. The District is rich in iron-ore, limestone, manganese, dolomite, and fire-clay. Besides a few other minerals like mica, bauxite, lead copper, and zinc are also found. The district is more synonymous with the industrial township of *Rourkela*, famous for the Rourkela Steel

Industry. In addition to *Rourkela*, there are other large scale industries in *Rajgangpur*- an important town situated between *Rourkela* and Sundargadh. It has a cement plant (OCL India Limited) and other small industries and *Kansbahal* famous for L&T's fabrication plant. As per the DIC there are 9 large scale industries already operating in the district in addition to the Steel Plant. Three large scale industries are in pipeline and there are 6 other medium scale industries. In addition to these two major power projects are proposed to be set up in *Darlipali* (NTPC) and *Bhedabahal*. As far as investments into large and medium scale industries are concerned, Sundargadh is currently ranked 3rd in the State, with an investment of Rs. 108.37 billion by 2010 and which constitute 11.7 percent of the total investment in large and medium scale industries.

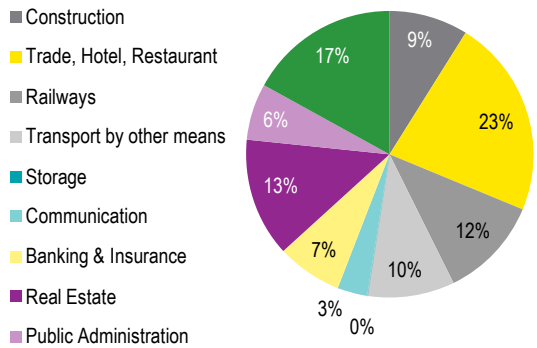
In terms of attracting investments and setting up micro and small scale industries, Sundargadh is ranked 6th in the State. MSME investment in Sundargadh was 3.84 percent of the total investments made in the State till March 2010.



Engineering and metal based products have the maximum investment of Rs. 5.38 billion while Others which include miscellaneous manufacturing , paper & paper product , electrical & electronics , forest & wood based , livestock & leather, has an investment of Rs. 0.157 billion.

Services

The composition of service sector at current prices for year 2004-05 is shown below. In terms of contribution to Sundargadh GDP, the service sector remains the most important contributor constituting 45 percent of the district GDP.



As depicted in the chart, trade, hotel and restaurant is the leading contributor to the service sector (22 percent) followed by other services (21 percent), real estate (13 percent).

Source: Planning Commission, Government of India

Figure 185: Composition of Service Sector- Sundargadh 2004-05

10.30.4 Skill Gap Assessment for Sundargadh District

The total workforce demand for skilled jobs in Sundargarh district is expected to grow from the present levels of 3.8 lakhs in 2011 to 6.5 lakhs in 2026. The total workforce demand is expected to be dominated by the tertiary sector (64 percent), followed by the secondary (25 percent) and primary sector (11 percent).

The district's workforce demand for skilled jobs in 2026 is primarily expected to come from sectors such as construction materials and building hardware –including metals (1.4 lakh); tourism, travel, hospitality and trade (1.1 lakh); banking, financial services and insurance (0.8 lakh); and agriculture (0.7 lakh).

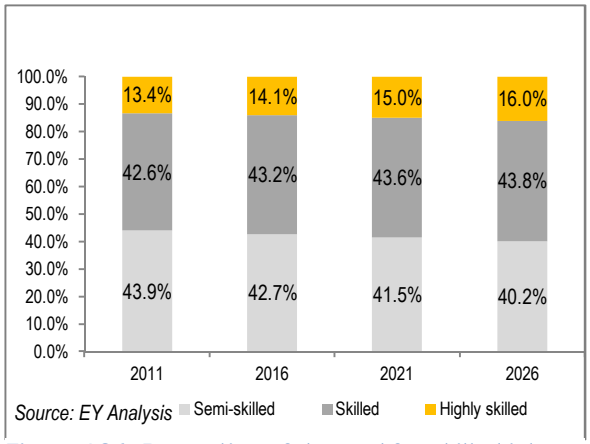


Figure 186: Proportion of demand for skilled jobs by skill categories- Sundargadh District

The CMIE Capex database and secondary research indicates relatively higher number of capital projects/MoUs being announced for cement and iron industries during the past two years. As a result, the sector and labor demand for construction materials & building hardware has been assumed to grow at a higher rate over the next 15 years.

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Construction materials & building hardware (including metals):					
Semi-skilled	38,090	43,344	49,322	56,126	
Skilled	47,856	54,457	61,969	70,517	
Highly skilled	8,790	10,002	11,382	12,952	
Total demand for skilled jobs	94,736	107,803	122,673	139,595	22
Tourism, travel, hospitality & trade:					
Semi-skilled	29,611	37,553	47,624	60,396	
Skilled	19,622	24,884	31,558	40,022	
Highly skilled	3,211	4,072	5,164	6,549	
Total demand for skilled jobs	52,444	66,509	84,346	106,967	17
Banking, Financial Services & Insurance:					
Semi-skilled	6,316	9,560	14,470	21,903	
Skilled	3,626	5,488	8,307	12,574	
Highly skilled	13,450	20,359	30,816	46,645	
Total demand for skilled jobs	23,392	35,407	53,593	81,122	13
All sectors:					

	2011	2016	2021	2026	percent of total demand for skilled jobs in 2026
Semi-skilled	167,697	191,667	221,888	260,306	
Skilled	162,651	193,700	233,226	283,762	
Highly skilled	51,247	63,229	80,076	103,963	
Total demand for skilled jobs	381,595	448,596	535,190	648,031	100

Source: E&Y Analysis

Table 100: Skill-wise demand for sectors where high demand is foreseen- Sundargadh District

On the supply aspect, the district's incremental supply for these skilled jobs has been taken as the intake of students in these various skill-imbibing institutes (diploma courses, graduation, post-graduation, etc. for different streams). The aggregate supply for these skills (assumed to grow at different rates over the next 15 years) has been used to arrive at incremental demand-supply gap for this 15 year period.

Incremental Demand Supply Gap

Assuming that the current levels of available educational infrastructure and utilization remain the same, the demand-supply gap for highly skilled and skilled is expected to widen by more than 1.4 lakh during the period 2011-2026.

While the district is foreseen to have abundant incremental supply for **semi-skilled labor**; the district is likely to require an additional ~1,00,000 skilled and 51,000 highly skilled jobs during the next 15 years.

Sectors like Banking, Financial Services & Insurance (63 percent); IT & ITeS (12 percent) and Construction Materials & Building Hardware (8 percent) are likely to create incremental requirement for **highly skilled** jobs.

A significant proportion of incremental requirement for **skilled labor** would be required in sectors such as education & skill development (19 percent), healthcare (19 percent) and construction materials & building hardware (19 percent).

Sector	2012-16	2017-21	2022-26	2012-26
Agriculture	(248)	(463)	(631)	(1,342)
Auto & Auto Components	0	8	16	24
Chemical & Pharmaceuticals	68	152	243	463
Construction materials & building hardware	3,900	6,612	9,538	20,050
Electronics & IT Hardware	20	39	58	117
Food Processing	135	146	158	439
Furniture & Furnishings	2	35	67	104
Leather & Leather Goods	3	3	4	10
Gems & Jewellery	-	-	-	-
Organised Retail	-	-	-	-
Textile	(39)	16	66	43
Unorganised sector	9	32	54	95
Banking, Financial Services & Insurance	6,584	11,710	19,861	38,155
Building, Construction & Real Estate Services	(77)	1	68	(8)

Sector	2012-16	2017-21	2022-26	2012-26
Education & Skill Development	5,138	7,054	9,563	21,755
Healthcare	4,427	6,318	8,806	19,551
IT & ITES industry	3,716	5,585	8,060	17,361
Media & Entertainment	1,039	2,552	4,513	8,104
Tourism, travel, hospitality & trade	1,312	5,022	9,845	16,179
Transportation, logistics, warehousing & packaging	(1,233)	(477)	305	(1,405)
Total	24,753	44,345	70,594	139,692

Source: E&Y Analysis

Table 101: Total incremental demand supply gap for skilled jobs by sectors- Sundargadh District

10.30.5 Development potential and Stakeholder perception

Sundargarh is well known for the prestigious Rourkela which is a national pride. The town is well developed and endowed with the modern amenities, educational institutions at all levels. Rourkela block also has the highest literacy level, almost double the figure of some other blocks like Bonaigarh and Koida. The district has a large tribal population; almost half the population is tribal. Development across the district is not uniform. It is heavily skewed towards urban areas especially Rourkela and Sundargarh blocks. The entire district does not have access to electricity. About 15 percent population still does not have access to electricity. Accessibility was cited as an issue by a number of respondents. All these factors indicate that there in inequality across different sections of population.

A large section of population depends on agriculture. Progress in the agriculture sector has not been as rapid as in the case of industry. Most of the farming is still rainfed. Very limited area is covered under the irrigation system. Paddy is the main crop although maize, cotton is also finding popularity among farmers. These crops are replacing the traditional crops like mandia, kushla, thus affecting their dietary habits. There is a lot of potential to develop horticulture and floriculture in the district. While some programmes are promoting horticulture, the same cannot be said about floriculture. It was shared that flowers are still being sourced from West Bengal and Andhra Pradesh although there is a lot of demand for flowers. The centrally sponsored National Horticulture Mission, which has been operational since 2005-06, has helped in promoting the growth of fruits like mango, banana, litchi and spices like ginger and turmeric, the benefits of which will become visible in the next few years. This time could be utilized to put the enabling factors in place – infrastructure for imparting training, creating awareness among the youth to utilize this potential gainfully. *Krishi Vigyan Kendras* seem well positioned to impart trainings. Currently they are taking up about 70-100 training programmes in a year. Their capacity would need to be enhanced to expand their activities and undertake additional tasks so that people especially the youth are encouraged to acquire value addition skills for agro products.

The educated youth, it was widely shared, is not keen to take up entrepreneurial activities related to agriculture or horticulture. There could be different reasons for the same – one lack of knowledge and relevant skills to do so, lack of access to finance. Although there are a number of opportunities available through APICOL, there is hesitation to utilize these. It may be helpful if they could get some support to overcome these barriers.

It was shared that there has been growth in the large scale industries in the district, mostly in the area of iron and steel and power. There is only one spinning mill that provides employment to 400 odd individuals. There is reluctance on their part to expand since they need to source cotton from Maharashtra. They also have erratic supply of electricity which affects productivity. Development in towns like Rourkela, offer a number of opportunities in the service sector. Some of these services which are in demand are jobs in hotels and restaurants, garages for automobile repair, retail outlets. However, despite the impetus provided, there are a limited number of individuals who can find opportunities for employment/self employment.

The infrastructure for providing vocational training is inadequate, a concern shared by most respondents. IL&FS has been engaged by the state government to impart training in stitching to girls. The quality of training is very good and helps the trained workers to get jobs. Due to lack of employment opportunities in Odisha, most of them get jobs in other states like Karnataka (Bangalore) and Kerala where they get a salary of about 6000 p.m. and residential facilities. This amount is quite attractive for them, but many girls give up their jobs once they get married. There are limited opportunities for employment within Odisha.

- **Primary Sector:** Skills for undertaking value addition for agro and forest based produces
- **Secondary Sector:**
- **Services Sector:** Tourism and hospitality sector related trainings; automobile repair, drivers, mason, healthcare and education

Engagement Team

Core team

1. Parul Soni,
2. Dr. Niraj Seth
3. Vijay Ganapathy
4. Ajay Pandey
5. Deepak Sachdeva

Support team

6. Abha Saxena
7. Bijon Keshwani
8. Gaurav Bhargava
9. Niranjan Pai
10. Prabodh Mohanty
11. Shveta Bhardwaj
12. Shradha Pathya
13. Sunil Sharma
14. Tanisha Manav
15. Vipul Nanda

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