N·S·D·C
National
Skill Development
Corporation

District wise skill gap study for the State of Kerala (2012-17, 2017-22)

Disclaimer

1. NSDC engaged Deloitte (Deloitte Touche Tohmatsu India Private Limited) to prepare this report, which is based on independent research and analysis done by Deloitte. This report is not based or derived from any other report or research paper. Any similarity with any other paper may purely be a co-incidence.
2.
3. For purposes of the exercise, Deloitte Touche Tohmatsu India Pvt Ltd has used information obtained from various enquiries, primary interactions and secondary information sources, which we believe to be reliable and our assessment is dependent on such information being complete and accurate in all material respects. We do not accept any responsibility or liability for any losses occasioned to any party as a result of our reliance on such information.
4. Deloitte Touche Tohmatsu India Private Limited makes no representation or warranty as to the accuracy or completeness of the information used within this assessment, including any estimates, and shall have no liability for any representations (expressed or implied) contained in, or for any omission from, this assessment.
5. This report is for information purposes only. While due care has been taken during the compilation of this report to ensure that the information is accurate to the best of Deloitte's and NSDC's knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice. Deloitte and NSDC neither recommend nor endorse any specific products or services that may have been mentioned in this report and nor do they assume any liability or responsibility for the outcome of decisions taken as a result of any reliance placed in this report.
6. Neither Deloitte nor NSDC shall be liable for any direct or indirect damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from any portion of this report.

Acknowledgements

We are grateful to the Government of Kerala and its various departments for their contribution towards the successful completion of the study.

We would like to extend our gratitude to the KASE, CII and SB Global for their support and inputs during the course of the study.

We would also like to thank all industry partners, training partners for their active participation and contribution towards the study.

Table of Contents

List of Tables

List of Figures

1 Background and Scope of Work

1.1 Background

In order to achieve the target of skilling a huge workforce in the country, the Government of India has formulated the National Skill Development Policy. The policy aims to increase the productivity of India's workforce and enhance India's competitiveness in the global market by empowering people through improved skills, qualifications and access to employment and to attract investment in the skill development sector in India.

Further, the policy envisages creation of a separate regulatory authority under the chairmanship of the Prime Minister for policy formulation and strategic review of the skill development sector in India. This led to the creation of three tier structure consisting of:

- National Council on Skill Development (NCSD)
- National Skill Development Coordination Board (NSDCB)
- National Skill Development Corporation (NSDC)

NSDC, a not-for-profit organization set up by the Ministry of Finance, under Section 25 of the Indian Companies Act, is a first of its kind Public Private Partnership (PPP) in India to fulfil the growing need in India for skilled manpower across sectors and narrow the existing gap between the demand and supply of skills.

NSDC acts as a catalyst for skill development by providing funding to enterprises, companies and organizations that provide skill training. In order to achieve its objective of skilling/ up-skilling 150 million people in India by 2022, NSDC has been working on the following three key mandates:

- Enable: (a) Facilitate creation of support systems required for skill development
  (b) Develop a research base
- Create: Proactively catalyze creation of large, quality vocational training institutes
- Fund: Reduce risk by providing patient capital and improve returns by providing viability gap funding

As highlighted above, NSDC is developing a research base by conducting sector and geographic skill gap studies to assess demand-supply gaps. The research base created by NSDC is proposed to be utilized by different stakeholders such as training organizations, employers, government and trainees.

NSDC has conducted sector skill gap studies to estimate the existing skill gap for the 20 high priority sectors as identified by the Planning Commission. These studies were conducted in the year 2008-2009.

In addition to the sector skill gap studies, NSDC is now conducting district skill gap studies to understand and highlight existing and future skill gaps across sectors in all districts of a state. Through these studies NSDC envisages to identify the current and future (2012-2017 and 2017-2022) skill and manpower requirements in the ascertained priority sectors of the district, estimate the gap that exists and recommend strategies for addressing this gap.

Against this backdrop, NSDC has mandated Deloitte to undertake a district level skill gap study for the state of Kerala with the broad objective of creating an information source, which can be utilized by

(a) Training organizations to offer their services,
(b) The State Government in making policy level decisions and
(c) Industry/employers for assessing options for expansion or new projects.

1.2 Scope of Work

The proposed scope of work of the study is presented below:

- To trace the socio-economic profile of each district by demography, economy, industry, education, etc.
- To identify developmental opportunities keeping in mind factor endowments and stakeholder perspectives
- To identify specific developmental initiatives/ projects/ government schemes which have an impact on employment generation
- To articulate the aspirations of the youth
- To identify the current and future (2012 to 2017 and 2017-2022) skills and manpower requirements by industry and estimate the gap that exists
- To study the existing vocational training (VT) infrastructure both in the private sector and the government domain
- To suggest suitable interventions/recommendations to address the skills gap
  - To recommend specific and actionable measures
  - To suggest specific initiatives that NSDC can take based on the mandate of the organization
- To create an action plan with indicative timelines

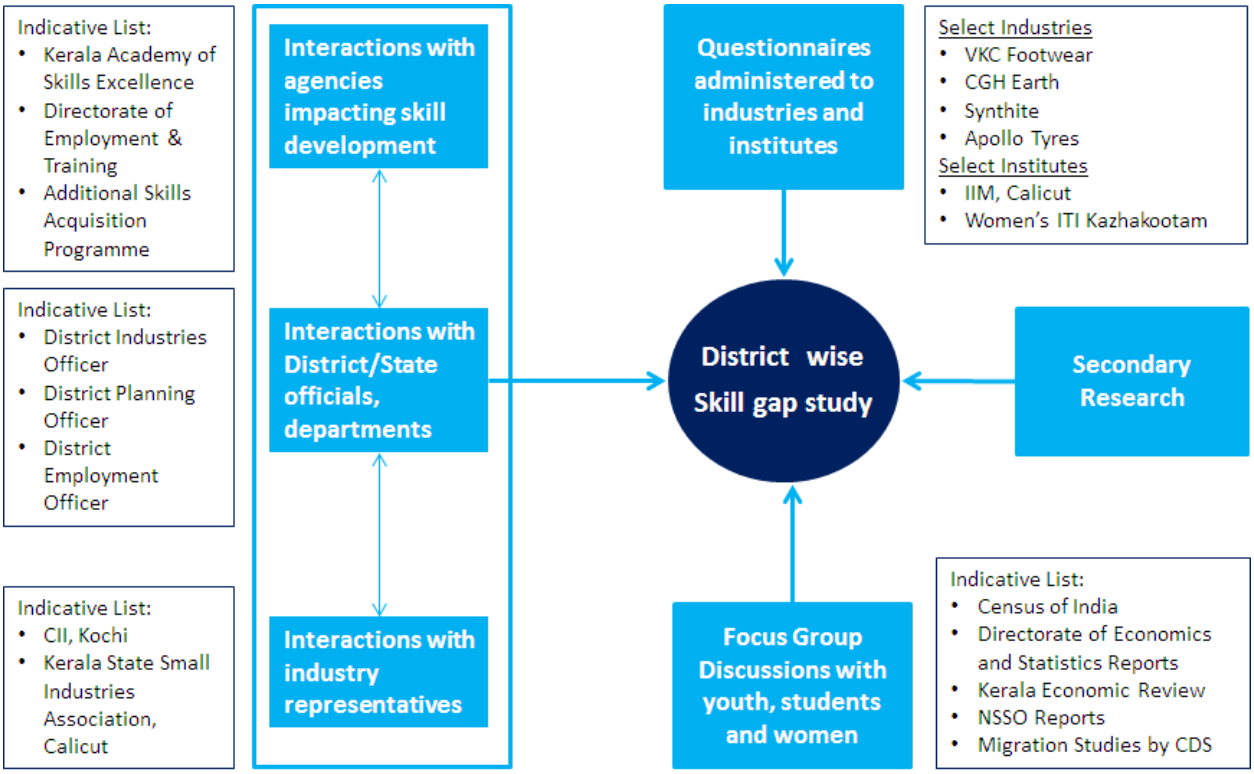
This report outlines the approach and methodology used to conduct the study and presents the state and district profiles highlighting the demography, education, employment profiles and future growth opportunities, skill gap assessment and recommendations for the key stakeholders to improve the skill development and employment situation in each district.

2 Approach and Methodology

2.1 Project Approach

Our team has adopted a consultative and participatory approach to fulfil the requirements of the study. Our approach is significantly based on interaction with the key stakeholders, aided by focused secondary research utilizing various government publications, our own database and other sources available in the public domain. The approach involved a comprehensive assessment of the skill requirement in the state and for each district, assessing the requirements from both a demand side as well as supply side perspective, as indicated in the figure below:

Figure 1: Project Approach



As indicated above, our proposed approach for the study comprises of the following:

- **Interactions with key stakeholders:** Various stakeholders including (a) state government officials such as District Planning Officer, General Manager, DIC, Employment Exchange Officer etc. (b) representatives from industry associations and (c) agencies impacting skill development in the state would be consulted for their inputs in line with the discussion agenda. The interactions with the above stakeholders were conducted at the locations to be covered as part of the study. List of key officials met/interacted with is enclosed in annexure 5.1.
- **Obtaining feedback from industry and training institutes:** Questionnaires were administered to a selected sample of companies and training institutes. We emphasized to select a sample which is representative of the industrial and training landscape of the state. Based on the responses to the questionnaires, we would be able to estimate current and future skill demand and supply in the

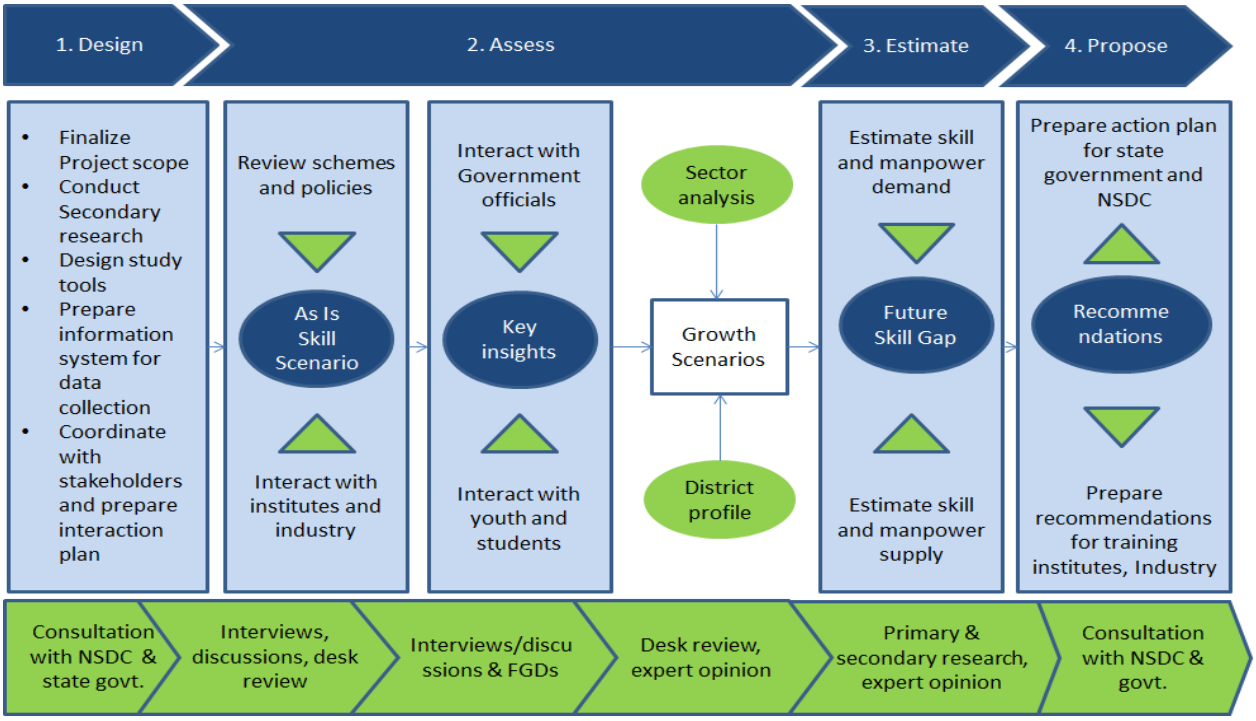
districts of the state. List of personnel's from key industry and industry association met is enclosed in annexure 5.2 and key training institutes is enclosed in annexure 5.3.

- **Capturing voice of the youth:** Focus group discussions (FGDs) were held in each district involving 15-20 participants including students, recent alumni of the various educational institutes, youth (educated and unemployed) and from rural areas as well. The key objectives of the FGDs will be to: (i) assess student and youth aspirations, (ii) understand satisfaction with current skill enhancement programmes and (iii) find out expectations from the education and training system. The FGDs will help in identifying themes like preferred sectors, wage expectations, readiness to migrate etc. Youth survey and list of FGD details is mentioned in annexure 5.4.
- **Secondary Research and Literature survey:** Data collected from the above primary interactions would be analyzed in light of secondary data available in public domain like Census of India reports, NSSO reports, Economic Reviews, Directorate of Economics and Statistics reports etc. Desk research and opinion of subject matter experts on skill development would be incorporated for evaluating strategic options developed during propose module.

2.2 Project Methodology

Based on our understanding of the scope of work, we adopted the project methodology for the study to comprise four distinct phases as outlined in the figure below.

Figure 2: Project Methodology

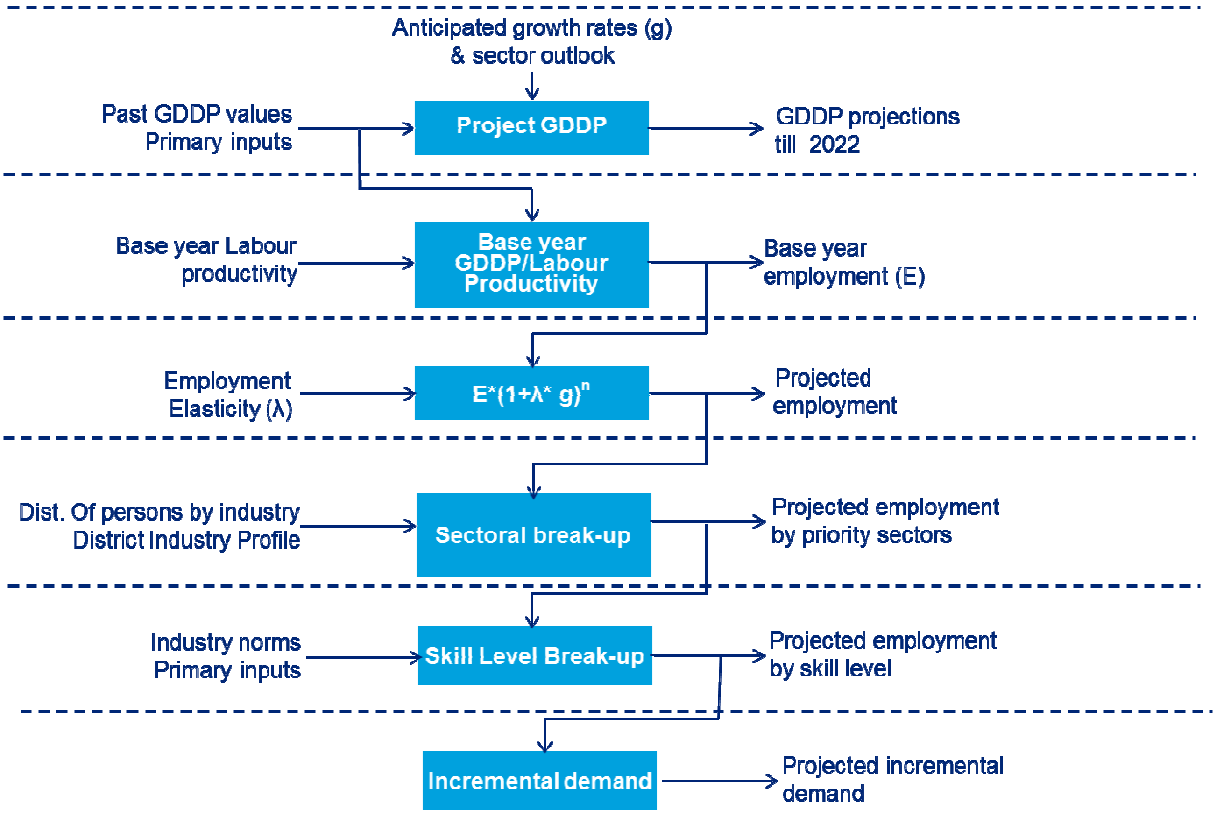


The keys steps followed as part of the methodology are given below.

2.2.1 Demand side estimation

Demand estimation was done with the objective of determining the incremental demand by skill level (skilled, semi-skilled and minimally skilled). The following figure depicts the overall methodology taken for demand side estimation

Figure 3: Demand Side Estimation methodology



The following were the eight steps used for Demand estimation

1. Determine anticipated GDDP growth rates by economic sub-sectors at district level for 2012-22

- DDP data of each economic sub-sector was first projected using trend to identify Growth rate for 2012-22 based upon historical growth of all sub-sectors
- Growth rates were then revised based on the current and future investments and primary inputs at district level, to arrive at anticipated growth rate for 2012-22 for each of the economic sub-sectors
- Using the anticipated growth rates from above, the GDDP for each of the economic sub-sectors has been projected for the period 2012-22.

2. Estimate Base year employment across the sub-sectors

- Total no. of workers in each economic sub-sector sector (agriculture and allied activity, Mining & Quarrying, Manufacturing etc.) is calculated using WPR (2010) and population data
- Where NIC-2004 classification data is not available in NSSO, No. of workers is split across economic sub-sectors by using assumption of constant output per worker within that sub-sector
- Output per worker is calculated using GSDP data divided by number of workers in that sub sector
- Base year employment estimated using the base year GDDP and Output per worker as calculated above

3. Estimate sector wise employment elasticity and project employment by economic sub-sectors

- Total no. of workers in each economic sub-sector sector is calculated using WPR and summed up for 1999-00 and 2009-10
- No. of workers is split across sub-sectors where NIC-2004 classification data is not available, by using assumption of constant output per worker within sub-sectors
- Growth rate in employment and growth rate of GSDP between 1999 and 2010 is calculated, and the ratio of the two gives employment elasticity for the state
- Estimated no. of workers for the period for each sub-sector is projected by multiplying base year employment number with anticipated GDDP growth rate and employment elasticity

4. Projected employment by priority sectors for the period 2012-22

- Aggregate manpower in Manufacturing was split into various sub-sectors using the industrial profile shared by MSME-DI for the district
- For splitting the manpower in the following sectors – Trade Hotels & Restaurants, Real Estate Ownership of Dwellings Business Services & Legal and Public Administration – NIC 2004 mapping and shares as given in NSS report was used
- Some sectors provided by MSME-DI for which NSDC sector mapping was not possible have been retained into “other manufacturing” and “other services”

5. Projected employment by skill levels

- Based upon the primary interactions with industry representatives, Government officials and literature survey, the sector level incremental demand is distributed into various skill levels (skilled, semiskilled & minimally skilled)
- Skill Mapping applied on demand to get Min. skilled, semi-skilled and skilled labour break-up

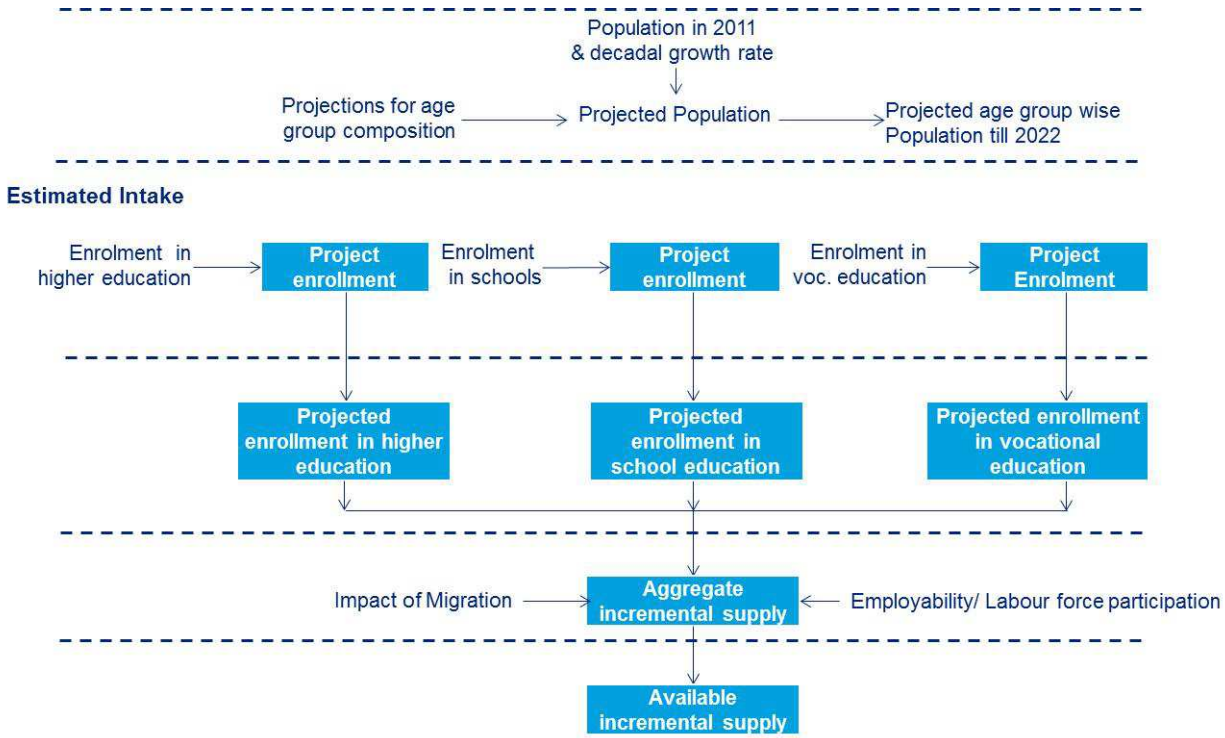
6. Sector level incremental manpower demand

- Incremental demand has been calculated for each year from the data above.

2.2.2 Supply side estimation

Supply estimation was done with the objective of determining the incremental supply by skill level (skilled, semi-skilled and minimally skilled). The following figure depicts the overall methodology taken for supply side estimation.

Figure 4: Supply Side Estimation methodology



The following were the steps used for Supply side estimation

1. Projected district population by age group till 2022

- Population of the district has been projected till 2022 based on the population projected from the population projection reports (Census)
- Population estimated in the working age group (15-59), and for specific age groups required for further analysis (15, 16, 17, 18-23 etc.)

2. Estimate of Incremental Skilled Labour Force in the district

- Total number of students enrolled by courses/ streams and level (UG/ PG) and annual enrolment determined at state level
- Share of students enrolling per year by level & course estimated for district based on the share of colleges for the specific streams in the district
- Current GER calculated for district (based on state / national targets & growth rate) and total enrollments estimated for period 2012-22
- Estimated No of Students Enrolled in District calculated by course and level for period 2012-22
- Estimated No of Students Passing out in the district calculated by course and level for period 2012-22
- Supply of students from all colleges in District estimated using estimated transition rates for state
- Students who are failing from PG level are added back into the graduate level of skilled workforce
- Total skilled workforce and incremental skilled workforce calculated

3. Estimate of Incremental Semi-Skilled Labour Force in the district

- Seating capacity of ITI/ITC is calculated for district; Seating capacity and enrollment rates calculated based on historical data and primary inputs on future trends
- Total Students enrolling in ITI's & ITC's per year calculated for period 2012-22
- Total Students passing out from ITI's & ITC's every year calculated taking estimated pass percentage
- Total Students passing out from ITI's & ITC's and not going to higher education is estimated
- In case of Post School Diploma, it is taken from the calculations done in the skilled workforce calculations (as it is considered in the GER, whereas ITI/ ITC are not)
- No. of estimated students dropping out of UG courses is added to semi-skilled workforce
- Total and incremental semi-skilled workforce is calculated by totaling the above

4. Estimate of Incremental Minimally-Skilled Labour Force emerging out of vocational institutions in the district

- Total students enrolled in Grade I estimated for period 2002-15
- Drop-out rate from class I to VIII applied to get total students who have dropped out prior to class VIII and will enter workforce (age 15) each year from 2012-22
- Similarly drop-outs from VIII-X, X, XI and XII estimated for each year for period 2012-22 and corresponding no. of students entering workforce estimated
- Total estimated number of students enrolling in ITI, ITC & Post School Diploma deducted from the above
- Pass-out rates at each successive level applied for X, XI and XII applied to calculate number of students passing into higher classes
- No. of students failing at UG and ITI/ ITC are added back into min. skilled workforce

5. Aggregate and Incremental manpower supply

- In all the three calculations above, Incremental manpower supply is estimated as a difference of available labour force in successive years,
- Break-up of males and female students calculated for the above

6. Application of LFPR on incremental supply

- The ratio of enrolment by gender for each skill level (Skilled, semi-skilled and minimally skilled), is taken and applied on the total number of incremental workforce to get male: female break-up
- The male and female LFPRs is applied on each of the above to find out the total supply

7. Estimate migrants in district available for work by skill level

- Net migrants within state from/ to other states, country who have migrated for employment estimated
- Share of employment in district to state enumerated; Total migrants for employment above are split in the corresponding ratio.
- Net migrants within state from/ to other states, country who have migrated for marriage estimated, and LFPR applied on the same (rural/ urban, male/ female) to estimate those who are available for work
- Share of Population in each district enumerated; Total migrants for marriage and available for work are split in the corresponding ratio.
- Share of migrants (from above two categories) relative to total working are population of district (15-59) who are available for work estimated
- Incremental population in the 15-59 age group estimated for each year for period 2012-22
- Share of migrants applied on incremental population to get total number of incremental migrants per year
- Total migrants split by skill level (skilled, semi-skilled and min. skilled) for each year

8. Total Available Incremental Supply by skill level

- To the incremental supply by skill level achieved from step 6, add/ subtract the incremental migration numbers to arrive at the total incremental supply by skill level for each year

2.2.3 Demand - Supply gap estimation

Taking the incremental demand and supply from the calculations as explained above, the demand-supply gap is then arrived at by skill levels.

3 Kerala – State Profile

3.1 Demography

The state of Kerala was formed on November 1st, 1956. It covers an area of about 38852 sq. km. Administratively; the state has been divided into 14 districts. As per Census 2011, Kerala has a population of 3.34 cr. amounting to 2.7% of India's population and is ranked 12th among states in terms of population share. The most populated district is Malappuram (0.41 cr.) and least populated district is Wayanad (0.08 cr.).

As indicated in the table below , SC population accounts for 9.1% and ST population accounts for 1.5% of the total population in the state. Among Scheduled Castes, the highest proportion has been recorded in Palakkad (14.4%) and least in Kannur (3.3%). Among Scheduled Tribes, the highest proportion has been recorded in Wayanad (18.5%) and least in Thrissur (0.3%).

Table 1: Demographic Profile of Kerala

Demography	Kerala	India
Population (2011)	3,34,06,061	1,21,05,69,573
Decadal Population Growth Rate (2001-11)	4.86%	17.7%
Population density per sq. km (2011)	860	382
Sex Ratio (2011)	1084	943
Percentage of Urban Population (2011)	47.7%	31.2%
Percentage of SC population(2011)	9.09%	16.6%
Percentage of ST population(2011)	1.45%	8.6%

Source: Census 2011

Low Decadal Growth Rate: The decadal growth rate of population in the state between 2001 and 2011 was reported to be 4.9%, which is the lowest among 17 major states in the country.

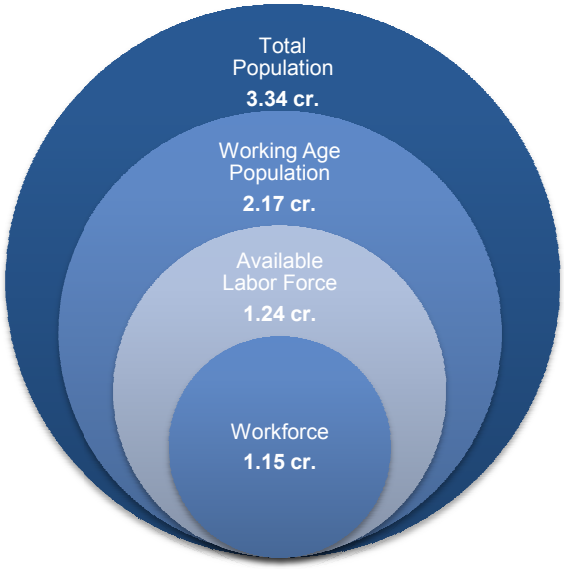
High Sex Ratio and Literacy: As indicated in the table below, Kerala is unique within India with a high sex ratio of 1084, ranking first among all states in this regard. Kannur district has the highest sex ratio at 1136 while Idukki district has the lowest sex ratio at 1006.
The high sex ratio could be attributed in part to the high levels of literacy in the state. Kerala has the highest literacy rate among all states (94%).

Balanced Urban-Rural Spread: According to Census 2011 estimates, 1.74 cr. are reported to be inhabited in rural areas comprising 52.3% of total population, while 1.59 cr. are reported to be inhabited in urban areas (47.7%). Ernakulam district has a high share of 68.1% urban population while Wayanad district has a low share of 3.9% urban population.

The figure below depicts the estimated workforce in Kerala in the context of the population of the state. Out of the total population of 3.34 cr., the working age population (between 15-59 age group) constitutes to 2.17 cr. or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 among the working age population are estimated at 1.15 cr. or nearly 53% of the working age population.

Figure 5: Work force in Kerala- 2011



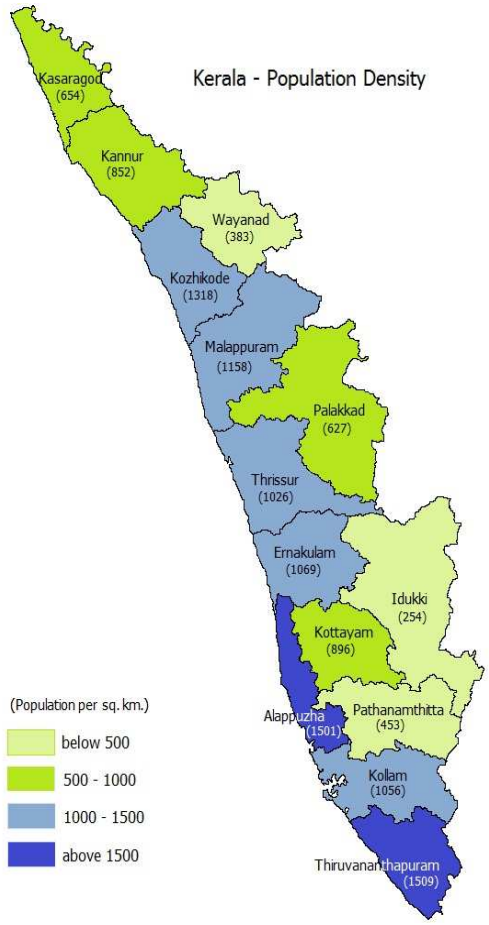
Source: Census 2011 and Deloitte Analysis

High Population Density:

The population density of the state (860) is much higher than the national average (382). Kerala has the third highest population density among major states (after Bihar and West Bengal).

Thiruvananthapuram district is reported to have highest population density of 1509 per sq. km. and Idukki district is reported to have least population density of 254 persons per sq. km.

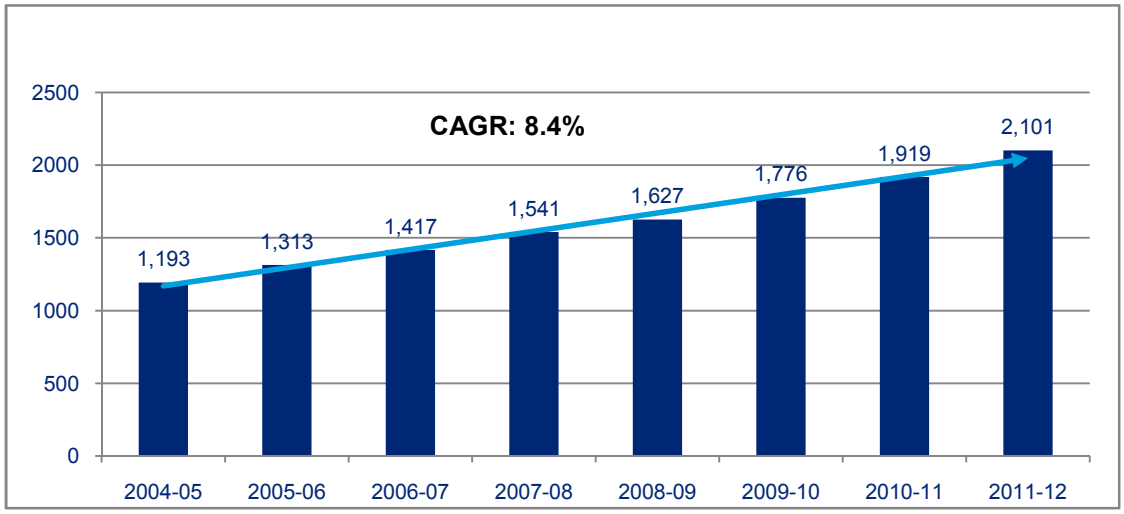
Figure 6: Kerala- Population Density 2011



3.2 Economic Profile

The economy of Kerala has registered a CAGR of about 8.4% (estimated at constant prices 2004-05) between 2004-05 and 2011-12 and grown from Rs 1,19,2.6 billion cr. to Rs 2,101.1 billion cr. In terms of income distribution, the state per-capita income has increased from Rs. 36,278 in 2004-05 to Rs. 60,536 in 2011-12.[1]

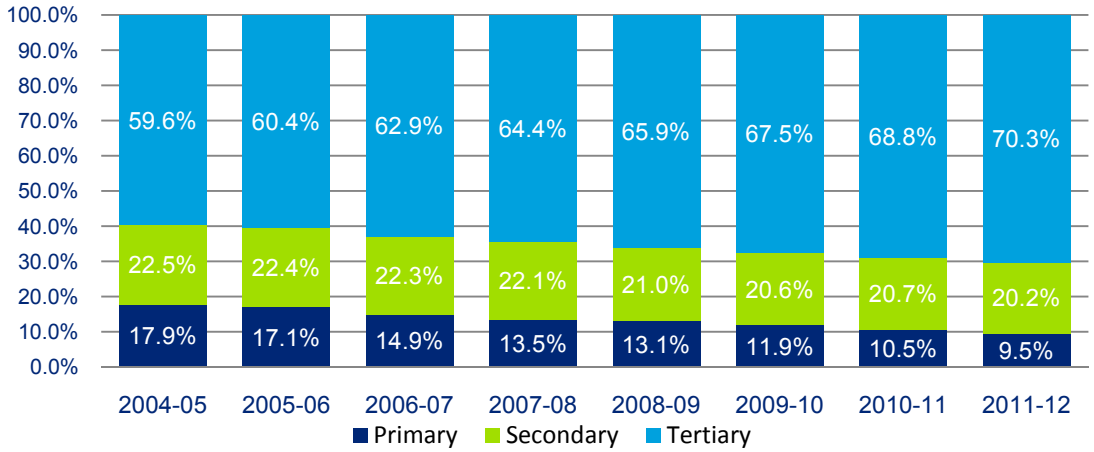
Figure 7: Kerala GSDP 2004-05 to 2011-12 at constant prices (2004-05) in Rs. Billion cr.



Source: CSO State Series

In terms of sector level contribution to GSDP, the primary sector's contribution has declined from 17.9% in 2004-05 to 9.5% in 2011-12, as indicated in the figure below. Similarly, the secondary sector contribution has also fallen from 22.5% to 20.2% between the same time period. It is important to note that the share of tertiary sector has steadily increased from 59.6% to 70.3%, primarily due to increased contributions from sectors such as Transport, Storage and Communication, and Banking and Insurance.

Figure 8: Sectoral Share of GSDP, 2004-05 to 2011-12



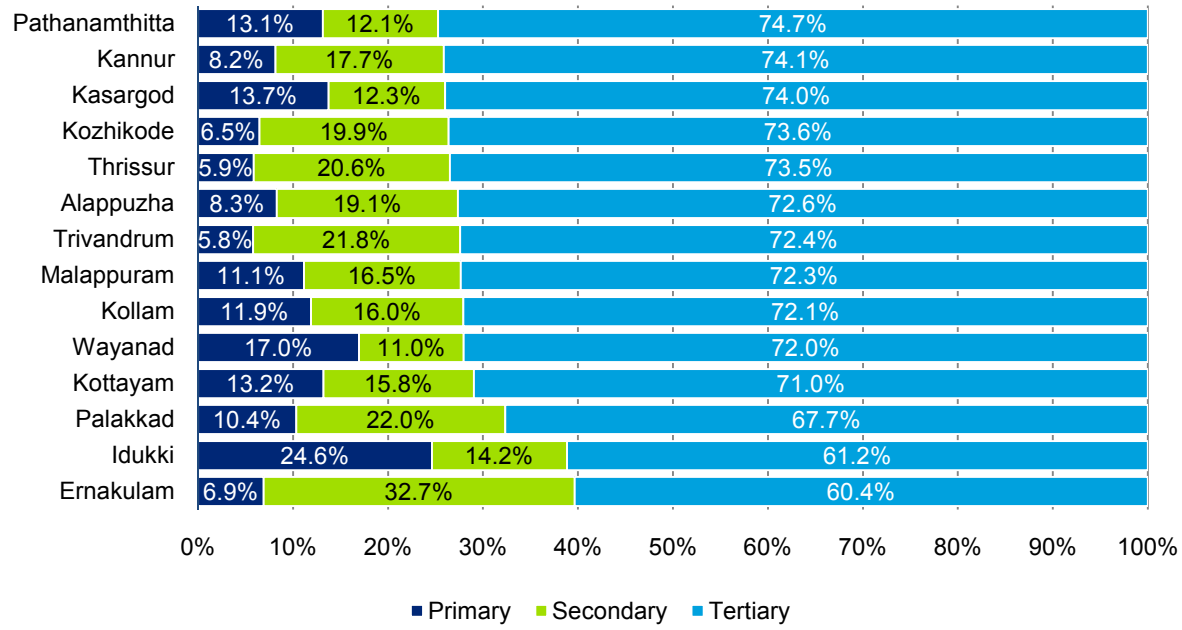
Source: CSO State Series, 2004-05 base prices

[1] Directorate of Economics and Statistics, Govt. of Kerala

District-wise comparison of economic contribution in 2011-12 indicates that Ernakulam district (Rs 30,287 Cr) contributes the most to the state economy, followed by Thiruvananthapuram (Rs. 23,099 Cr). Wayanad district (Rs. 3927 Cr) contributed the least to the state economy, and is notably the least populated district in the state as well.

The tertiary sector contributes the highest to the economy across all districts, followed by the secondary sector except in four districts including Idukki, Wayanad, Kasargod, and Pathanamthitta where the primary sector contributes more than the secondary sector. Idukki (24.6%), Ernakulam (32.7%) and Pathanamthitta (74.7%) districts has seen the highest contribution from the primary, secondary and tertiary sectors respectively in 2011-12.

Figure 9: District wise sectoral breakup of GDDP, 2011-12



Source: CSO State Series, 2004-05 base prices

In terms of districts' contribution to the state economy in 2011-12, Ernakulam (10.5%) and Kottayam (9.3%) contribute highest to primary sector share. Ernakulam (23.3%) and Trivandrum (11.8%) contributed highest to secondary sector share, and Ernakulam (12.4%) and Thiruvananthapuram (11.3%) contributed highest to tertiary sector share in the state.

3.2.1 Primary Sector

As indicated in Figure 3, the primary sector contribution has declined from 17.5% in 2004-05 to 9.5% of GSDP in 2011-12. In real terms also, the sector has seen negative growth of 0.9% during this time period, primarily due to declining contribution of agriculture and fishing activities. In 2011-12, agriculture comprised 75% of the primary sector, followed by forestry & logging (12%), fishing (9%) and mining and quarrying (4%).

Figure 10: Primary Sector GSDP (Rs billion Cr.), 2004-05 to 2011-12

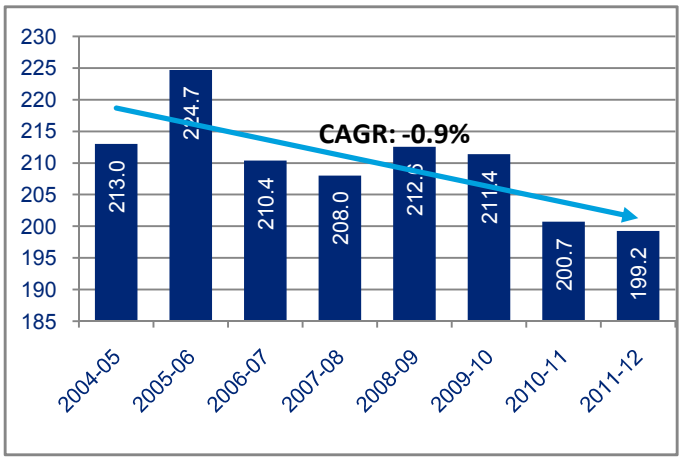
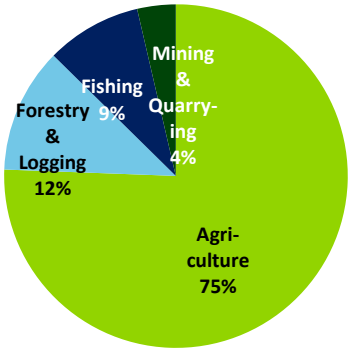


Figure 11: Primary Sector Contribution, 2011-12



Source: CSO State Series, 2004-05 prices

Based on the economic profile of the districts (detailed in the following chapters), the table below highlights the key districts, which together contribute about more than 60% of total primary output of the state:

Table 2: Key Districts with high primary output

District	Contribution of district to overall state primary output
Ernakulam	10.5%
Kottayam	9.6%
Kollam	9.3%
Malappuram	9.1%
Idukki	8.9%
Palakkad	8.2%
Thiruvananthapuram	6.7%

Source: Deloitte Analysis

Agriculture and Allied Activities

The agriculture and allied activities (agriculture, forestry & logging, fishing) contributed 9.1% to GSDP in 2011-12 and the share has been steadily declining over the years, compared to 17.5% contribution in 2004-05. Although it is an important sector in terms of food security, rural livelihoods and exports, constraints such as land availability, high costs of factors of production, dependence on international commodity prices affected viability in such sectors.[2]

[2] Kerala Economic Review 2012, State Planning Board

Agriculture – The agriculture sector contribution amounted to Rs. 15,062.6 cr. in 2011-12. The sector has seen a negative growth of 1.7% between 2004-05 and 2011-12.

Out of a total geographical area of 38.86 lakh hectares, net sown area is about 53% and the share of total cropped area in the total geographical area is 68%. Some of the key highlights regarding principal crops[3] for the state in 2011-12 are indicated below:

- Out of the total gross cropped area of 26.5 lakh hectares, coconut farming has the highest area (31%), followed by rubber cultivation (20.4%) and rice cultivation (7.9%)
- In terms of production of principal crops, tapioca cultivation yielded the highest produce (49.5%), followed by rubber (15.2%) and rice (11%).[4]
- Tapioca (34470 Kg/Ha), Sweet Potato (16838 Kg/Ha) and Sugarcane (10101 Kg/Ha) are the crops which have highest productivity numbers among principal crops in the state.[5]

The table below presents an overview of important crops and corresponding key districts. Coconut farming is a key crop in the state with 8.2 lakh hectares accounting for 40.2% of net cropped area in the state, contributing 42.1% to total production in India (2011-12). Rubber plantations account for 5.4 lakh hectares of cultivated area, contributing 87.3% of national production. Kerala also accounted for 70% of the national production in cardamom.

Table 3: Key Crops and Districts

Crop	Area under Cultivation (% of total net cropped area)	Key Districts
Coconut	8, 20,867 Ha (40.2%)	Kozhikode, Malappuram, Kannur
Rubber	5, 39,565 Ha (37.8%)	Kottayam, Ernakulam, Pathanamthitta
Paddy	2, 08,160 Ha (10.2%)	Palakkad, Alappuzha, Kottayam
Coffee	85,359 Ha (4.2%)	Wayanad
Pepper	85,335 Ha (4.2%)	Idukki, Wayanad, Kannur
Tapioca	74,498 Ha (3.7%)	Kollam, Thiruvananthapuram & Idukki
Cashew	54,052 Ha (2.7%)	Kannur
Cardamom	41,600 Ha (2.0%)	Idukki, Wayanad

Source: Kerala Economic Review 2012 and Agricultural Statistics 2011-12, Department of Economics and Statistics

Forestry and Logging – Forestry and Logging output amounted to Rs. 2348.2 cr. in 2011-12. The sector has seen a positive growth of 2% between 2004-05 and 2011-12.

According to data presented in the Kerala Economic Review 2012, the forest cover of the state was 17300 sq. km. (44.5% of total state area); with Idukki district having highest forest cover among districts with 3930 sq.km in 2011. Other key forest areas include Wayanad, Pathanamthitta and Palakkad districts.[6] Revenue from forestry/logging amounted to Rs. 220.7 cr. in 2011-12, of which revenue from timber accounted for 82.7% (Rs. 182.5 Cr)

Fishing – Output from Fishing amounted to Rs. 1792.7 cr. in 2011-12. The sector has seen a slightly negative growth of 0.2% between 2004-05 and 2011-12.

The fish production in Kerala amounted to 6.9 lakh tonnes during 2011-12, comprising 5.5 lakh tonnes of marine fish and 1.4 lakh tonnes of inland fish. Kerala is the highest contributor of marine fish, after Gujarat, with high value species including Seer fish, Prawn, Ribbon fish and Mackerel.[7]In terms of fishermen communities, Alappuzha, Thiruvananthapuram and Ernakulam districts have the highest shares in the state.

[3] Principal Crops, as per DES Kerala classification, include 25 crops
[4] Coconut production is not included since the unit is in numbers while the production units for other crops is expressed in million tons
[5] Coconut productivity is not included in this analysis since it is expressed in numbers, while the remaining principal crop productivities are expressed in Kg/Ha units.
[6] Kerala Economic Review 2012
[7] Kerala Economic Review, 2012

Mining and Quarrying

Output from Mining and quarrying activities amounted to Rs. 721.4 cr. in 2011-12. The sector has seen a positive growth of 6.7% between 2004-05 and 2011-12.

Although Kerala is endowed with minerals such as iron ore, gold, bauxite, graphite, gemstones etc. limited availability of land for mining, dense population limit the ability to tap the potential offered by these resources. In 2011-12, revenues collected from Mining activities amounted to Rs. 44.3 cr. with Rs. 11.2 cr. from major minerals. Among major minerals, Heavy Mineral sand and China Clay contribute more than 90% of the total value of major mineral production although minor minerals account for 75% of revenues from minerals.

Among the districts, Palakkad contributed highest revenues (Rs. 6.8 cr.), followed by Kollam (Rs. 6.2 cr.). The least revenue came from Alappuzha district (Rs. 1.1 cr.).

3.2.2 Secondary Sector

As indicated in Figure 3, the secondary sector contribution has declined from 22.5% in 2004-05 to 20.2% of GSDP in 2011-12. In real terms, the sector has seen growth of 6.8% during this time period, primarily due to increasing contribution of construction and manufacturing activities.

In 2011-12, construction comprised 58% of the secondary sector, followed by registered manufacturing (20%), unregistered manufacturing (16%) and electricity, gas & water supply (6%).

Figure 12: Secondary Sector GSDP (Rs billion Cr.), 2004-05 to 2011-12

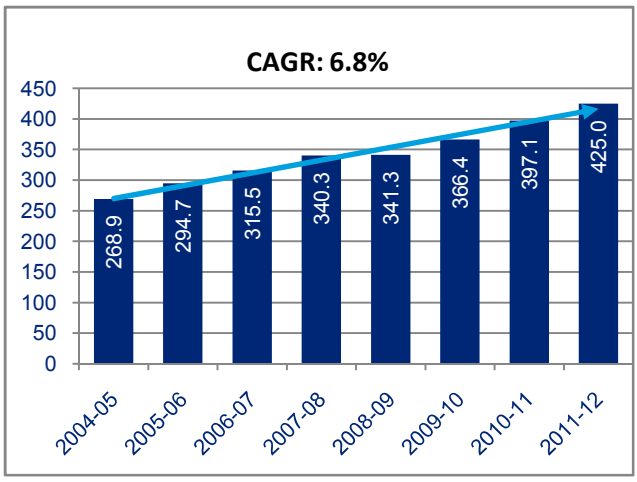
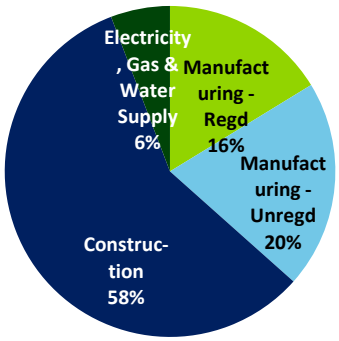


Figure 13: Secondary Sector Contribution, 2011-12



Source: CSO State Series, 2004-05 prices

Based on the economic profile of the districts (detailed in the district profiles), the table below summarizes the information related to the secondary sector of top 5 districts contributing more than 60% in terms of contribution to the state:

Table 4: Key Districts with high secondary output

District	Contribution of district to state secondary output	Major Sectors[8]
Ernakulam	23.3%	Building and Construction, Wood/ wooden based furniture, Chemical/Chemical based, Mineral based units.
Thiruvananthapuram	11.8%	Building and Construction, Food Processing, Textiles/Garments, Engineering Units
Thrissur	10.1%	Building and Construction, Mineral based units, Food Processing, Rubber and Plastics
Kozhikode	8.6%	Building and Construction, Textiles/Garments Engineering Units, Leather Goods
Palakkad	8.2%	Food Processing, Textiles/Garments, Chemicals and Pharmaceuticals, Building and Construction

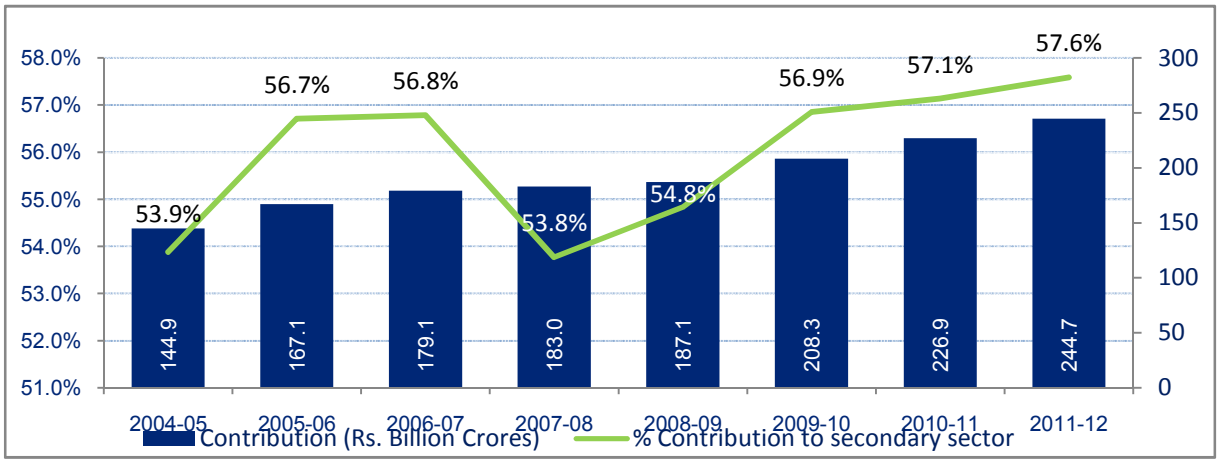
Source: MSME DI Profiles and Deloitte Analysis

Construction

The construction industry has been identified as a priority sector in India and is estimated to employ the second largest proportion of the workforce, after agriculture[9]. The sector holds significance due to the increasing focus on infrastructure including construction of roads and bridges, industrial parks, housing projects etc. The sector is significant in Kerala as well and has grown at 7.8% between 2004-05 and 2011-12. The contribution of the sector to the secondary sector grew from 53.9% to 57.6% over the same time period.

The state has seen considerable growth in the construction industry and will continue to do so, owing to infrastructure development including the Kerala State Transport Project (since 2002, ~ Rs. 1612 cr,), Kochi Metro Rail System (first phase estimated at cost of Rs. 5,181 cr.), High Speed Rail Corridor Project, Kannur International Airport, development of five ports through PPP mode, Kerala Sustainable Urban Development Project, Integrated Housing & Slum Development Programme etc. In terms of industrial development, Kerala State Industrial Development Corporation (KSIDC) identified growth centres in Malappuram, Alappuzha, Kozhikode and Kannur and proposed projects include Palakkad NIMZ (National Investment Manufacturing Zone), Electronic Hardware Park at Kochi, the Light Engineering Industrial Park in Palakkad, Electronic Hardware Park at Kochi and Life Sciences Park in Thiruvananthapuram.

Figure 14: Contribution of Construction Sector, 2004-05 to 2011-12



Source: CSO State Series, 2004-05 base prices

According to the draft Approach Paper[10] to the XII Five Year Plan for Kerala, focus for the 2012-17 period

[8] The MSME sectors indicated are the key sectors in terms of employment
[9] Twelfth Five Year Plan, Planning Commission, GoI
[10] State Planning Board, Govt. of Kerala

will include setting up new industrial infrastructure parks in PPP mode, infrastructure up-gradation projects in tourism destinations (including sea plane services), development and maintenance of 25,000 kms of roads, development of Vizhinjam International Trans-shipment Container Terminal etc. Thus, the building and construction industry is expected to continue to grow and contribute significantly to the state economy in the future as well.

Manufacturing

Manufacturing activities amounted to Rs. 15,553.1 cr. in 2011-12. The sector has seen a positive growth of 6.2% between 2004-05 and 2011-12. Industry in Kerala includes a combination of traditional industries such as handlooms, coir and emerging sectors.

The state has 44 Public Sector Enterprises (PSEs), employing a significant share of personnel in the organized sector. There are 9 PSEs in the Textile sector, 8 in Traditional/Welfare sectors, 7 in Chemical, 6 in Engineering, 4 each in Development & Infrastructure and Electrical Equipment, 3 in Electronics, 2 in Ceramics & Refractories and 1 in Wood & Agro based sectors.[11]

The key industrial clusters in the state and the associated regions are highlighted in the table below:

Table 5: Key Industrial Clusters

Industries	Key Districts
Handlooms and Powerlooms	Kannur, Palakkad, Thrissur, Thiruvananthapuram
Textiles	Malappuram, Thrissur
Coir Products	Alappuzha, Kollam
Agriculture and Forest Based	Idukki
Minerals and Mining	Kasaragod, Kollam, Wayanad
Engineering	Kottayam, Pathanamthitta, Thiruvananthapuram, Palakkad
Tiles	Thrissur
Canning	Thrissur
Sericulture	Palakkad
Rubber	Kottayam, Kozhikode, Idukki, Wayanad
Food Products	Kottayam, Malappuram, Pathanamthitta, Ernakulam, Idukki
Beedi	Kannur
IT/ITES	Ernakulam, Thiruvananthapuram

Source: Department of Industries and Commerce, 'Study on Kerala – Roadmap for Inclusive Growth' ASSOCHAM 2012, Primary Interactions

KSIDC Projects: In order to promote industrial development in industrially backward areas, the Kerala State Industrial Development Corporation (KSIDC) has identified the following Industrial Growth Centres (IGCs) in the state, apart from the proposed growth centre in Malappuram[12]:

- **Kannur** – The proposed growth centre is to be developed in Koothupurumba over 250 acres with infrastructure facilities such as roads, water supply, power, gas etc. The existing units include a SSI Park, Separate Apparel Zone, Rubber Park and Apparel Training and Design Centre by GoI.
- **Kozhikode** - The growth centre is located in Kinalur over 308 acres with infrastructure facilities such as roads, water supply, power etc. The existing facilities include Footwear & Sports Goods Park and Footwear Design and Development Centre. New initiatives include a Food Processing Park, Hi-Tech Park in Electronics and Communication, Defence Park etc.
- **Alappuzha** - The growth centre is located in Pallipuram over 279 acres with infrastructure facilities such as roads, water supply, power etc. It is ideally suited for "coir clusters/ marine / silica/ cement-based projects/ educational/ engineering" projects.[13] New initiatives include an IT park.

Other key proposed projects include Kochi – Palakkad NIMZ (National Investment Manufacturing Zone), Electronic Hardware Park at Kochi, the Light Engineering Industrial Park in Palakkad, Electronic

[11] Kerala Economic Review 2012.
[12] KSIDC Website – Industrial Growth Centres
[13] Doing Business in Kerala, KSIDC, 2012

Hardware Park at Kochi and Life Sciences Park in Thiruvananthapuram.

KINFRA Projects: The Kerala Industrial Infrastructure Development Corporation (KINFRA) has set up l4 theme based Industrial Parks in Kerala in areas such as **garments, infotainment, marine/seafood, rubber, exports, food processing**, etc. Key projects include International Apparel Park at Thiruvananthapuram; India's first Export Promotion Industrial Park at Ernakulam; India's first Infotainment Park, the Film & Video Park at Thiruvananthapuram and India's first Food Processing Industrial Park at Malappuram.[14]

Micro, Small and Medium Enterprises (MSMEs) – According to the 4th All India MSME Census, Kerala accounted for 10% of the functional MSMEs in the country providing employment for nearly 7% of the total employed in MSME sector in the country. Among all MSMEs, the key manufacturing sectors in terms of number of enterprises are textile/apparel units (12.5%), units manufacturing coir products (3.2%), wood and furniture units (2.9%) and tobacco manufacturing units (2.2%).[15]
The key districts and employment across MSME units in Kerala are presented in the table below:

Table 6: Key MSME Clusters

MSME Industries	Key Districts	Approximate Employment
Food Processing	Thiruvananthapuram, Alappuzha, Kottayam, Ernakulam, Kollam	111,427
Ready-made garments & embroidery	Thiruvananthapuram, Alappuzha, Kottayam, Ernakulam	96,200
Wood/wooden based furniture	Alappuzha, Kottayam, Ernakulam	50,962
Chemical/Chemical based	Ernakulam, Alappuzha	34,406
Rubber, Plastic & Petro-Based	Alappuzha, Kottayam, Ernakulam	43,163

Source: MSME DI Profiles

The MSME Development Institute in Thrissur has taken up **six clusters** for development of *Ornaments, Dies & moulds, Notebooks, Rice Milling, General Engineering and Diamond*. Major manufacturing industries in the state[16] are highlighted below:

Coir Industry: The Coir industry is one of the largest traditional agro-based industry concentrated in rural areas and providing livelihoods to a large proportion of women. As of 2011-12, Kerala accounted for 80% of India's coir exports of 410854 MT values at Rs. 1052.6 cr. The key export items include curled coir, coir fibre, coir pith, coir rope, coir yarn, geo-textile, handloom mattings, Power loom Mats & rubberized coir. Alappuzha district is the hub for the industry in the state.

Food Processing Industries: Food Processing holds tremendous potential for inclusive growth through employment and industrial development in rural areas. There are 132 food processing units in the state covering a total area of 109.4 acres, with an investment of Rs. 269.7 cr. and employing around 5000 people. The food processing parks in Ernakulam and Malappuram have the highest number of units.
Processed food exports account for two-thirds of Kerala's export income. Major food products which are exported in Kerala include spices, pickles and marine products. The key food items produced include dairy products, rice/wheat products, fish/meat products, masala powders, bakery products, coconut and other oils, fruit juices, ayurvedic products etc.

Handloom Sector: The sector is concentrated in Thiruvananthapuram and Kannur district and in some parts of Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam and Kasaragod. Among the traditional industries, it is the largest employer after the coir industry and employs a large proportion of women. Dhotis, furnishing material, bed sheets, sarees and lungis are the main products which contribute 67% of total production.

[14] Kerala Economic Review 2012
[15] 4th All India Census of MSMEs 2006-07, GoI
[16] Kerala Economic Review 2012

Power looms: There are 536 powerloom units in the state producing 27.8 lakh metres of cloth amounting to Rs. 380.3 lakhs in value, in 2011-12. 93% of such units are in the co-operative sector. The five key integrated power loom co-operative societies are located in Calicut, Wayanad, Neyyattinkara, Kottayam and Malappuram. In Wayanad, there is potential for training tribal women in this sector.

Handicrafts: The handicraft industry is a traditional industry which employs artisans mainly from socially/economically backward classes. Ivory, bamboo, palm leaves, seashells, wood, coconut shells, clay, cloth, coir, metals, stone etc. are typically used to make items such as kathakali masks, elephants, idols, miniature boats etc. Ernakulam district is famous for wood work and lacquer ware while Kozhikode is being promoted as a hub for hi-tech bamboo flooring tiles.

Cashew Industry: The cashew industry is a labour-intensive traditional industry centred in Kollam district, employing a large proportion of illiterate women. Other districts with factories include Thiruvananthapuram, Alappuzha, Thrissur and Kannur. Raw cashew nuts are usually processed into kernels and value added products like cashew soup, cashew vita, cashew bitz and cashew powder.

3.2.3 Tertiary Sector

As indicated in Figure 3, the tertiary sector contribution has risen significantly from 59.6% in 2004-05 to 70.3% of GSDP in 2011-12, indicating the importance of the services sector in the Kerala economy. In real terms, the sector has seen growth of 11.0% during this time period, primarily due to increasing growth of communication, banking and insurance and trade, hotels and restaurants.

In 2011-12, trade, hotels and restaurants comprised 30.4% of the tertiary sector, followed by real estate and business activities (16%) and other services (14.4%).

Figure 15: Tertiary Sector GSDP (Rs billion Cr.), 2004-05 to 2011-12

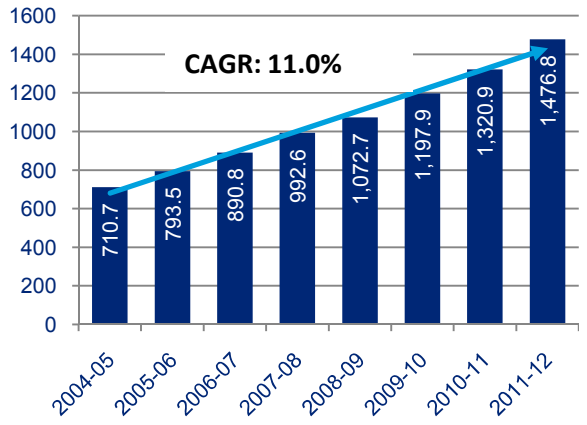
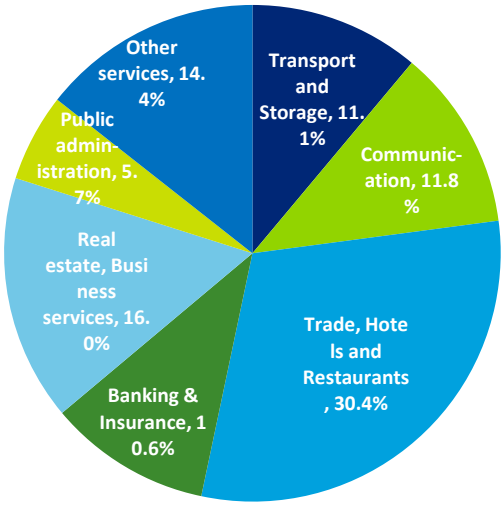


Figure 16: Tertiary Sector Contribution, 2011-12



Source: CSO State Series, 2004-05 prices

Based on the economic profile of the districts (detailed in the following chapters), the table below summarizes the information related to the tertiary sector of the top 7 districts accounting about more than 60% of total tertiary output of the state:

Table 7: Key Districts with high tertiary output

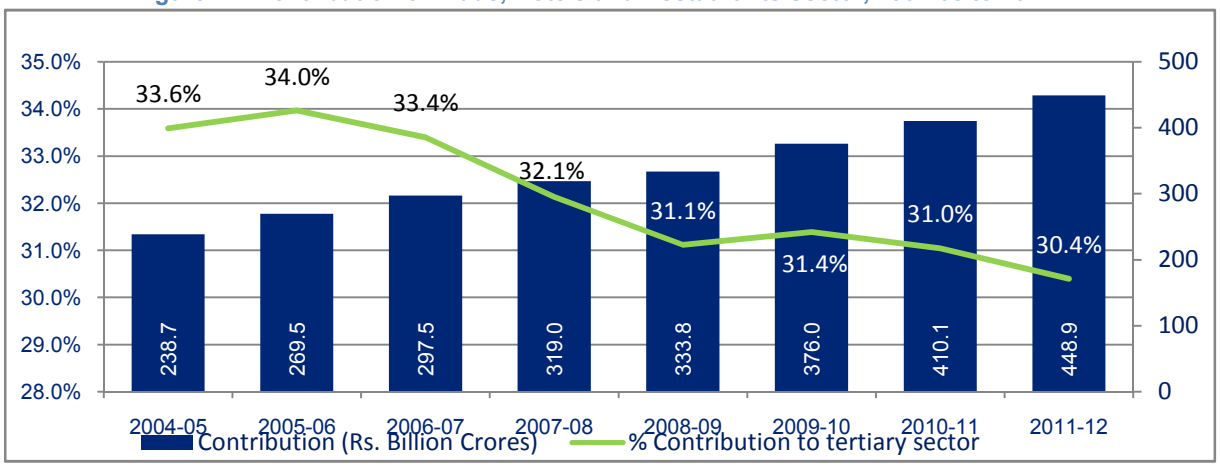
District	Contribution of district to overall state tertiary output
Ernakulam	12.4%
Thiruvananthapuram	11.3%
Thrissur	10.4%
Kozhikode	9.2%
Malappuram	8.0%
Kannur	7.7%
Kollam	7.6%

Source: Deloitte Analysis

Trade, Hotels and Restaurants

The trade, hotels and restaurants sector contributed Rs. 448.9 billion cr. to the economy in 2011-12. It contributes 30.4% to the services sector and has grown at 9.4% between 2004-05 and 2011-12.

Figure 17: Contribution of Trade, Hotels and Restaurants Sector, 2004-05 to 2011-12



Source: CSO State Series, 2004-05 base prices

Trade: Kochi Port in Ernakulam district is the main hub for Kerala's trade operations for items including pepper, cashew, coir and coir products, tea, cardamom, ginger, spices and spices oil and marine products. In 2011-12, the total traffic handled by the Kochi Port was 200.91 lakh MT, an increase of 12.4 % over 2010-11.[17]

In 2011-12, total of exports through Kochi Port amounted to 43.11 lakh MT. Compared to 2010-11, spices exports increased by 41 %, coffee exports by 36%, sea food exports by 22%, cashew kernel exports increased by 11%, while Exports of tea and coir products decreased by 0.21% and 6.5% respectively.

Imports through Kochi Port amounted to 157.80 lakh MT in 2011-12. The main items of import include fertilizers and raw materials, food grains, iron and steel and machinery, newsprint and raw cashew nut. It is important to note that the import of iron and steel and machinery sharply decreased by 78.6% and import of fertilizers and raw materials decreased by 30.5% during 2011-12.

Hotels and Restaurants: Kerala is one of the most favoured tourist destinations in the country. In 2011-12, 13 awards were granted to Kerala tourism including PATA Grand, PATA Gold, ITB (Berlin) – Das Golden, Outlook Traveler, Conde Nast Traveller etc. In 2012, Kerala saw 7, 89,698 foreign tourists accounting for nearly 12% of total foreign tourist arrivals in India (recording 7.7% growth over previous

[17] Kerala Economic Review 2012

year) and 100, 76,854 domestic tourists (growth rate of 7.4% over previous year), accounting for Rs. 21,125 cr. in revenues.[18]

Table 8: Tourist Arrivals and Revenues in Kerala, 2008 to 2012

Year	Number of Tourists	Total Revenues (Rs. Cr.)
2008	8,190,179	13,130
2009	8,470,795	13,231
2010	9,254,340	17,348
2011	10,114,440	19,037
2012	10,866,552	21,125

Source: Tourism Statistics, Department of Tourism, Govt. of Kerala

As indicated in Table 6 above, the number of tourists has increased at a CAGR of 7.3% and the total revenues have increased at a high CAGR of 12.6% between 2008 and 2012. Among foreign and domestic tourists, **Ernakulam and Thiruvananthapuram** emerge as the top districts in terms of number of tourist arrivals.

According to the Kerala Economic Review 2012, the hotel sector is one of the key drivers of tourism industry in Kerala. Kerala has 14276 rooms in classified hotels, the maximum share (7795) contributed by 3-star category rooms. The key tourism hubs in the state are given in the table below:

Table 9: Key Tourism Destinations

Sector/Theme	Key Districts
Ayurveda	Ernakulam, Alappuzha, Kottayam, Thiruvanathapuram
Beaches	Thiruvananthapuram - Kovalam, Varkala, Alappuzha – Marari, Kasaragod – Bekal, Kannur
Backwaters	Kottayam, Alappuzha, Kollam, Ernakulam, Kozhikode
Hill stations	Idukki – Munnar, Wayanad, Thiruvananthapuram - Ponmudi
Wildlife reserves	Idukki - Periyar, Eravikulam, Ernakulam - Thattekad, Palakkad - Parambikulam
Heritage Tourism	Ernakulam, Kozhikode, Thiruvanathapuram

Source: Identification of Tourism Clusters – Kerala 2012, Department of Tourism, GoK

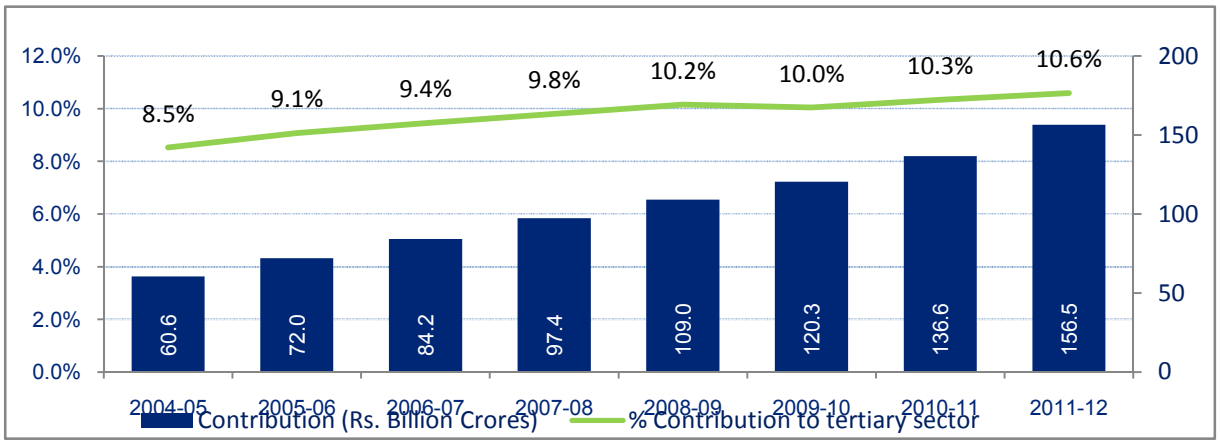
The Tourism Policy 2012 for the state clearly indicates the need to focus on emerging areas such as ***adventure tourism, promotion of local souvenirs and handicrafts, continued emphasis on backwater tourism and Ayurveda, promotion of homestays and environment-friendly tourism.***

Banking, Financial Services and Insurance (BFSI)

The Banking and Insurance sector has grown at 14.5% between 2004-05 and 2011-12. The contribution of the sector to the tertiary sector grew from 8.5% to 10.6% over the same time period.

[18] Department of Tourism, Govt of Kerala

Figure 18: Contribution of Banking and Insurance Sector, 2004-05 to 2011-12



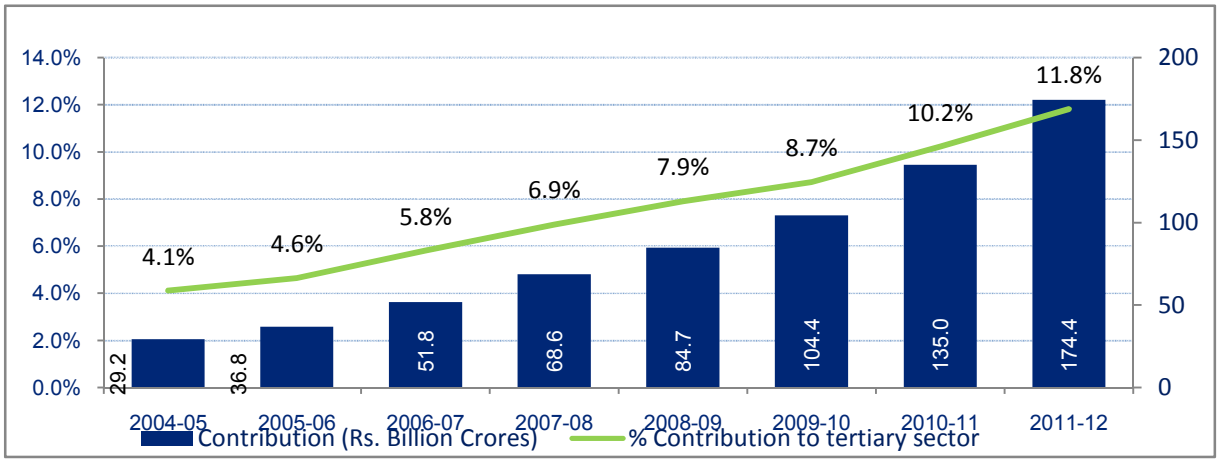
Source: CSO State Series, 2004-05 base prices

Communication

The Communication sector has recorded an impressive growth of 29% between 2004-05 and 2011-12 contributing 11.8% to the tertiary sector in 2011-12. This is primarily due to the growth of the telecommunication sector in the state. 99.9% of the state is reported to have achieved quality telecom connectivity through VSNL's International Communication Gateway and Optical Fibre Connectivity at the grass root level. Kerala was the first state to provide public telephones in every village and automate all telephone exchanges. Some of the major telecom operators in the state include BSNL, Bharti Airtel, Aircel Limited, Vodafone Essar, IDEA Cellular, Reliance Communications etc.

As of 2011-12, there were 101.8 lakh functioning BSNL telephone connections and 8.3 lakh broad band customers.[19]

Figure 19: Contribution of Communication Sector, 2004-05 to 2011-12



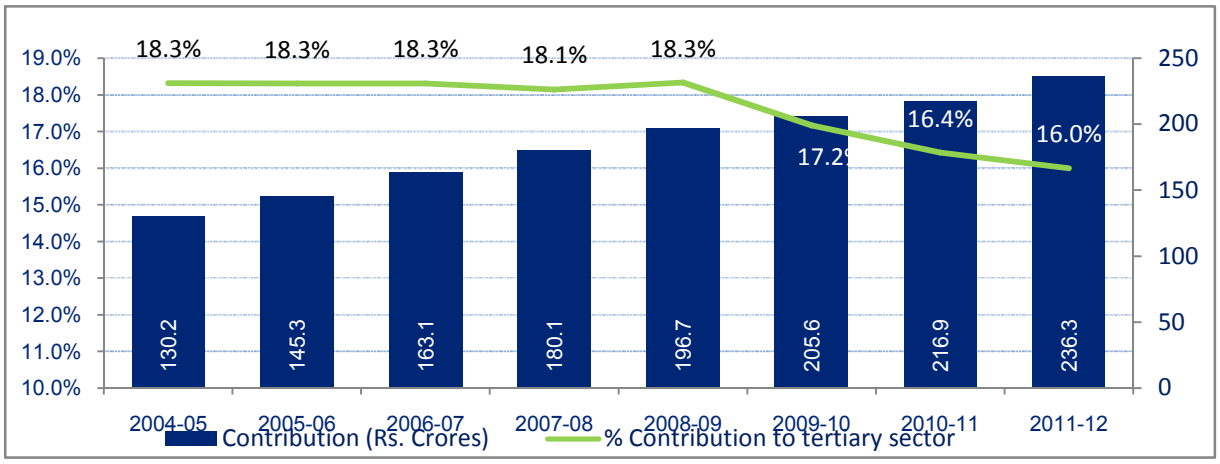
Source: CSO State Series, 2004-05 base prices

Real Estate and Business Services

This sector comprises real estate services, ownership of dwellings, rental services, computer and related activities (including IT/ITeS), business services etc. The sector grew at 8.9% between 2004-05 and 2011-12, contributing 16% to the tertiary sector in 2011-12.

[19] Kerala Economic Review 2012

Figure 20: Contribution of Real Estate and Business Activities Sector, 2004-05 to 2011-12



Source: CSO State Series, 2004-05 base prices

The IT sector is an important sector in the state with Technopark based in Thiruvananthapuram, the first CMMI level 4 assessed Technology Park in India spread over 330 acres, housing more than 260 companies and around 37,000 employees.[20] As of 2011-12, the total investment was reported to be Rs. 3000 cr. with turnover of Rs 2850 cr. and exports amounting to Rs. 2800 cr.

Other IT parks in the state include InfoPark Kerala (Ernakulam, Thrissur and Alappuzha) and Cyberpark in Kozhikode.

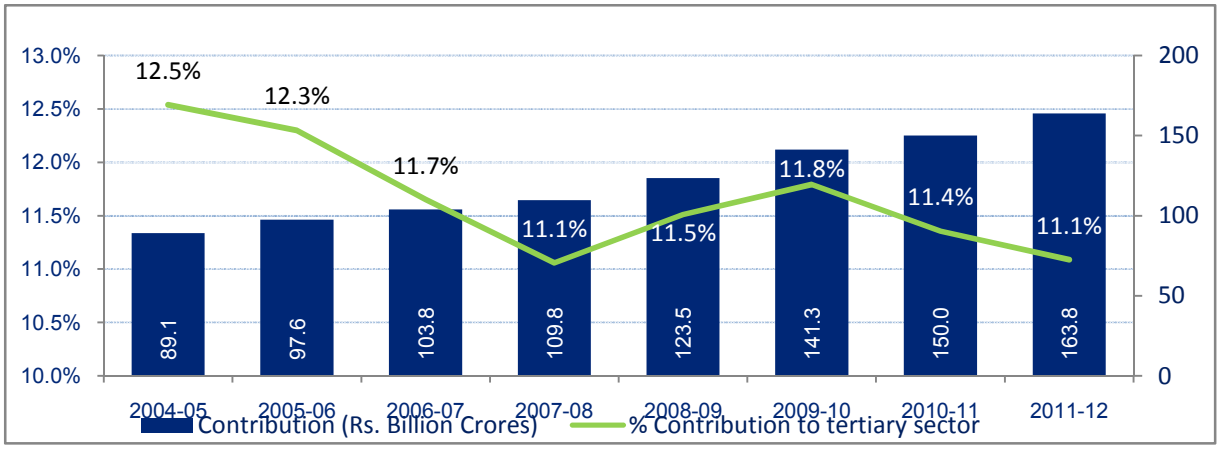
Transport and Storage

The transport and storage sector (including railways) grew at 9.1% between 2004-05 and 2011-12, contributing 11% to the tertiary sector in 2011-12. The contribution of this sector has seen a decline from 12.5% of tertiary sector in 2004-05 to 11% in 2011-12.

The state is well connected with a network of roads, railways, airports and water transport facilities. As of 2012, Kerala Public Works Department (PWD) maintained a total road length of 31811.6 Kms of State roads and 1542 Kms of National Highways and the Kerala State Road Transport Corporation (KSRTC) owned 5803 buses.[21] The rail network comprises 1257 kms with approximately 200 railway stations. The state has three airports located at Thiruvananthapuram, Ernakulam and Kozhikode. Kerala has a total coastline of 585 kms with 18 ports, the major port located in Kochi. Cargo-handling is presently taking place in the ports of Vizhinjam, Beypore (Kozhikode) and Azhikkal (Kannur).

[20] Kerala Economic Review 2012
[21] Kerala Economic Review 2012

Figure 21: Contribution of Transport and Storage Sector, 2004-05 to 2011-12

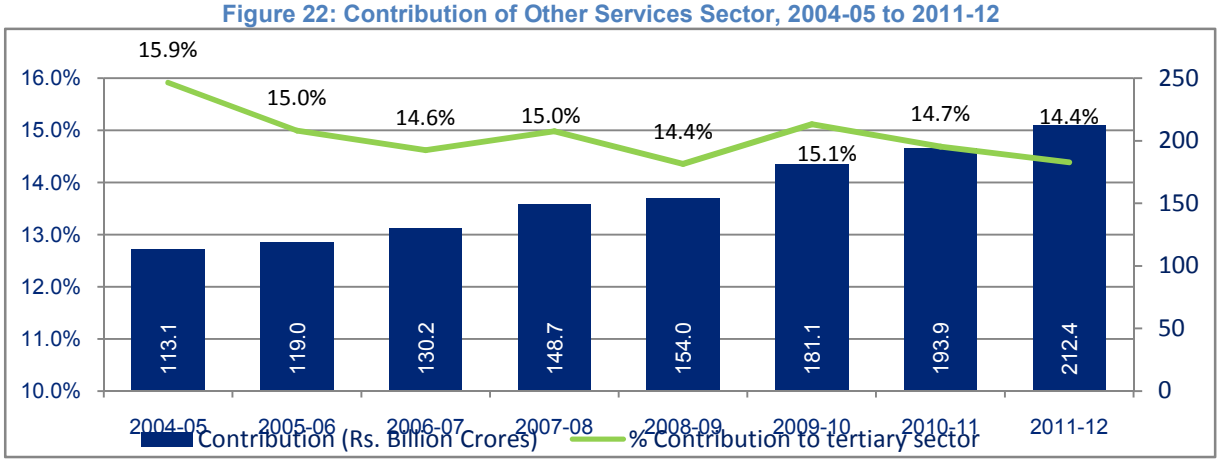


Source: CSO State Series, 2004-05 base prices

Other Services

This sector has grown at 9.4% between 2004-05 and 2011-12, contributing 14.4% to the tertiary sector in 2011-12. This sector includes services such as Education & Skill Development, Healthcare, Media & Entertainment, Informal sector services such as drivers, domestic help etc.

Figure 22: Contribution of Other Services Sector, 2004-05 to 2011-12



Source: CSO State Series, 2004-05 base prices

3.2.4 Promotional Initiatives – Thrust Sectors

The Industrial and Commercial Policy (2011) states that the Government aims to transform Kerala into an entrepreneur-led society from a wage-earning society.[22] Kerala Industrial Infrastructure Development Corporation (KINFRA) and Kerala State Industrial Development Corporation (KSIDC) have promoted certain industrial parks and growth centres across districts with certain thrust areas, as presented in the table below:

Table 10: Key Infrastructure Investments

District	Name of the Park	Thrust Areas
Thiruvanan-thapuram	Life Sciences Park	Industries and R &D institutions in key life science sectors like biotechnology, biomedical engineering, bioinformatics, pharmaceuticals and healthcare etc.
	KINFRA International Apparel Park	Apparel/garment manufacturing
	Film and Video Park	Animation, film & serial making, editing, media
Pathanam-thitta	KINFRA Industrial Park	General industries
	KINFRA Food Processing Park	Food processing industries
Alappuzha	Industrial Growth Centre	Coir clusters/ marine / silica/ cement-based Projects /Educational/ Engineering Projects
	Seafood Park	Pre-processing units (peeling), cleaning and storage
Ernakulam	Electronic Hub, Amballoor, Kochi	Electronic Hardware, display technologies, entertainment electronics, optical storage devices, passive components, electromechanical components, telecom equipment, transmission & signaling equipment, semiconductor designing, electronic manufacturing services (EMS) etc.
	Rubber Park	Rubber/rubber wood products, latex.
	KINFRA Small Industries Park	Rubber/plastic products, furniture, food processing, light engineering, packaging, ceramic products
	KINFRA Export Promotion Industrial Park	Export Oriented Units with export commitment in engg. products, textile and garments, food products, ceramic products, rubber/plastic/leather products, chemicals, pharmaceuticals/herbal medicines.
Thrissur	KINFRA Small Industries Park	Ceramic products, building materials, plastic products, spices, light and general engineering
Palakkad	Light Engineering Industrial Park	Light Engineering Units
	Western India KINFRA	Rubber/plastic products, textile and garments, coir products, chemicals, engineering products, food/agro products/ beverages, pharmaceuticals/ herbal medicine, ceramic products, leather products
Malappuram	KINFRA Neo Space	Electronics/ software industry/ IT enabled services /biotechnology
Kozhikode	Industrial Growth Centre	Small scale units, Separate Apparel Zone , Rubber park, Apparel Training and Design Centre
Wayanad	KINFRA Small Industries Park	Agro/food industries, garments, building materials/wood products, ceramic industries, plastic products, chemical products, paper, leather goods, general engineering
Kasaragod	KINFRA Small Industries Park	Building materials/ wood products, rubber/leather, ceramic and mineral based industries, light engineering, electronics repair/servicing, sericulture/silk processing, plastic, food processing, paper, garments.

Source: Kerala Industry Investor Guide 2012

[22] Industrial and Commercial Policy (Draft) 2011, Govt. of Kerala

The following sections outline the high-potential sectors identified for growth and employment in industry and service sectors.

Industries

The table below summarizes the major promotional initiatives in the thrust sectors:

Table 11: Key Industries and Initiatives

Sector	Promotional Initiatives
Khadi and Handlooms	• Extension/exposure programmes for weavers to improve their skills, knowledge and adopt better mechanization/technology • Production of niche products for up-market clientele
Handicrafts	• Promote new design and innovation • Professionalize marketing of products • Skill development training for artisans/craftsmen
Coir	• Skill Up gradation • Automated spinning/weaving • Development of geo-textiles as construction engineering material • Marketing Events like Coir Village, Coir Kerala
Bamboo	• Promote innovative technologies and R&D • Encourage use of bamboo for industrial purposes
Cashew	• Support full employment and better wages
Food Processing	• Processing and marketing of cardamom, pepper, coffee, tea, coconut, marine products, fresh water fish with focus on organic products. • Infrastructure support and specialized storage facilities
Hi-Tech Industries	• Focus on Bio-technology and nano-technology • Development of specialized parks and technology incubation facilities

Source: Industrial and Commercial Policy (Draft), 2011

Services

- A Services led growth strategy will be implemented with focus on **Healthcare, Entertainment, Education, IT, Tourism, Ayurveda, Logistics, Transport, Financial Services, Communication, Retail, Knowledge based & Non Polluting Industries.**
- To provide skilled and efficient manpower for these sectors, industry demand-based courses will be developed in education/skill development institute and plans will be explored to set up an Institute of Retail Management.
- Sector-specific training centres will also be initiated in Mission mode through PPP.

Information Technology

The IT sector is an important sector in the state and Kerala is known for establishing the first IT park in the country in Thiruvananthapuram in 1990. The objectives of the IT Policy 2012 include:

- Achieving up to 5 lakh direct employment in the ICT sector by 2020
- Establishing at least 3,000 technology start-ups by 2020
- Promote IT parks such as Technopark, Infopark and Cyberpark in a hub-and-spoke model around the districts of Thiruvananthapuram, Ernakulam and Kozhikode. Private IT parks will also be promoted and incentivised.
- The government will also promote growth of IT firms in Tier II and Tier III cities by providing appropriate incentives and concessions.

Tourism

Kerala is nationally and internationally recognized as a preferred tourist destination due to unique offerings such as backwater tourism, Ayurveda, medical tourism etc. Some of the key objectives of the Tourism Policy 2012 include:

- Promoting Kerala as a tourist destination in markets such as USA, Scandinavia, Russia, China, South Africa, Middle East and Malaysia
- Developing and promoting *Ayurveda, backwaters, adventure, eco-tourism, and Medical Tourism* as special tourism products
- Promoting new backwater tourist destinations other than Alappuzha and Vembanad Lake.
- Initiating 'Life Saving Volunteer' Scheme in areas close to water bodies by training volunteers from local communities in life guard services
- Employing Tourist Wardens in all major tourist destinations, a significant proportion being unemployed women
- **Entrepreneurship Development Programme** to develop Local Level Entrepreneurs (LLE) in identified areas
- Promoting local souvenirs by making local souvenir shops mandatory in all classified tourism units
- Training and Capacity Building through the **Let's Learn Capacity Building Programme**. The Programme aims to train at least 25000 employees in the tourism sector till 2017
- Encouraging ITIs and training institutes to offer more industry demand based courses in tourism.

3.3 Education and Skill Development

Kerala is the most literate state in the country, with literacy recorded at 94%, compared to the India average of 74.0%.

The male literacy rate was reported to be 96.1% and female literacy rate was recorded at 92.1%.

The literacy levels in urban and rural areas are also not too diverse with 94.9% urban literacy and 92.9% rural literacy rates.

As indicated in the adjoining map, Pathanamthitta district has the highest literacy rate (96.9%) and Palakkad district has the lowest literacy rate (88.5%).

Table 12: Literacy Profile of Kerala

Literacy (2011)	Kerala	India
Overall Literacy Rate (%)	94.0%	74.0%
Male Literacy Rate (%)	96.1%	82.1%
Female Literacy Rate (%)	92.1%	65.5%
Urban Literacy Rate (%)	94.9%	84.9%
Rural Literacy Rate (%)	92.9%	68.9%

Source: Census 2011

The general education levels of the population are also high in Kerala, compared to the all-India levels, as indicated in the table below. Per 1000 persons, 545 men and 509 women are educated up-to middle-school, comprising the largest proportion in terms of education levels. The next highest proportion is of secondary and higher-secondary school persons with 277 men and 271 women (per 1000). 92 men and 97 women were estimated to be graduates and above, only slightly higher than the all-India estimation for men at 90 (per 1000).

It is interesting to note that the share of women graduates is higher than men graduates in the respective state populations. 53 per 1000 men and 36 per 1000 women were estimated to have a diploma or certificate in Kerala, indicating the relative preference for such certifications among men.

Table 13: Distribution of population (15 years and above) by education level (per 1000 persons), 2009-10

Education Level (per 1000)	Kerala			India		
	Male	Female	Person	Male	Female	Person
Illiterate	33	86	61	214	423	317
Literate up to middle school	545	509	526	422	346	385
Secondary and Higher Secondary School	277	271	274	259	169	215
Diploma/Certificate	53	36	44	15	6	11
Graduate and Above	92	97	95	90	56	73

Source: NSS Report 551 - Status of Education and Vocational Training in India

3.3.1 School Education

Kerala has a total of 15283 schools with total enrolment of 46.7 lakh students. The number of schools varies from a maximum of 1596 for Malappuram to 425 in the case of Wayanad.
Accordingly, the total enrolments in primary schools (I-VIII) also vary from 502912 for Malappuram to 104517 in the case of Wayanad. The top 3 districts in terms of number of schools are Malappuram (1596), Kannur (1466) and Kozhikode (1412) while in terms of enrolment (I-VIII), the top districts are Malappuram (502912), Thrissur (317275) and Kozhikode (296258).
The total enrolments in higher secondary schools are 485214 students with girls accounting for 54% of the total enrolments.

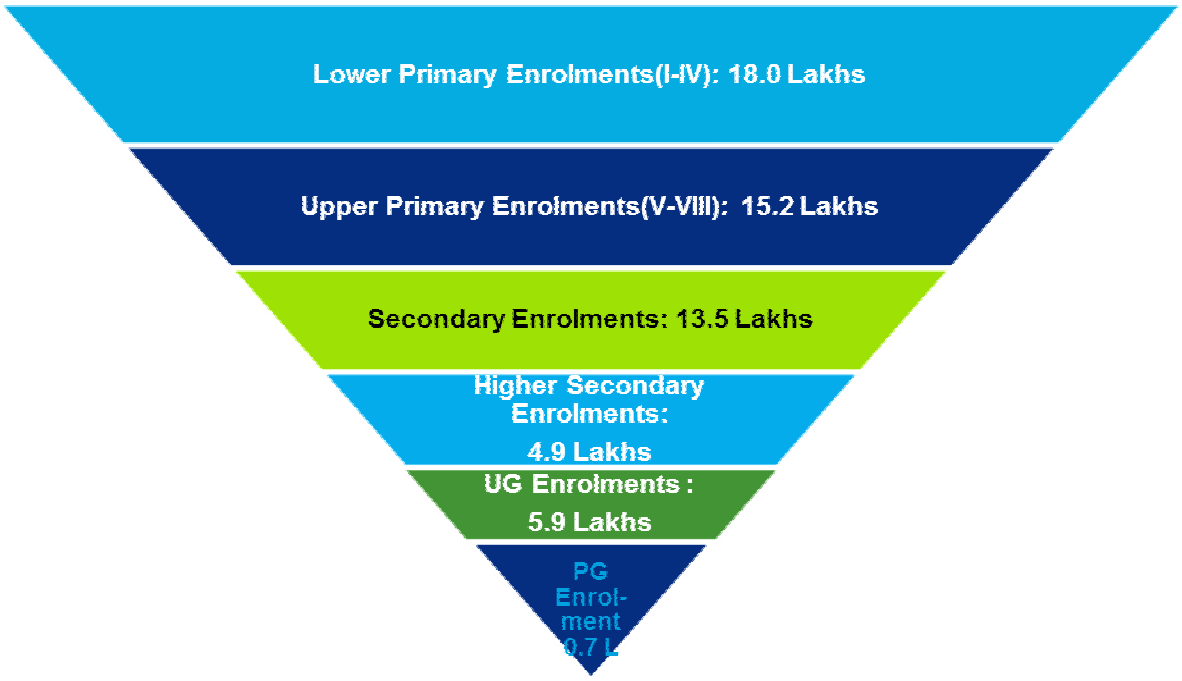
Table 14: School Education Indicators - Kerala

School category	Number
NUMBER OF SCHOOLS	
Lower primary Schools (I-IV)	7872
Upper Primary Schools (V-VII)	3761
High Schools (VIII-X)	3650
Total	15,283
TOTAL ENROLMENT	
Lower primary Schools(I-IV)	1795723
Upper Primary Schools (V-VII)	1521904
High Schools (VIII-X)	1350746
Total	4,668,373
TOTAL TEACHERS	
Lower primary Schools(I-IV)	48676
Upper Primary Schools(V-VII)	56791
High Schools (VIII-X)	77782
Total	183,249

Source: Kerala Economic Review 2012-13,DISE Report 2010-11 and statistics division report

As indicated in the figure below, the enrolment figures for 2012 are 33.2 lakhs for primary education, 13.5 lakhs for secondary education, 4.9lakhs for higher secondary education and 6.5 lakh for higher education.

Figure 23: Education Enrolments - Kerala 2012



Source: DISE Report 2010-11, SEMIS report 2010-11, MHRD 2010-11 All India Higher Education Survey

3.3.2 Higher Education

As per the All India Survey of Higher Education 2011, Kerala has a Gross Enrolment Ratio (GER) of 21.9. The GER for females (25.1) is significantly higher than GER for males (18.8). Kerala has a total of 9 universities, of which 4 universities offer courses in various fields while Sree Sankaracharya University of Sanskrit, Kochi University of Science and Technology and Kerala Agricultural University offer specialized courses. National University of Advanced Legal Studies (NUALS) established in 2005 and the Central University established in Kasargod district are the other universities in the state.

The distribution of higher education institutes in the district varies from 144 colleges (16.1%) for Ernakulam district to 10 (1.6%) for Wayanad. Thiruvananthapuram and Ernakulam district account for more than 27% of the institutes of higher education in the district.

As depicted in the table below, there are 153 engineering colleges with a sanctioned intake of 48,988. The distribution of engineering colleges varies from 29 in the Ernakulam district and 24 in the Thiruvananthapuram district to 1 in Wayanad district. There are 59 polytechnics across the state with approximately 10,500 sanctioned capacity.[23]

In terms of institutes related to medicine, Kerala has 66 medical colleges (including AYUSH), 111 Nursing colleges, 29 B.Pharm and 28 Paramedical and Applied Sciences colleges in the state with sanctioned intake of 6957, 7363, 2641 and 1143 respectively. Thiruvananthapuram and Ernakulam are the major

[23] Board of Technical Education, Govt of Kerala

centres for Medical Education. Kasaragod, Idukki and Wayanad do not have any medical college for pursuing MBBS or Masters.
Thrissur has 2 institutes for agriculture while Thiruvananthapuram, Kasaragod and Ernakulam have one institute each, with a total intake of 289.
There are 16 law and 88 Management colleges in the state with a sanctioned intake of 2004 and 7950 respectively. Thiruvananthapuram (4) has the highest number of law colleges while Ernakulam (26) has the maximum number of Management institutes in the district.

Table 15: Higher Education in Kerala (2012)

Educational Infrastructure	Number of Institutes (Kerala)	Sanctioned Intake
Engineering	153	48,988
Arts Science and Commerce Colleges	414	105418
Agriculture	5	289
Medicine (including AYUSH)	66	6,957
Nursing	111	7,363
BPharm	29	2,641
Paramedical and Applied Sciences	28	1,143
Law	16	2,004
Management	88	7,950

Source: Directorate of technical education, Kerala University website, CEE Website, AICTE, List of Affiliate medical Colleges
**Enrolment figures are provided for arts, science and commerce colleges*

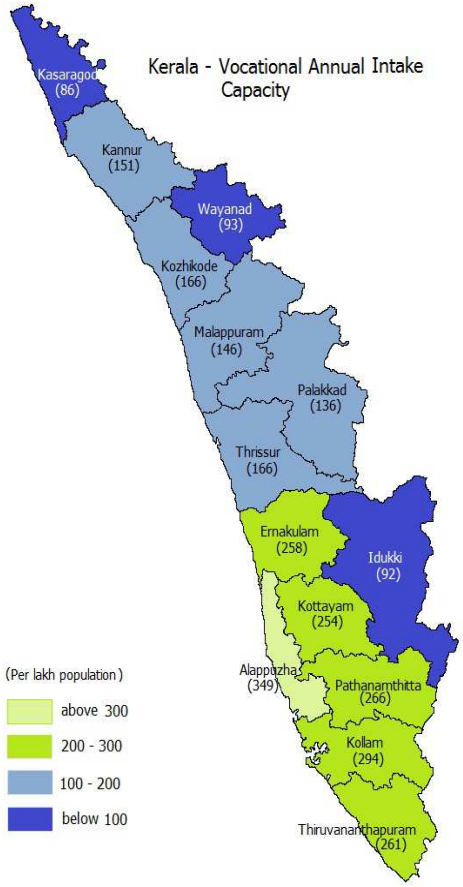
Some of the Centres of Excellence in Kerala include Technopark, Vikram Sarabhai Space Centre, Rajiv Gandhi Centre for Biotechnology, Indian Institute of Science Education & Research, Cyberpark, IIM Kozhikode, National Institute of Technology (formerly known as REC), Kochi University of Science and Technology (CUSAT), National Institute of Oceanography (Regional Centre), Central Marine Fisheries Research Institute, National Institute of Fisheries Post Harvest Technology & Training, Infopark, etc.[24]

[24] Emerging Kerala 2012

3.3.3 Vocational Education

In terms of vocational training infrastructure, Kerala has 389 vocational higher secondary schools[25] (261-Govt., 128-Aided)[26]. It has a total of 76 ITIs and 536 ITCs[27]. The total sanctioned capacity is 67,258.

Figure 24: Vocational Intake Capacity in Kerala



The adjoining map indicates the annual intake capacity among ITIs and ITCs per lakh population across all districts.

It is interesting to note that most southern districts have a high annual intake capacity (200 and above per lakh population) while northern districts have lower annual intake capacity (below 200 per lakh population).

The districts of Idukki (92), Wayanad (93) and Kasaragod (86) are backward districts in this aspect, with low annual intake capacity of vocational training per lakh population, relative to all other districts in the state

Among the districts, Thiruvananthapuram (73) has the maximum number of ITI/ITCs followed by Malappuram (65) and Kollam (62). Wayanad (7) has the lowest number of ITI/ITCs in the state. The districts of Kasaragod (12), Idukki (12) and Wayanad (7) have the least number of ITI/ITCs. It may be noted that the government ITIs form only 12.4% of the total ITI/ITCs in the districts. Thus private providers are predominant.

Additionally, under the Skill Development Initiative Scheme of Govt. of India, there are approximately 250 registered Vocational Training Providers (VTPs) in the state, with around 70 VTPs estimated to be functional[28]. According to the Progress Report on the Skill Development Initiative Scheme[29] (April to July 2013), 54 Vocational Training Providers were registered in 2013, training a total of 2900 trainees.

S B Global is the first private training institution based in Kerala to be approved by NSDC as a Skill Development Partner. Currently, SB Global has training centres at Kochi, Kottayam, Thrissur and Kannur. Training is currently offered in the following sectors and trades as part of NSDC program:

- Travel, Tourism and Hospitality: Ticketing, Tour operations
- Transport and Logistics: Supply chain, Airport services
- Education and Skill Development: School Teacher
- IT: System administration & Management
- Others: Office Administration & Management, Financial Accounting & Management

Other NSDC partners with operations in Kerala include Future Sharp, IIJT and Talent Sprint.

[25] VHSE schools were introduced with an objective to impart at plus two level specific trade education in order to achieve self/wages/direct employment as well as vertical mobility. The trades vary from welding, plumbing to TV repair.
[26] Kerala Economic Review 2012-13
[27] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[28] Minutes of Skill Development Initiative Scheme held on 7th August 2013, Kerala State Industrial Training Department Website
[29] Directorate of Employment and Training, Govt. of Kerala

The table below provides a list of some of the ITCs as follows:

Table 16: Vocational Education in Kerala

District	Major Private Providers
Thiruvananthapuram	Bishop Peter Pereira Memorial ITC, N I Institute of Engineering, M P Industrial Training Centre, Bishop Vincent Dercele Memorial ITC
Kollam	Malik Dhinar ITC, Sivarajapillai Memorial ITC, Marthoma ITC, Mata Amritandamayi Mission Trust
Pathanamthitta	Michael Mar Dionysious Memorial ITC, Mezhuveli Pan ITC, Mar Phelizenos ITC, Mannam Centenary Memorial ITC
Alappuzha	Pius X, Bharat Institute, Hindustan Inst.of Computer Tech., Sobha ITC,
Kottayam	Madonna Institute of Electronics Engg. & ITC, Mary Matha ITC, Mathews Mar Ivanios ITC, Leejoy ITC
Idukki	CSI ITC, Guru ITC, Mar Gragorious Memorial ITC, KSDS ITC
Ernakulam	Social Welfare Technical, Little Flower Engineering, Kuriakose Chavara Memorial ITC, Balanagar Technical Institute, Skiltek
Thrissur	Thozhil Abhasana Peedam ITC, Good Sheperds ITC, College of Technology ITC, Victory ITC
Palakkad	Parakkotti Krishnam Memorial ITC, St. Mary ITC, Mount Seena ITC
Malappuram	Valvannur Bafukhy Yetheem Khana ITC, M D P Sangham ITC, Hamad ITC, Madin ITC, Ideal ITC
Kozhikode	J D T Islam ITC, Markaz ITC, Indus Data System ITC, MHES ITC, Salafi College of Engineering ITC
Wayanad	Eldorado ITC, Athanasian Institute, Mar Athanosios ITC
Kannur	Sree Narayana, Nirmala, Universal ITC, BhagavadPada ITC
Kasaragod	SA-Adiya ITC, Aliya ITC

Source: DGET Website

3.3.4 Government Initiatives towards Skill Development

The Kerala Government has initiated the State Skill Development Project, to be implemented jointly by the General Education, Higher Education, Labour (Employment & Training) and Local Self Government Departments.

The project aims to cover 14.8 lakh people over the Twelfth Five Year Plan Period.[30] The Project aims to focus on certain 'dream projects' in ten sectors including **Hospitality, Organized Retail, Healthcare, IT & ITES, Event Management, Business Services, Media and Entertainment Industry, Banking and Finance Sector, Construction and Agriculture.** The project comprises a preventive and curative component.

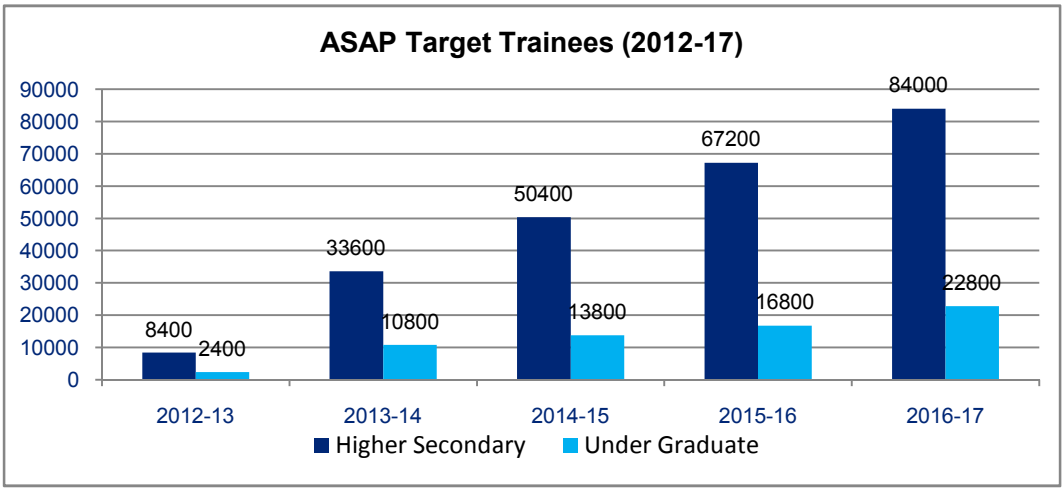
Additional Skills Acquisition Programme (ASAP)

The preventive aspect is the implementation of the Additional Skill Acquisition Programme (ASAP) by General and Higher Education Departments.

The programme will provide vocational training to Higher Secondary School Students and B.A, B.Sc., B.Com Students at the Undergraduate levels in colleges. The programme is free for students from BPL, SC/ST, OBC etc. provided they successfully complete the courses. For other students, 75% of the fees will have to be paid by the student, and 25% incentive will be provided for those successfully completing the course. ASAP has a target of training 3.1 lakh trainees between 2012-17 with a budget of Rs. 633.3 cr. The program is targeted to be implemented in 2100 higher secondary schools and 575 Under Graduate institutes.

[30] State Skill Development Project – Preliminary Project Report, GoK, 2012

Figure 25: ASAP Targets (2012-17)



Source: State Skill Development Project – Preliminary Project Report, GoK, 2012

Additional Skills Enhancement Programme (ASEP) – Kerala Academy of Skills Excellence

The curative component, termed as the Additional Skills Enhancement Program (ASEP), will be implemented by the Labour Department through the Directorate of Employment and Training.
ASEP aims to provide skill up gradation to ITI students and registered applicants through Employment Exchanges with services including skill mapping and trainings to improve their employability.
Some of the key components of the program include:

- Conversion of Employment Exchanges to Employability Centres
- Online Database of Registrants through Job Portal
- Up gradation of ITIs to include virtual classrooms facilities and ISO certification
- Training of Employability Managers / Mentors / Master Trainers
- Formation of Industry Employability Councils
- Encourage skills up gradation through Modular Employable Skills (MES) conducted by registered VTPs
- Skill Mapping, Grading and Counselling

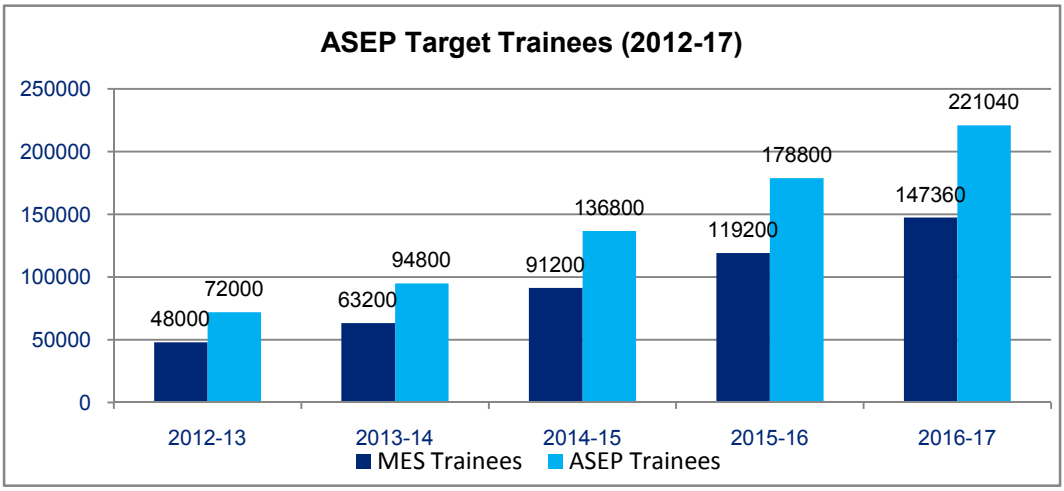
Kerala Academy of Skills Excellence (KASE)
In particular, the Kerala Academy of Skills Excellence (KASE) has been set up as a nodal agency to promote skill development activities in the state under the Department of Labour and Rehabilitation, Government of Kerala[31].
The mandate of this agency includes setting up 'world class institutions' for skill development through SPVs, monitoring and regulating such institutions, supporting international certification to workers and ensuring international mobility for workers through technology and soft skills training.
Some of the key initiatives of KASE include:

- Construction Academy at Chavara (Kollam) on PPP mode.
- Multi-dimensional Skill Development Centre proposed with the help of Smart City at Kochi for the Hospitality Sector;
- Initiatives in ITIs of Pallickathodu (Kottayam) and Kalpetta (Wayanad) under Centre of Excellence initiative.

[31] Kerala Academy of Skills Excellence (KASE) Website

- Vocational Training Providers (VTPs) registering for Skill Development Initiative schemes under Modular Employable Scheme (MES) to provide training to students in the hospitality sector.[32]
- MoU with Security Knowledge and Skill Development Council (SKSDC) to establish a Centre of Excellence for Training in Security Services sector.
- Academy for Nursing to cater to global demand for professionally trained nurses to equip them with latest machine-operating skills and soft skills, in PPP mode
- PPPs are also being planned to set-up Skill Training Centres in the Automotive sector, High-Tech Automation and Mechatronics, Oil and Rig, Banking and Finance etc.
- Entrepreneurial Skill Development Centre in collaboration with the Entrepreneurship Development Institute in Ahmedabad.

Figure 26: ASEP Targets (2012-17)



Source: State Skill Development Project – Preliminary Project Report, GoK, 2012

Kudumbashree

The Local Self Government Department is conducting skill development programs to impart low-end skills for semi-skilled and minimally skilled personnel through the Kudumbashree Mission. SSDP will aim to integrate these programmes into its framework and scale up the programs with a 'mission mode institutionalized approach'.

These initiatives will be focused on trainings for migrant workers in sectors such as construction, or sectors with huge shortage of manpower such as agriculture-allied activities and informal sector activities such as home-based services.

Central Government Initiatives (XII Five Year Plan)

Apart from the State initiatives outlined above, there are some important Central Government schemes to promote employment and skill development in the state, as detailed in the table below:

Table 17: Key Central Schemes for Employment and Skill Development

Ministry/ Department	Schemes/ Programmes/ Institutions	Key Highlights
Human Resource Development	Vocationalisation of Education	Aims to strengthen vocational education in Classes XI-XII
	Adult Education & Skill Development Scheme	The existing Literacy Campaigns & Operation Restoration and Continuing Education for Neo- Literates merged into one single scheme of Adult Education & Skill development
	Support to NGOs/ SRCs	Financial support will be provided to NGOs for imparting literacy

[32] Kerala Economic Review 2012

Ministry/ Department	Schemes/ Programmes/ Institutions	Key Highlights
	/Institutions for Adult Education & Skill Development	to adult non-literates in the age group of 15-35 years.
	Support for skill-based higher education including community colleges	Special emphasis will be placed on expansion of skill-based programmes in higher education through Community Colleges
	Support for the Polytechnics in the States	Setting up new polytechnics in unserved areas, strengthening infrastructure in existing polytechnics, community polytechnics and Women hostels in polytechnics.
Labour and Employment	Training schemes	Upgradation of ITIs into CoEs , Hi Tech Training etc.
	Welfare of SC, ST and other backward classes	Coaching-cum-Guidance Centres for SC/ST to provide confidence building training programmes and vocational guidance for candidates belonging to that category
	Infrastructure Development & Capacity Building	Special emphasis has been accorded to comprehensive development of clusters. Infrastructural support has also been added under this programme.
	Special Scheme on MSME	Provide relief and incentives to the MSMEs, accompanied by institutional changes and detailing of programmes, to be achieved in a time bound manner
Micro, Medium and Small Enterprises	Prime Minister's Employment Generation Programme (PMEGP)	Generate employment opportunities through self-employment ventures/projects/micro enterprises
	Promotion of Khadi Industries	Budgetary allocation under Khadi grant or promotion and development of khadi, and financial assistance for revitalization of KVI institutions
	Other Village Industries	Promotion and development of village industries through technology up gradation, improved market access through facilitating participation in exhibitions at International, National, State and District levels
Communic-ations and Information Technology	Manpower Development (including Skill Development in IT & IT for Masses)	Ensure availability of trained human resources for the manufacturing & service sectors of electronics and IT industry.
Textiles	Human Resource Development (ISDS)	The Scheme is part of a Government wide focus on creating Skill i.e. needed to enhance the competitive advantage of India
Rural Development	Aajeevika – National Rural Livelihood Mission	Demand driven programme and the states will formulate their own poverty reduction action plans Provide a professional support structure for programme implementation at all levels for National to Sub district level in different streams.
	Mahatma Gandhi National Rural Employment Guarantee Scheme	Provide for the enhancement of livelihood security of the rural households by ensuring a legal right for at least 100 days of unskilled wage employment to willing adult members
Urban Development	Swarna Jayanti Shahari Rozgar Yojana (SJSRY) / National Urban Livelihoods Mission (NULM)	Provides for employment and skill development to the urban unemployed or underemployed poor.
Panchayati Raj	Backward Regions Grants Fund	The Scheme aims at focused development programmes for backward areas which would help in reducing the imbalances and speed up development. In Kerala, the scheme is implemented in Palakkad and Wayanad districts.
Tourism	Hunar Se Rozgar Tak	Since 2012, the Central Govt. funded 'Hunar se Rozgar Tak' (HSR) program is also being implemented by KITTS and KTDC to impart skill training to personnel in food production, housekeeping, front office management for 6 to 8 weeks. .

Source: Interim Report to State Planning Board - 12th Five Year Plan Expert Committee on Employment and Skills Development

Other Key Initiatives

Setting up Community Colleges on Pilot Basis, Department of Technical Education

The Department of Technical Education proposes to set up community colleges for skill development. The scheme will be implemented in 5 selected polytechnics in 2013-14. The selected courses for the pilot phase include Diploma in Auto Engineering, Diploma in Printing Technology and Diploma in Hospitality Management. The industry partners are Deedi Automobiles, D C Books and Deedi Resorts Pvt. Ltd. These courses will be open to the community, and will be developed in line with NVEQF.

NORKA (Non-Resident Keralites' Affairs Department)

NORKA Roots, a field agency of the Department of NORKA was established by the Govt. of Kerala in 2002 to safeguard the interests of Non-Resident Keralites (NRKs). NORKA imparts training to emigrants from Kerala to ensure better employability in overseas markets.

The Skill Up gradation programmes include technical training, communicative English, computer skills, soft skills etc. NORKA Roots is now conducting Skill Up gradation & Re-integration Training Programmes in collaboration with ITIs under the Department of Industrial Training. NORKA also conducts pre-departure orientation programs in all districts for those who are leaving for employment abroad.

- Some of the courses conducted by NORKA targeted primarily at ITI and polytechnic students seeking jobs abroad include Web Designing, Graphic Designing, Interior Decoration and Design, Hotel Management, Automobile Mechanic, Electrical and Electronics trades, Civil Designing and Auto-CAD, Crane Operator, Fork Lift Operator etc.
- During 2012-13, NORKA has successfully imparted training to 3300 candidates enrolled in 46 Government institutes and 19 private institutes across Kerala. In 2013, 64 batches of 20 to 30 candidates are being trained in 28 Government and 19 private institutes.
- NORKA is also planning to start a database of returning Non-Resident Keralites, who can be deployed as master-trainers and as examiners of relevant courses conducted in Government and private institutes.[33]

Department of Tourism

Since the tourism sector is a focus sector for the state, a number of capacity building programs are conducted for taxi drivers, auto rickshaw drivers, tourism police etc. in areas such as communication, etiquette, awareness of rules/regulations etc.

- Let's Learn: In 2010, the Kerala Institute of Tourism and Travel Studies (KITTS) and Department of Tourism developed 'Let's Learn Program' to enhance quality of service delivery in the hospitality sector for housekeeping staff, front office staff, F&B staff working in the hospitality sector. The program has trained around 8000 to 9000 personnel across the state and has been funded by Govt. of India.
- In 2011-12, the first state government funded skill development program in Tourism & Hospitality was initiated to train personnel to be employed as travel consultants, tour guides, nature guides, naturalists, souvenir makers etc. The target of the program is to train 1800 candidates by December 2013.
- Hunar Se Rozgar Tak: Since 2012, the Central Govt. funded 'Hunar se Rozgar Tak' (HSR) program is also being implemented by KITTS to impart skill training to personnel in food production, housekeeping, front office management for 6 to 8 weeks. This is a free course, funded by Govt of India, with certificate awarded by GoI.

[33] Note on Skill Upgradation and Reintegration Programme for NRKs, NORKA Roots, Kerala

- Responsible Tourism: KITTS is also the nodal agency for the 'Responsible Tourism' Initiative to provide capacity building to Kudumbashree members. Under the same initiative, trainings are being imparted to the public in Kumarakom (Kottayam district) in life-saving techniques.

Kudumbashree

Kudumbashree is a key poverty-eradication project launched by the Govt. of Kerala in 1998, focused on women empowerment through micro-credit, entrepreneurship and skill development initiatives. Some of the existing capacity building programmes of Kudumbashree include:

- Organization Training: This training focuses on leadership and management skills for women, having trained approximately 10 lakh women to date.[34]
- Enterprise Training: Skill development and Orientation programs to enhance business capabilities of individual and group entrepreneurs.
- Financial Services Training: Training in Micro Finance to support communities in engaging with financial institutions effectively.
- Social and Gender Empowerment Training: Training on life skills and self-awareness targeted at the marginalized communities.

Entrepreneurship Development Initiatives

MSME Development Institute (DI)

The MSME DI in Thrissur conducts multiple programs across districts focused on entrepreneurs in the MSME sector with emphasis on Entrepreneurship Development Programmes (EDP), Management Development Programmes (MDP), Entrepreneurship Skill Development Programmes (ESDP), Motivation Campaigns, Awareness Programmes etc.

- In 2011-12, 60 Industrial Motivation Campaigns, 10 EDPs, 61 ESDPs, 4 Business Skill Development Programmes and 13 MDPs were conducting, achieving the target of training 6393 trainees.
- The Entrepreneurship Skill Development Programmes (ESDPs) imparted skill trainings in 30 manufacturing related areas and 31 service sector areas in 2011-12. *Readymade Garments and Embroidery (18%) was the top sector in terms of number of trainings, followed by Beauty Therapy (11.5%), Bag Manufacturing (9.8%), Textile Designing (8.2%) and Fashion Designing (6.6%).*[35]

Kerala State Self Entrepreneur Development Mission

The Mission, started in February 2012, aims to provide support to 10,000 Micro and Small Enterprises, *training to 50,000 entrepreneurs*, and generate 1 lakh direct employment and 5 lakh indirect employment. The scheme is being implemented by the Kerala Financial Corporation.[36]

[34] Kudumbashree Website
[35] Annual Report 2011-12, MSME DI, Kerala
[36] Kerala Financial Corporation Website

3.4 Migration

Kerala has historically witnessed high levels of emigration of Keralites to other states and countries especially the Middle East leading to a shortage of locally available skills/manpower. This has naturally resulted in an inward migration of labour from other states of the country to meet the needs of Kerala's economy. This chapter presents an overview of key characteristics of migration of Keralites to other states and countries, and migration of labourers from other states to Kerala.

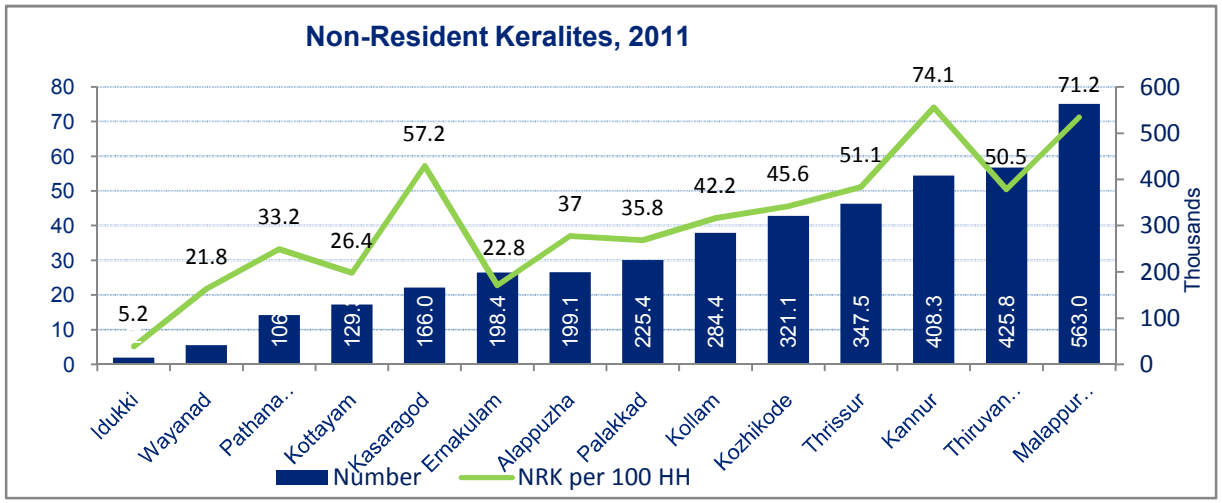
Migration of Keralites

Non-Resident Keralites

According to the Kerala Migration Survey[37] published by the Centre for Development Studies in 2011, the number of emigrants[38] from Kerala residing abroad is estimated to be 22.8 lakhs. Malappuram district had the largest number of emigrants (22%) and 90% of Kerala's emigrants reside in the Middle East in countries such as UAE and Saudi Arabia. There is also a trend of return migration with emigrants returning to Kerala, estimated at 11.5 lakhs which has implications for skill development in terms of re-skilling/up skilling of returning migrants to the state. Increasingly, migration studies point to a trend of declining emigration from Kerala owing to factors such as demographic transition, improved life styles in Kerala/India, increasing cost of emigration etc. In 2011, the Kerala Migration Survey estimates that nearly 82% households had no emigrant member.[39]

Non-Resident Keralites (NRKs), defined as the sum of emigrants and return emigrants, thus amounted to 34.3 lakhs in 2011. Malappuram district had the highest share of NRKs at 5.6 lakhs, while Idukki district had the least with 0.14 lakh NRKs. In terms of NRKs per 100 households, Kannur district had the highest share (74.1), followed by Malappuram district (71.2).

Figure 27: Number and Proportion of Non-Resident Keralites, 2011



Source: Inflexion in Kerala's Gulf Connection, Report on Kerala Migration Survey 2011

Inter-State Migrants

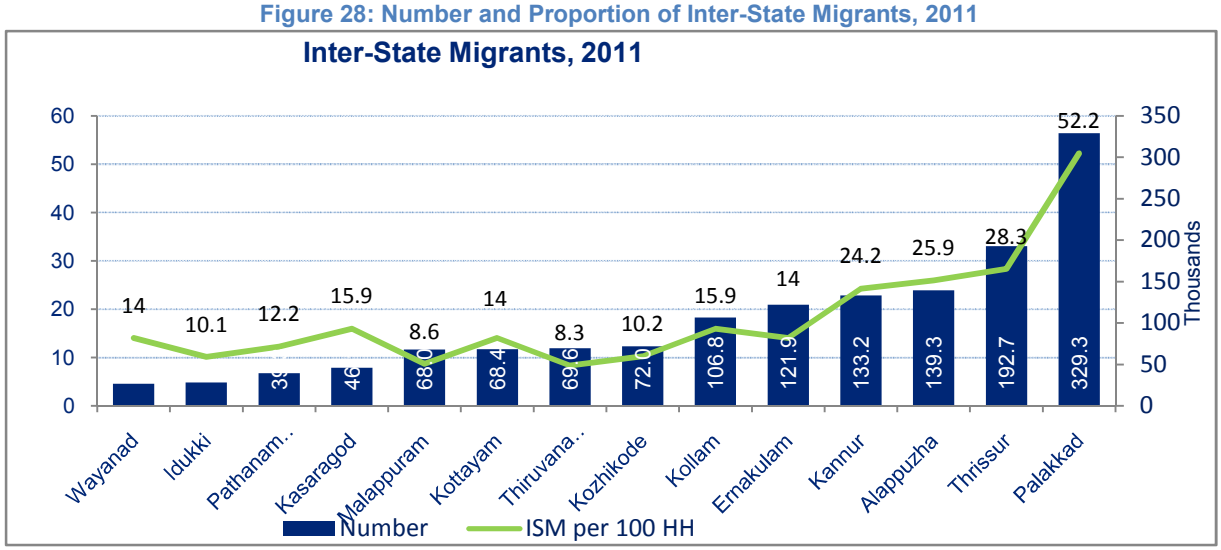
In terms of migration to other states in India, the out-migrants are estimated at 9.3 lakhs while the number of out-migrants returning to live in Kerala is estimated at 5.1 lakhs in 2011.

[37] Inflexion in Kerala's Gulf Connection, Report on Kerala Migration Survey 2011, CDS 2012
[38] Emigrants are defined as persons who are usual members of a household in Kerala but living outside at the time of the survey
[39] Kerala Economic Review 2011

Karnataka, Tamil Nadu and Maharashtra are the leading states for out-migration. Palakkad district accounted for the highest number of out-migrants. Thus, north Kerala, (the Palakkad-Malappuram corridor) is an emigration hub. Pathanamthitta district, which led all the districts in out-migration in 1998, has dropped to the bottom in 2011 and studies indicate a similar trend to be replicated in other districts in terms of migration transition in the next decade.

The composition of out-migrants and return out-migrants is termed as Inter-State Migrants (ISM), amounting to 14.4 lakhs in 2011. As indicated in the figure below, Palakkad district had the highest share of ISM at 3.3 lakhs and the highest proportion of ISM per 100 households (52.2). Wayanad district had the least number of ISM at 0.26 lakhs, and Thiruvananthapuram district had the least share of ISM per 100 households (8.3).

Figure 28: Number and Proportion of Inter-State Migrants, 2011



Source: Inflexion in Kerala's Gulf Connection, Report on Kerala Migration Survey 2011

Remittances

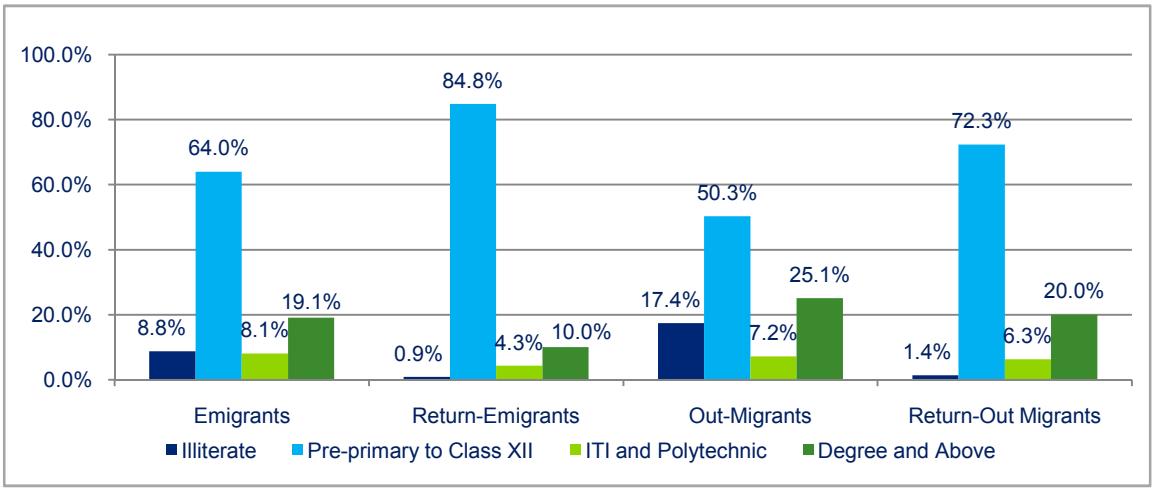
A related aspect is the volume of remittances to Kerala from abroad, estimated at Rs. 49,675 Cr. ,in 2011. Malappuram district received the largest share of remittances, indicating the predominance of the northern districts in migration. The survey estimated the increase in remittances from emigrants to be close to 5% between 2008 and 2011. Although the state derives significant economic benefit due to this, the resulting brain drain has had a negative impact in terms of availability of qualified manpower from within the state.

Educational Attainment

The survey estimates that more than 30% of highly qualified (in terms of educational qualifications) Keralites reside abroad, and 25 -30% of highly skilled workers reside outside the state.

The figure below indicates the education profile of the migrant population, as estimated in 2011. Among the emigrant population, 64% fall in the category of having attained education between Pre-primary to Class XII, 8.1% having attained a ITI certificate or a polytechnic diploma and 19.1% with a degree or above. Similarly among the out-migrant population, 72.3% fall in the category of having attained education between Pre-primary to Class XII, 6.3% having attained a ITI certificate or a polytechnic diploma and 20% with a degree or above. Given that the percentage of professionally qualified or certified (those with ITI certificate, diploma, degree etc.) emigrants and out-migrants are relatively less, compared to those with education qualification of Class XII or below, the implications for the government include raising the employability of these workers by skilling them through professional certifications which are recognized internationally.

Figure 29: Education Profile of Migrants, 2011



Source: Inflexion in Kerala's Gulf Connection, Report on Kerala Migration Survey 2011

Occupational Status

The Kerala Migration Survey also profiled the occupational status of emigrants and out-migrants to understand the occupational profile of the migrant population.

As indicated in the table below, agriculture/animal husbandry workers (21.9%) comprised the largest share of emigrants, followed by construction labourers (9%) according to their occupation status prior to emigration. Among out-migrants, shop salesmen (16.6%) comprised the largest share of out-migrants, followed by computer professionals (7.2%), according to reported occupational status prior to out-migration. Across emigrants and out-migrants, some of the key occupations (as a share of migrant population, prior to migration) include agriculture/animal husbandry workers, shop salesman, motor vehicle drivers, construction workers/labourers and teachers/lecturers. It is interesting to note that although nurses/nursing assistants comprised 4.6% of out-migrants, they comprised only 0.7% of the emigrant population.

Table 18: Occupational Status of Migrants (Top 10 categories, % of Migrant Population)

Occupation	Before Emigration	Occupation	Before Out-Migration
Agriculture/Animal Husbandry	21.9%	Shop Salesman	16.6%
Construction worker / labourer	9.0%	Computer Professional/ Assistant	7.2%
Cultivator	8.3%	Agriculture/ Animal Husbandry	6.5%
Motor Vehicle Driver	5.8%	Motor Vehicle Driver	5.2%
Shop Salesman	5.4%	Nurse/ Nursing Assistant	4.6%
Teacher/Lecturer	3.3%	Teacher/Lecturer	3.7%
Proprietor	3.1%	Construction worker / labourer	3.6%
Painter	2.4%	Office clerk / accounting clerk	3.6%
Carpenter	1.9%	Tailor/Dressmaker	3.6%
Cashier, ticket clerks, clerks, accountant	1.8%	Cashier, ticket clerks, clerks, accountant	3.3%

Source: Inflexion in Kerala's Gulf Connection, Report on Kerala Migration Survey 2011

Migrant Labour from Other States

Kerala is home to a large proportion of migrant labour, especially in booming sectors such as construction and hospitality. The Department of Labour and Rehabilitation, Govt. of Kerala, commissioned a study[40] on domestic migrant labour in the state which estimated that there are over 25 lakh migrant labourers in Kerala, with an annual arrival rate estimated at 2.4 lakhs.

Distribution of migrants by State

The table below presents the geographic distribution of migrant labour in the state, based on state of origin. West Bengal (20%) dominated the states from where migrants were found to originate, followed by Bihar (18.1%), Assam (17.3%) and U.P (14.8%). Most of the migrants were single males, aged between 18 to 25 years. In Kerala, most of the migrants were found to be working as contract workers.

Table 19: Distribution of migrant labour in Kerala by state of origin

State	% of total migrants in Kerala
West Bengal	20.0%
Bihar	18.1%
Assam	17.3%
Uttar Pradesh	14.8%
Orissa	6.7%
Others	23.1%

Source: Domestic Migrant Labour in Kerala, Gulati Institute of Finance and Taxation, 2013

Distribution of migrants by Industry

Among the migrant labourers in the state, it was estimated that 60% work in the construction industry, 8.3% in manufacturing and 6.9% in hotels and restaurants. Most of the migrant labourers are minimally skilled labourers especially in sectors such as construction.

Table 20: Distribution of migrant labour in Kerala by Employment

Sector	% of total migrants in Kerala
Construction	60.0%
Others	17.5%
Manufacturing	8.3%
Hotels and Restaurants	6.9%
Agriculture	2.3%
Trade	1.7%
Not Reported	3.1%

Source: Domestic Migrant Labour in Kerala, Gulati Institute of Finance and Taxation, 2013

The continuing influx of migrant labourers has implications for the State Government to integrate them into mainstream employment and also provide opportunities for skilling and re-skilling in sectors of employment.

[40] Domestic Migrant Labour in Kerala, submitted to Labour and Rehabilitation Department, Govt of Kerala, 2013

3.5 Aspirations of Youth in Kerala

Aspirations of the youth were captured through Focus Group Discussions held in each district of the State. It is important to understand the career aspirations of the youth in light of the manpower requirements of the industry, so that suitable initiatives can be undertaken to meet both.

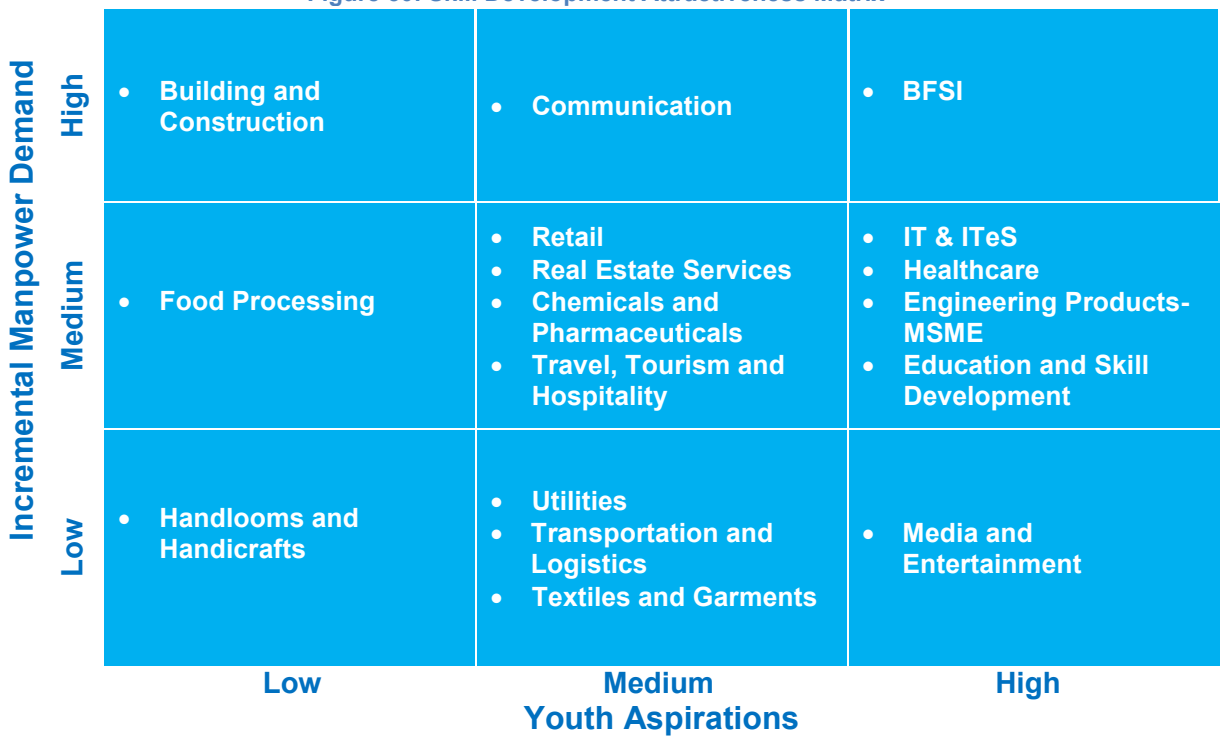
- **Preference for Government Sector jobs:** Most of the ITI students prefer to be employed in Government organizations like KELTRON, Kerala State Electricity Board, Kerala State Road Transport Corporation, Kerala Tourism Development Corporation as they offer security of employment, pension and other benefits. However, students of courses such as Hotel Management, Hospitality, and Fashion Design prefer to work for private sector and would like to migrate to another state/country.
- **Preference for NCVT course over SCVT courses:** Since ITI/ITC students are expected to compete with diploma holders and engineering graduates; they prefer courses with industry / national recognition and thus prefer NCVT certified courses over SCVT courses since they believe it improves their chances of placements and opportunities outside the state.
- **Preference for trades in Construction, Mechanical, Electronics/Electrical and Computer Science**: ITI students aspired for courses in trades such as surveyor, civil (draughtsman), Motor Mechanic Vehicle, Electrician, Computer Operator and Programming Assistant (COPA) etc.
- **Need for Entrepreneurship Awareness/Development Programmes:** Few students wished to be self-employed or become entrepreneurs, reflective of the lack of entrepreneurial culture among the youth. However, students suggested the need for entrepreneurship awareness/development programmes in colleges and training institutes to instill awareness and aptitude for entrepreneurship among youth
- **Demand for Communication and Language Skills:** Most students mentioned the need for inculcating communication and English language skills while pursuing skill development courses. This would significantly improve their employability and prospects of employment outside the state. In hospitality courses, students cited the need for good communication skills, grooming, public relation skills etc.
- **Need for more practical training and paid internships:** Students find a mismatch between training received in the institute and the actual work environment in the industry. Thus, students suggested the need for more industry-based practical training and paid internships as a mandatory part of training. Students of Nursing suggested that they be given regular trainings (in-service education) on new technologies in medical sciences.
- **Need for more employment opportunities**: Students of vocational training courses opined that the government and institutes could focus on supporting better employment opportunities of students through strong tie-ups with industry rather than merely increase the seats in skill development institutes every year. Students also felt the need for industry to appreciate the value of vocational trades since they are competing with polytechnic/ engineering graduates in the job market. Students of hospitality and tourism trades also suggested that institutes should take initiative to build relations with sectors other than hotels such as airlines, event management companies etc.
- **Migration of nursing students:** Students of Nursing typically prefer to be employed in their home district but find the need to relocate to another state or country due to lack of lucrative opportunities. Nurse to patient ratio in local hospitals is very low, thereby putting a lot of pressure on nurses. This is a major reason for migration of nurses.
- **Willingness to migrate for employment:** Although most vocationally trained students preferred to be employed in their home districts, students in northern districts were willing to migrate to other districts and states such as Karnataka, Tamil Nadu etc. due to limited opportunities. Students in

sectors such as hospitality and tourism, fashion design etc. preferred to be employed outside the state due to better opportunities.

Skill Development Attractiveness

The figure below presents the incremental employment opportunities in sectors mapped against the career aspirations and preferences of the youth in each sector.

Figure 30: Skill Development Attractiveness Matrix



Source: Deloitte Analysis and Primary Interactions

- In terms of incremental demand, although the building and construction sector has high potential for employment, the youth aspirations are not reflective of this industry demand. Based on primary interactions with youth and industry, it is understood that the high incremental demand sectors such as **Communication and BFSI** are preferred sectors among youth.
- Among the sectors ranked medium in terms of incremental manpower demand, IT & ITeS, Engineering products, Healthcare and Education/Skill development are ranked high among youth aspirations, apart from sectors such as Travel/Tourism, Retail and Real Estate services which are ranked as medium preference among the youth.
- Among the sectors ranked low in terms of incremental manpower demand, Media and Entertainment sector is ranked high in terms of youth preference. In terms of medium preference among youth, Mining and Utilities[41] are preferred due to the opportunities available in the government sector.

3.6 Estimation of Skill Gap

Based on our analysis of the state data and primary interactions, both output and employment in the primary sector is expected to continue to decline and will experience people moving out of this sector. If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 12.3%. The secondary and tertiary sector contributions are

[41] Utilities refers to the Electricity, Gas and Water Supply Sector

estimated to increase to 30.1% and 57.6% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the building and construction (16.5%), trade, hotels and restaurants (15.3%) and manufacturing (13.3%) which are also confirmed by our primary interactions with government stakeholders, institutes and industries representatives. Within the secondary sector, apart from building and constructions, the expected industries contributing to employment in manufacturing include agro based / food processing, textiles and garments, general/ light engineering units, rubber & plastics and chemicals industries. In the tertiary sector, the sectors expected to show growth include banking & insurance, communication, hospitality and retail and business and other services which includes IT & ITeS, education and healthcare.

Table 21: Projected Employment Contribution and Growth Rate - Kerala

#	Economic Sector [42]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-4.4%	11.6%
2	Mining and Quarrying	-1.3%	0.7%
3	Manufacturing	1.2%	13.3%
4	Electricity, Gas & Water supply	0.4%	0.3%
5	Building and Construction	2.5%	16.5%
6	Trade, Hotels and Restaurants	1.0%	15.3%
7	Railways	-2.3%	0.2%
8	Transport & Storage	0.2%	4.1%
9	Communication	6.7%	6.8%
10	Banking and Insurance	10.2%	5.9%
11	Real estate services and business services etc.	6.9%	7.0%
12	Public Administration	1.6%	3.9%
13	Other Services	4.4%	14.4%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology adopted the estimated incremental human resource demand in the period 2012-22 will be about 33.9 lakhs.

Table 22: Incremental Demand – skill levels (in '000s) - Kerala

Incremental HR Demand ('000)	2012-17	2017-22	2012-22
Skilled	499	663	1162
Semi-Skilled	566	725	1291
Minimally Skilled	424	520	944
Total	1489	1908	3397

A significant proportion (38%) of this incremental HR demand is expected in the semi-skilled segment which typically comprises of people undergoing vocational and skill training programs. Almost 34% of the HR demand is likely to be in the skilled segment which typically comprises of those who have passed out from the higher education system. Both these segments hold an important implication from a skill development perspective in terms of provision of industry specific employability linked training.

The breakup of this demand across sectors is given below. While building and construction is expected to contribute a significant proportion of this demand (16.5%) based on the relatively higher anticipated

[42] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

growth rates, Banking, Financial Services & Insurance (BFSI) segments and Communication are also expected to contribute to the incremental demand.

Table 23: Incremental Demand ('000) – Key sectors- Kerala

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	39	105	118	45	119	134
Banking/ Insurance/ Finance	97	87	9	154	139	15
Communication	40	80	80	55	110	110
Education/ Skill development services	100	23	31	125	29	39
Other Services	83	38	6	113	52	9
Select Informal Sector	12	43	68	16	54	86
Manufacturing	20	58	40	22	62	44
IT / ITES Services	42	20	3	59	27	5
Organized retail	10	32	22	10	33	23
Healthcare	12	21	8	16	26	10
Travel/Tourism/Hospitality	6	16	9	7	17	10
Total Incremental demand	499	566	424	663	725	519
Overall Incremental Demand	**3,397**					
Workers exiting sectors						
Mining and Quarrying	-2	-5	-10	-1	-4	-7
Agriculture and allied activities	-14	-45	-393	-10	-32	-282
Total workers exiting[43]	**-820**					

Some of the key trends observed on the demand side include

- In light of increase in urbanization and development of infrastructure in the state, building and construction is expected to generate about 16.4% of the incremental demand and 26% of the demand for minimally skilled resources. The allied industry of real estate is also expected to generate an incremental demand of 3.4%.
- While the projected incremental demand in BFSI, Communication and IT and ITeS sectors contribute to 14.8%, 13.9% and 4.6% respectively, growth of these sectors typically result in the creation of significant number of indirect employment, especially in sectors like construction, education, healthcare etc.
- Education and Health care (including AYUSH) sectors together contribute significantly to the creation of jobs in the skilled (13%). This is in line with the views of the industry and government officials that Kerala is expected to emerge as one of the hubs for education and health care.
- Within Manufacturing the key industries, as shown in the table below, that are expected to contribute to employment include Agro-based/ Food processing and Textiles & garments are expected to contribute 20% and 16% each followed by Engineering Units (~15%). Mineral based manufacturing units, furniture and wood based industry, chemicals & pharmaceuticals and rubber & plastics are expected to be the other key industries in the manufacturing sector.

[43] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Table 24: Incremental Demand (in '00) – Break Up Of Manufacturing- Kerala

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Food processing/ Cold Chain/ Refrigeration	23	70	139	25	75	150
Textiles & garments	38	105	48	41	113	51
Engineering Units	32	96	32	34	103	34
Mineral Based	26	77	26	28	83	28
Chemicals and Pharmaceuticals	37	61	24	39	66	26
Manufacture of Rubber and Plastics	18	41	59	19	44	63
Paper and Paper Products	5	30	15	5	32	16
Other Manufacturing (Ayurveda, Other Electrical Machinery and Transport, glass and ceramics etc.)	8	16	16	8	17	17
Leather/ Leather goods	2	5	7	2	5	8
Printing and Allied	1	3	1	1	3	1
Incremental Demand in Manufacturing	190	504	368	204	543	396
Overall Incremental demand	**2461**					

- The select informal sectors include industries like the security and surveillance, facilities management and housekeeping, etc. which are important from the view of skill enhancement.
- A significant number of the workforce (~8 Lakhs) is expected to exit from the agriculture sector between 2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.
- It is important to note here that the demand projections account for local demand needs in the state, in particular. Based on emigration trends, the global demand for resources should also be considered, since Keralites have been known to re-locate to other countries for employment and contribute to the global workforce. The chapter on migration and following chapters have taken this aspect into regard.

Manpower Supply

The population of Kerala in 2011 was about 336 lakhs which is expected to increase to about 358 lakhs in 2022. As per the methodology adopted the estimated incremental manpower supply in Kerala from 2012 to 2022 will be about 31.2 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the state.

Table 25: Incremental HR supply (in '000) across skill Levels- Kerala

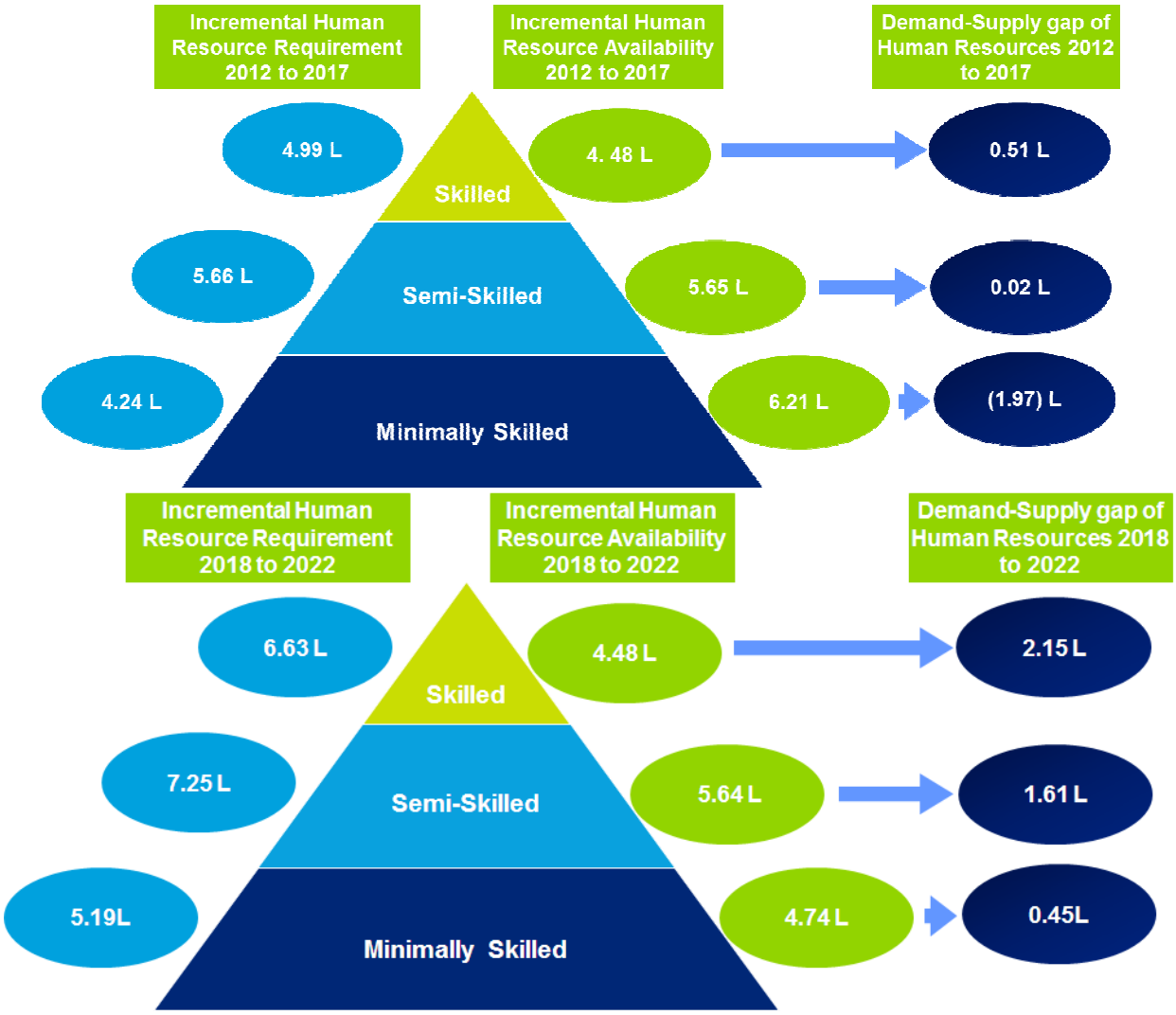
Incremental Labour-force ('000)	2012-17	2017-22	Total
Skilled	448	448	896
Semi-Skilled	565	564	1129
Minimally-Skilled	621	474	1095
Incremental manpower supply (2012-22)	3120		

Some of the key trends observed on the supply side include

- Significantly, the semi- skilled segment is expected to emerge as the largest category of supply over the 2012-22 period and account for 11.3 Lakhs or 36% of the incremental workforce closely followed by minimally skilled workforce (35% of incremental workforce). While this employee segment would have undergone some skill based training post schooling, to ensure their employability, this training has to be aligned to the industry demands. Also, the training should be augmented with non-technical skills like soft skills, life skills, etc. since most of the new entrants are expected to be absorbed in the services sector.
- The trend of migration is expected to be outward across skill levels. According to our primary interactions this number may be higher since the youth expectations of compensation may not be matched by the industry, especially in the minimally skilled roles. However, there is a trend towards inward migration from other states, especially for minimally skilled jobs in sectors like building and construction and hospitality.
- Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 38% in the 2012-17 period to 32% in the 2018-22 periods. This may be attributed to improved enrolment and transition at the high school level, coupled with high pass ratio in the state.
- The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.

Incremental Demand Supply Gap

Figure 31: Incremental HR Demand Supply Gap- Kerala



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 2.7 Lakhs with the excess demand across skilled and semi-skilled segment and excess supply in the minimally skilled segments. When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- The excess demand in the skilled segment is expected to continue in the state. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources.
  However, such a trend also presents an opportunity for upward mobility of those initially in the semi-skilled segments to augment their skills according to the industry demand.
- Even in case of excess supply, it is pertinent to note that it does not imply industry demand for skills is being sufficiently met. Employability linked skills have emerged as a key area of concern among industry.

The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers. These are especially true in manufacturing industries where traditional processes and practices are being replaced by newer production techniques.

- As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.

Qualitative Skill Gaps

The following table highlights the qualitative skill gaps in high incremental demand sectors

Table 26: Prominent qualitative skill gaps- Key Sectors

Sector	Key Skills

Building and Construction	• Engineers:
	  ○ Knowledge of design and tools such as AutoCAD etc.
	  ○ Knowledge of green/eco-building design
	  ○ Project Management and People Management Skills
	• Supervisors: plumbing, electrical, carpentry, masonry, panting, drilling
	  ○ Skills in civil- operations of ready mix m/c, earth movers, etc.
	  ○ Basic repair and maintenance
	  ○ Attitude towards safety and quality
	• Workmen: plumbing, electrical works, carpentry, masonry, panting, drilling
	  ○ Basic skills related to relevant category
	  ○ Attitude towards safety

BFSI	• Middle level managers
	  ○ Banking operations
	  ○ Client and team management skills
	  ○ Interpersonal and communication skills
	• Officer and Trainee
	  ○ Product Knowledge
	  ○ Written and verbal communication Skills
	  ○ Inter-personal skills
	• Customer Service Executives
	  ○ Computer skills
	  ○ Basic accounting knowledge
	  ○ Verbal communication skills

Communication	• Customer care executive at call centre
	  ○ Verbal communication especially related to selling
	  ○ Basic computer skills
	• Customer care executive at repair centre
	  ○ Basic knowledge of products
	  ○ Documentation
	  ○ Communication

Education and Skill development	• Faculty and Trainers
	  ○ Knowledge and experience in use of modern teaching aids and activity-based learning modules
	  ○ Industry exposure or experience (for HE and VE)
	  ○ Technical knowledge in trades such as fashion design; fine arts, visual communication
	  ○ Soft Skills and Inter-Personal Skills

IT/ ITeS	• ITeS- BPO, KPO
	  ○ Basic computer skills
	  ○ Customer services attitude
	• IT
	  ○ Project management skills
	  ○ Entrepreneurial skills (in smaller companies)

Sector	Key Skills

Manufacturing – Food Processing Engineering Products Rubber, Coir, Cashew	• Plant Associates and operators-
	  ○ Basic engineering knowledge esp. on practical aspects
	  ○ Process knowledge e.g. distillation, modern production techniques e.g. SPC (Standard Process Control) chart
	  ○ Basic understanding of repair and maintenance- electrical and mechanical
	  ○ Quality and safety awareness,
	  ○ Industrial exposure for updated technology use
	  ○ Exposure to industrial relations
	• Material handlers-
	  ○ Basic computer skills including barcode reading, etc.
	  ○ Quality, health and hygiene awareness (food proc.)
	• Sales and marketing
	  ○ Communication skills
	  ○ Ability and willingness to understand the product and manufacturing process
	• Traditional Industries e.g. Coir
	  ○ Worker- fibre extraction, spinning, manufacturing
	  ○ Entrepreneur- managerial skills, production- planning, quality & modernization, value addition and product diversification

Retail	• Front end services
	  ○ Communication and customer services knowledge
	  ○ Cashier- data entry and basic computer skills
	• Stocking and Inventory-
	  ○ Industry knowledge
	  ○ Documentation skills
	• Procurement, Supply Chain and Store managers
	  ○ Communication Skills
	  ○ People Management skills

Healthcare	• Nurses/ Paramedics/ Home-Care Specialists
	  ○ Geriatric care
	  ○ Technical knowledge and machine operation skills
	  ○ Inter-personal skills
	  ○ Crisis management
	• Ayurveda Nurses/Pharmacists
	  ○ Panchakarma and technical knowledge about curative medicine

Travel, Tourism and Hospitality	• Drivers: Communication/Language skills
	• Guides
	  ○ Knowledge of history/culture/nature for specialist guides
	  ○ Entrepreneurial and creative skills
	  ○ Tour operations
	• Hospitality
	  ○ Front Office Management skills,
	  ○ Housekeeping skills
	  ○ Customer Service skills
	  ○ Culinary and food production skills

Security and Facilities Management	• Security Guards- armed and unarmed training
	• Cash management services: Bank ATMs operations knowledge
	• Security Supervisor:
	  ○ Surveillance
	  ○ CCTV operations
	  ○ Communication Skills
	  ○ People Management skills
	  ○ Crisis management

Transportation and Logistics	• Logistics back office- knowledge of operations and ERP software, documentation skills • Air Cargo and Warehouse management- knowledge of DGR (Dangerous Goods Regulations) • Ground Service- IATA certification related skills

Sector	Key Skills
Emigrants[44]	• Middle Level Managers – Operations & Maintenance Experience, Project Management skills, interpersonal skills, communication skills • Officer/Engineer Trainee – Advanced Technical knowledge, communication skills • Supervisor – Computer skills, accounting skills, interpersonal skills, communication skills • Worker Category – Advanced technical skills, communication/soft skills, life skills

Source: Primary Interactions; Skill Gap Study for the State of Kerala, CII-KPMG 2010; Interim report of the Expert Committee on Employment and Skills Development, submitted to the State Planning Board, August 2013

[44] Overseas Emigrants form an important component of the workforce in the state, and the key skill gaps have been sourced from the *Skill Gap Study for the State of Kerala, CII-KPMG 2010*

District Level priority sectors

District level incremental manpower requirements estimation (detailed in the chapters on each district) indicates that the district of Ernakulam, Thiruvananthapuram and Thrissur account for almost 38% of the manpower requirement. Table below presents the district level priority sectors based on both the estimated demand and the thrust areas of the government agencies like KSIDC, KINFRA, etc.

District	Manpower Requirement (2012-22) in '000	Share	Building & construction	BFSI	Communication	Education/ Skill development	IT / ITES	Retail	Healthcare	Travel, tourism & hospitality	Agro based/ Food processing	Mineral based manufacturing	Engineering Units	Textiles & garments	Chemicals & Pharma	Rubber and Plastics	Real estate services	Furniture & Furnishing	Media and Entertainment	Select Informal Sector	Other Manufacturing	Other Services
Ernakulam	534	16%																				
Thiruvananthapuram	374	11%																				
Thrissur	366	11%																				
Kozhikode	298	9%																				
Malappuram	292	9%																				
Kollam	267	8%																				
Palakkad	253	7%																				
Kannur	238	7%																				
Kottayam	229	7%																				
Alappuzha	174	5%																				
Pathanamthitta	124	4%																				
Kasaragod	104	3%																				
Idukki	86	3%																				
Wayanad	58	2%																				

Key: Districts with moderate demand; Districts with significant demand

3.7 Challenges in Skill Development in the State

The key challenges in providing and promoting skill development initiatives have been highlighted below, based on our analysis and primary interactions:

- **Limited placement opportunities for students:** Most students studying in ITIs highlighted the limited placement options after graduation in private sector and that most of them try for government jobs instead. This may be attributed to lack of institutional infrastructure for continuous interaction with industry/ employers. Additionally, industry bodies indicated that initiatives such as Job Melas may need to be re-looked due to limited success in the past.
- **Need to increase industry participation and improve practical component of training:** According to both students and industry, there is further scope to update curriculum offered to students, especially, in engineering trades across industries such as construction, electronics, IT/ITeS etc. since industry demands are constantly evolving with greater need for technology-based skill modules. Additionally, training in niche areas such as high-end tourism is also found to be lacking.[45]
- **Need to strengthen industry readiness of the vocationally trained students**: Poor industry readiness was cited as a key factor preventing many industry players from recruiting ITI students. According to industry, students who are directly recruited from the ITIs lack proper grooming, work ethic and soft skills required to satisfactorily perform the duties at the work place apart from exposure to latest machinery and production techniques.
- **Limited Awareness or uptake of Skill Development Initiatives:** The Government is encouraging multiple skill development initiatives. Industry interactions indicated awareness about skill development initiatives, particularly through organizations such as KASE, needs to be strengthened across the state.
  There is also need to promote awareness/uptake of initiatives in particular sectors.For e.g. in the tourism sector programs such as Hunar se Rozgar Tak Yojna, have been initiated which need to be further popularized and promoted.
  In addition, premier institutes such as Institute of Hotel Management and Catering Technology should not be under-utilized and should be marketed further to potential trainees within and outside Kerala.[46]
- **Limited opportunities and awareness for up skilling/continuous learning:** Industry feedback indicated the limited options available for existing employees to continuously learn and upgrade their skills in their respective industries. Another related aspect is the limited initiative among employees to undertake such initiatives on their own, on a larger scale.
- **Need to strengthen Quality Assurance/Control for Skill Trainings**: The interim report of the Expert Committee on Employment and Skills Development, submitted to the State Planning Board, highlights the lack of quality control/assurance in line with international standards arising due to absence of high quality faculty and quality assurance systems. The report also highlights the lack of a proper certification system in the state, aligned with international requirements. The Sector Skill Councils (SSCs) can play an important role in addressing this challenge.
- **Need to improve availability of nationally recognized certification:** Interactions with youth indicated preference for courses with industry / national recognition e.g. NCVT certified courses over SCVT courses since they believe it improves their chances of placements and opportunities outside the state

[45] Interim report of the Expert Committee on Employment and Skills Development, submitted to the SPB, Aug 2013
[46] Interim report of the Expert Committee on Employment and Skills Development, submitted to the SPB, Aug 2013

- **Limited availability of local labour for minimally skilled jobs:** A key constraint faced by local industry in sectors such as construction and hospitality in particular, is the local labour constraints especially in jobs like construction labourers, waiters etc. Local industry is increasingly relying on migrant labour from other states who are more willing to take up such jobs in Kerala since the wages are attractive compared to similar jobs in their home states.
- **Preference for white collar jobs and professional education:** Most students aspire to join professional stream such as Engineering and Medicine, especially in urban areas and among those who can afford such education. Many students even end up joining Arts/Science/UG colleges if they fail to get admissions in the professional streams.
  In line with this, mobilization of students is a key issue expressed by training providers. This is especially true for sectors like retail where the industry does not give preference to trained personnel currently. The perceptions associated with vocational education results in students taking up vocational training as a last resort.
  This has also resulted in the state having to rely on migrant labor for certain jobs in industries such as construction and tourism/hospitality.
- **Skilling of traditional industries:** Traditional industries such as coir, cashew, beedi and agriculture based occupations are increasingly becoming redundant and may result in retrenchment of traditional workers. Since the agriculture sector is an important sector in terms of food security, rural livelihoods and exports, even though there may not be incremental demand in HR in the sector, it presents opportunities for re-skilling and up-skilling of the current workforce. A significant number of the workforce is expected to exit from the agriculture sector between 2012 and 2022. Up-skilling and multi-skilling of such workers will be key to ensuring alternative livelihoods for this workforce.[47]
- **Lack of Entrepreneurship Culture:** Primary interactions revealed the lack of an entrepreneurial culture among youth and the inherent challenges of devising skill development schemes to encourage entrepreneurship on a large scale among the youth.
- **Challenges related to emigrant labour:** As indicated in the chapter on migration, a large proportion of emigrant labour is estimated to lack a professional degree or certification which may limit their employability in occupations abroad. Additionally, restrictions on migrant labour from outside in Middle Eastern countries may result in emigrants returning to Kerala in significant numbers. Integrating the return-emigrants into the workforce will be a challenge and specific re-skilling (as needed) initiatives may need to be devised.
- **Challenges related to in-migrant labour:** Most of the minimally skilled workers are migrants mainly from Bihar, Orissa and West Bengal. Some of the industry representatives felt that in the context of high turnover among this segment, the statutory rules related to migrant labour may need to be relooked. One of the suggestions included that some mechanism of identity check may be facilitated for the migrant labour.

[47] State Skill Development Project – Preliminary Project Report, GoK, 2012

3.8 Recommendations for Skill Development in the State

This section provides a list of indicative suggestions and recommendations for four key stakeholders – Government of Kerala, NSDC, Industry and Skill Development Institutes. **While the recommendations are detailed for each stakeholder separately, it is important that all stakeholders work in close collaboration with each other, in a consultative manner, to achieve the objectives outlined by the State to improve the skill development scenario in Kerala.**

The table below provides a snapshot summarising the key issues and corresponding recommendations suggested for each stakeholder. The recommendations are detailed in the sections below.

Table 27: Summary Table of Key Challenges and Recommendations

Stakeholder	Key Issue to be addressed	Key Recommendations
Government of Kerala	• Need to strengthen industry readiness of the vocationally trained students • Need to update curriculum regularly with industry participation to strengthen practical component of training • Need to strengthen Quality Assurance /Control for Skill Trainings	• Very Large Multi Skill Training Centres in Construction, Health Care, Hospitality and Tourism, Communication in co-ordination with KASE co-located at the industry parks promoted by KSIDC and KINFRA • Faculty development programmes and exchange programmes e.g. UKIERI • Pool of master trainers of skilled emigrants/return migrants • Infrastructure-sharing with private training providers like NSDC partners
	• Skilling of traditional industries	• Skill Development Centres targeted at the unorganized sector • Re-skilling and Multi-skilling initiatives in Traditional and Unorganized Sectors
	• Limited Awareness or uptake of Skill Development Initiatives • Preference for white collar jobs and professional education • Lack of Entrepreneurship Culture	• To introduce the concept of dignity of labour and encourage youth to take up vocational trades, at the school level through the current ASAP initiative. • Skills Competitions and media campaigns to popularize skill development • Entrepreneurship awareness promotion in high schools and colleges by Directorate of Industries and Commerce, KSIDC, Kerala Financial Corporation and MSME Development Institute • Specific initiatives targeted at home-makers to become entrepreneurs in sectors such as Food Processing, Readymade Garments, Tourism/Hospitality
	• Challenges related to emigrants – Limited certification/degree attainment, re-integration of returning emigrants.	• Tracer studies to track emigrants and identify emerging needs in new countries and devise globally recognized certifications • Assess training level and certification of potential emigrants followed by training/certification e.g. IELTS for nurses • Study the profile of returning emigrants in terms of education/ skill attainment and occupational profile. Re-skilling initiatives as required • Form a pool of faculty for courses targeted towards employment in Middle East and other countries.

Stakeholder	Key Issue to be addressed	Key Recommendations
NSDC	• Need to improve availability of nationally recognized certifications	• Promote private training initiatives in identified sectors • Promote NSDC training partners from Kerala with the help of Local industry bodies
	• Need to update curriculum regularly with industry participation to improve practical component of training	<u>Sector Skill Council Collaborations</u> • Standardization of curriculum and content in key sectors such as BFSI, Construction, Retail etc. • Conduct detailed skill-mapping studies to map skill levels to occupational roles/job descriptions and work experience
	• Challenges related to in-migrants	• Understand specific skill gaps and training needs of migrant labor in collaboration with industry players • On-site training for migrant labor through NSDC training partners • NSDC training providers present in the places of origin of the migrants can be connected to the industries in Kerala through agencies like industry bodies to equip them with basic literacy, language and technical skills
Industry	• Need to update curriculum regularly with industry participation to improve practical component of training • Limited Placement opportunities for students	• Adoption of vocational training institutes through infrastructure up gradation, provision of technical equipment, capacity development of faculty, etc. • Active participation in curriculum design and content through continuous feedback to institutes • Participation in placements through career guidance and counseling workshops and recruitment drives for relevant trades.
	• Need to improve industry readiness of vocationally trained students	• Promote paid internships for vocational training students • Design Apprenticeship programs in collaboration with PSEs
	• Limited opportunities and awareness towards up skilling/continuous learning for employees	• Collaborate with industry bodies and SSCs to develop skill assessment tools to ascertain skill gaps and training needs. • Promote Massively Online Open Courses (MOOCs) and online education
	• Changing attitudes towards blue-collared jobs	• Preferential recruitment or wage differential for certified applicants, prioritizing the regularization of contract employees who opt for skill enhancement • Provide identity cards, uniforms, etc. to employees in blue-collared jobs. • Employee benefits such as health insurance and social security
	• Need to strengthen Quality Assurance/Control for Skill Trainings • Limited Awareness about skill development	• Increase membership of prominent industry players from Kerala within the SSCs • Kerala to be positioned as a location for setting up of centres of excellence (CoEs), in collaboration with industry bodies such as NASSCOM/CII. • Centres of excellence to develop trainers for key sectors with the help of relevant SSCs, industry bodies, international training providers and state agencies like KASE.
	• Challenges related to in-migrants	• Understand specific skill gaps and training needs of migrant labor. • On-site training for migrant labor • NSDC training providers present in the places of origin of the migrants can be connected to the industries in Kerala through agencies like industry bodies to equip them with basic literacy, language and technical skills

Stakeholder	Key Issue to be addressed	Key Recommendations
Skill Development Institutions	• Need to update curriculum regularly with industry participation to improve practical component of training • Need to improve industry readiness of the vocationally trained students	• Skill development institutes can focus on the sectors and districts, highlighted in the section below, in order to address some of the skill gaps identified in the priority sectors. In addition, skill development institutes may consider the following: • Language Training and Soft Skills: Setting up centres that function as 'finishing schools' which focus on providing communicative English, soft skills training and foreign language training. • Life Skills: Provision of life skills including goal setting, career planning, self-awareness, etc.

Source: Primary Interactions; Skill Gap Study for the State of Kerala, CII-KPMG 2010; Interim report of the Expert Committee on Employment and Skills Development, submitted to the State Planning Board, August 2013

3.8.1 Recommendations – Government of Kerala

- **Very Large Multi Skill Training Centres:** The State Government may aim to set up Very Large Multi Skill Training Centres with the support of NSDC, in sectors such as Construction, Health Care, Hospitality and Tourism, Communication etc. which will target school leavers (10th and 12th grade students) primarily.[48] This could be developed as part of the State Government's Additional Skill Enhancement Program (ASEP) by KASE with provision for recognition of prior learning for trainees with experience in the relevant industry.
  - These centres can be considered in the proposed and current projects of KSIDC, in the identified sectors e.g. rubber and apparel design courses in Kannur, food processing, footwear design and electronics courses in Kozhikode, electronics trades at Kochi and Palakkad and healthcare and life sciences in Thiruvananthapuram. Similarly, courses to cater to the KINFRA projects can also be considered.
  - The training centres can be integrated with the infrastructure development plans in the 14 theme based Industrial Parks proposed in Kerala e.g. apparel & garment sector and media & entertainment related courses for the proposed Apparel and Film & Video Park at Thiruvananthapuram, food processing at Malappuram, etc.
    Such a colocation of the institute and industry may address the issues of lack of sufficient industry interaction and limited exposure of faculty to modern industrial processes.
  - KASE is already planning for such institutes/academies to be set up in Nursing and Construction using a PPP model. The RFP for setting up the Indian Institute of Infrastructure and Construction in Kerala highlights the model, as given in the box below:

    Hub and Spoke Model for setting up training institutes:
    - The Construction Institute is being planned with a hub campus in Chavara, and spokes (satellite centres) to be set up in exiting Engineering Colleges and ITIs across Kerala
    - Although KASE will provide support as required, it will be the responsibility of the operator to collaborate with ITIs and engineering colleges to be set up as spokes.
    - The target set by KASE is for at least one spoke to be set up in a district; three years from the commencement of the academy.
    - The Operator will have the autonomy to design courses, curriculum, fee structure, accreditation, placements etc, apart from creating required infrastructure in the space provided by KASE.
    - Indicative courses include Civil Engineering Technician, Technician (Welder), Technician (HVAC- Ducting),Technician (Plumbing), Technician (Electrical) etc.

- **Skilling of Unorganized and Traditional Sectors:** The unorganized sector is an important component of Kerala's economy and the state may consider strengthening existing initiatives to skill this section of the population.
  - Skill Development Centres may be set up to deliver trainings targeted at the unorganised sector with the support of grass-root organisations such as Kudumbashree, NGOs etc. These trainings can be designed to incorporate basic literacy, financial literacy, life skills like safety, hygiene, etc. apart from skills related to the various trades.
  - *Re-Skilling and Multi-Skilling:* A significant number of the workforce is expected to exit from the agriculture sector between 2012 and 2022. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.

[48] Interim report of the Expert Committee on Employment and Skills Development, submitted to the State Planning Board, August 2013

Key occupation where skilling interventions can be considered include those related to cultivation of coconut in Kozhikode, Malappuram & Kannur, rubber in Kottayam, Ernakulam & Pathanamthitta, coffee in Wayanad, pepper in Idukki, Wayanad and Kannur, cashew in Kannur and cardamom in Idukki and Wayanad.

Kerala is one of the highest contributors of marine fish, with high value species including Seer fish, Prawn, Ribbon fish and Mackerel. Skilling ventures can be considered, specifically in Alappuzha, Thiruvananthapuram and Ernakulam districts which have the highest shares of fisher folk in the state.

For traditional industries such as coir, training programmes must be focused on modern technology and mechanization to enable competitiveness of products. Additionally, a strategy to skill traditional workers, e.g. beedi workers, in alternative sources of livelihood may also need to be devised to support them in case of retrenchment in the future.

- **Mobilize youth to participate in skill development schemes:** The State Skill Development Project is a unique initiative aimed at skilling the youth across various identified priority sectors. The current Additional Skills Acquisition Program (ASAP) and Additional Skills Enhancement Program (ASEP) addresses the aspects highlighted during the interactions with youth such as provision of vocational courses from high school onwards, provision of counselling and other services at the employment exchanges, access to better faculty through virtual classrooms facilities, etc. In order to ensure significant uptake of the proposed courses, a Media Campaign may be considered targeting students in schools, colleges and the unemployed youth to mobilise them to participate and gain from these initiatives. In particular, agencies such as KASE need to be popularised among government, youth and industry to facilitate greater awareness and uptake of skill development initiatives across the state.
  - In order to introduce the concept of dignity of labour and encourage youth to take up vocational trades, students must be exposed from school onwards to vocational trades such as carpentry, painting etc. Schools must encourage interest in varied subjects to promote aspirations other than in engineering, medicine or professional courses. This aspect can be introduced through the current ASAP initiative.
  - Mobilizing greater participation in existing schemes in priority sectors such as Tourism, including the Hunar Se Rozgar Scheme, which are free for participants and focus on areas including Food Production, House Keeping and Front Office skills, may also be prioritised in collaboration with employers.
  - To address the perception of skill development and vocational education, skills competition in the lines of World skills competition may be organized at the state level. These events can act as platforms to create awareness among youth about career opportunities based on skills.

- **Entrepreneurship Development:** Given that the State Government's Industrial Policy emphasizes the aim to transform Kerala into an entrepreneurial society, entrepreneurship development needs to be focused upon.
  - Entrepreneurship Awareness Campaigns may be strengthened/ institutionalized in high schools and colleges by inviting successful entrepreneurs in the state to collaborate with the Department of Industries, KSIDC etc. to participate in such campaigns
  - Organizations such as Kerala Financial Corporation and MSME Development Institute-Thrissur, which are already providing entrepreneurship skill trainings may be further supported and promoted to encourage greater uptake of such trainings. Additionally, the Entrepreneurship Skill Development Centre, which is being planned by KASE, in collaboration with Entrepreneurship

Development Institute (Ahmedabad), may be assigned further ownership of promoting entrepreneurship development among targeted segments of the workforce.

- For the development of MSMEs, the following districts can be targeted for cluster development by providing entrepreneurship and managerial skills - Food Processing at Thiruvananthapuram, Alappuzha, Kottayam, Ernakulam and Kollam, Ready-made garments & embroidery at Thiruvananthapuram, Alappuzha, Kottayam & Ernakulam, Wood/wooden based furniture at Alappuzha, Kottayam & Ernakulam, Chemical/Chemical based products at Ernakulam & Alappuzha and Rubber, Plastic & Petro products at Alappuzha, Kottayam & Ernakulam, Handlooms sector in Thiruvananthapuram & Kannur and handicrafts in Ernakulam & Kozhikode. These courses can be delivered in collaboration with MSME Development Institute in Thrissur.
- Given that Kerala has high literacy among women, a large part of whom remain unemployed, specific initiatives targeted at home-makers to become entrepreneurs in sectors such as Food Processing, Readymade Garments, Tourism/Hospitality may be designed by organizations such as KITTS.
  In particular, women may be encouraged to run home-stays and home-based enterprises such as small catering units, tailoring units, food-processing units in products such as jam, pickles etc.

- **Capacity Building of Faculty:** There is shortage of trained/experienced faculty across sectors with adequate exposure to industry demands. In particular, ITIs should recruit faculty who have expertise in respective trades and have industry experience as well.
  - Very Large Multi Skill Training Centres, mentioned above, need to recruit highly skilled trainers across multiple disciplines. Possible sources could be skilled, retired personnel from the public sector and industry. Faculty development programmes may be developed with exchange programmes with institutes in other states and even abroad. For e.g. the UK-India Education Research Initiative (UKIERI) promotes staff exchange programmes between higher education and skill development institutes across India and UK, with an aim to 'share, learn and deliver best practices on curriculum and pedagogy' among select teaching staff in India and UK.[49]
  - Create a pool of master trainers: Efforts can be made by the state to create a pool of master trainers and assessors of skilled emigrants/return migrants who return to the State to tap into their wealth of knowledge and expertise in various domains. In particular, skilled workforce returning from abroad can provide perspectives on the work practices and culture in these countries.

- **Specific Initiatives for Migrants:** Targeted initiatives may be designed to cater to the needs of emigrants and in-migrants in sectors including Construction, Health care, Tourism/Hospitality etc.
  - *Potential Emigrants:* As highlighted in the chapter on migration, only 8.1% of the emigrant population were estimated to have attained an ITI certificate or a polytechnic diploma and 19.1% with a degree or above (2011). This indicates an opportunity for the state to assess whether the majority of emigrants are specifically trained in their trades and certified for the same. This would involve tracking all emigrants and ensuring they are professionally trained and certified to increase their employability in various occupations abroad.
    - It is also important to track the profile of emigrants who go abroad and understand the nature of occupations they engage in after emigration in order to provide targeted interventions of skilling/ training based on global requirements. NORKA can commission periodic tracer studies for this purpose. Apart from the migration studies commissioned by NORKA, sample surveys for collecting information on migration trends specifically for focus sectors and geographies of KASE may be commissioned to enable training

[49] India UK Staff Exchange Programme, UKIERI, http://www.ukieri.org/india-uk-staff-exchange-programme.html

providers to provide customized trainings to emigrants based on international employer needs.

The objective of the study may be to recognize the trends in employment across key geographies like countries in the Middle East, etc. in the identified sectors. The trends related to job roles in demand, wage levels, working conditions, cost of living, etc. may be covered. It was suggested that this survey may be conducted in Kerala through the households which have members residing the destination countries.

- For those who emigrate to foreign countries, organisations such as NORKA can also identify emerging needs in new countries such as Japan, Italy etc. which have an ageing population, and devise specific initiatives to train nurses in areas such as geriatric health care.[50] After identifying new countries and demands for skilled manpower, globally recognised certifications may be developed in co-ordination with KASE.
- Interactions with an international placement agency/employer indicated that existing trainings organized by agencies such as NORKA for emigrants, can be designed to facilitate better access by arranging for accommodation facilities for trainees who come from other districts. Some of the key growth centres in the future for countries in the Middle East include Oil & Gas sector and Infrastructure – Building and Construction.

- *Returning Emigrants:* Based on our interactions, the returning non-resident Keralites (NRKs) can be involved in the skill development initiatives in two ways. Agencies like NORKA and KASE can lead these initiatives.
  - Those with interest and capabilities in the teaching profession can form a pool of faculty for courses targeted towards employment in Middle East and other countries. Their practical on-ground experience can be leveraged to prepare students on the work culture and professional practices in these countries.
  - Since some Middle Eastern countries such as Kuwait and Saudi Arabia are becoming increasingly stringent on allowing foreign migrants to work in their countries, specific initiatives will have to be designed to **integrate the returning emigrants** into the state's workforce. It will be imperative to study the profile of returning emigrants in terms of education/skill attainment and occupational profile to understand how they can be integrated back into the state's workforce either in their earlier occupations or by re-skilling to enter new occupations. Those returning to India for reemployment may need some re-skilling to integrate with the domestic economy through short term focussed courses.

- **Leveraging existing Vocational Training Infrastructure:** Given the wide network of ITI/ITCs in Kerala, there is a scope for sharing of infrastructure with private training providers like NSDC partners. This can also be a source of internal revenue generation for the institutes improving their viability and growth.

  KASE may be designated as the nodal agency to organize forums/platforms for various vocational training providers and ITIs to interact and discuss mutually beneficial collaborations in specific courses.

[50] Kerala Skills Conclave 2013 – Bridging the Skill Gap, Speech by Mr. S. Ramadorai, Chairman of National Skill Development Agency (shared by CII Trivandrum)

3.8.2 Recommendations – NSDC

- NSDC should promote partnership with private skill development players with focus on the following sectors identified based on future manpower requirements –
    - Building and Construction
    - Banking, Financial Services and Insurance (BFSI)
    - Communication
    - Manufacturing – Food Processing, Engineering Products, Rubber, Coir, Cashew
    - IT/ ITeS
    - Retail
    - Education and Skill development
    - Healthcare
    - Travel, Tourism and Hospitality
    - Security and Facilities Management

  In particular, training providers must be encouraged to provide courses in communicative English and soft skills as a compulsory component of all skill trainings provided.

  Apart from the key sectors indicated above, current workers from agriculture and allied sectors will continue to be target segment in terms of skill up gradation/re-skilling since a large proportion of workforce is expected to move out of such sectors.

- **Promotion of NSDC training partners from Kerala:** The state currently has only one NSDC training partner. Private training providers can be encouraged to provide skill trainings in the priority sectors identified in the report. In particular, industry interactions indicated that training providers can focus on courses for technicians in the health sector, specialised courses in retail etc.
  CII was of the opinion that the awareness about NSDC, SSCs and its training partners is low among youth and industry. They suggested a joint program by CII and NSDC at Thiruvananthapuram and Kochi to address this situation. This platform can also serve to increase the number of NSDC training partners from the state and increased engagement of Kerala based training providers as franchisees or business partners for large NSDC partners with plans for training centres in Kerala.
  Hence, NSDC can play an active role in encouraging more private training providers to become NSDC partners and provide skill trainings in the priority sectors with the help of the local industry bodies like CII- Kerala.

- **Collaborations with the Sector Skill Councils:** Sector Skill Councils can enable in conducting skill assessment and certifications in the above identified sectors. Such certifications must aim to be internationally recognized through collaborations with international skills certification agencies to allow for global mobility of the workforce.
    - Based on the inputs from training providers, the Sector Skill Councils may play an important role in the standardization of curriculum and content esp. in sectors of importance such as BFSI, Healthcare, Building & Construction, and Retail etc. This may be more important in courses where the demand is to high enough to warrant the necessary investment in developing the content. However, feedback from the training provider indicates that the delivery methodology of the training can be handled by the training provider to ensure customization to local needs.
    - NSDC can also collaborate with Sector Skill Councils to conduct detailed skill-mapping studies in each sector to map skill levels of personnel in various occupations with occupational roles/expectations and work experience required in each job role. This would enable a better understanding and analysis of skill levels and requirements in each sector, based on industry

requirements, for estimating skill gaps in skilled, semi-skilled and minimally skilled roles across sectors.

- **Specific Initiatives for inward migrants***:* Kerala is home to significant migrant labourers from other states in sectors such as Construction, Retail and Tourism/Hospitality in particular. Most of the minimally skilled workers are migrants who require support in the initial stages to adapt to the new conditions. It is important to integrate this labour pool into the formal workforce to reduce the attrition in this segment.
  - Support from industry players can be elicited to understand specific skill gaps and training needs of migrant labour. One of the industry players suggested that the training be provided at the site as it may be difficult for this segment to attend training otherwise.
  - NSDC training providers present in the places of origin of the migrants can be connected to the industries in Kerala through agencies like CII to equip them with basic literacy, language and technical skills. This will improve the productivity of these resources and address the local needs of the industry better.

3.8.3 Recommendations – Industry

- **Pro-active Support of Skill Development:** Primary interactions suggested that industry is not always forthcoming in providing paid internships to students of vocational trades and prefer to recruit technical or professional graduates for job roles which are trade-specific even. Some of the activities that industry could undertake include:
  - Adoption of vocational training institutes through infrastructure up gradation, provision of technical equipment, capacity development of faculty and industry visits for trainees. One of the prominent industry players expressed that Industry- Academy collaboration is key to both to improve the employability of students and in the area of research. They expressed willingness to adopt an ITI and polytechnic which offered trades relevant to their industry viz. chemical and mechanical. One of the industry players (manufacturing) expressed plans to set up a skill development centre, as part of their CSR initiatives, targeted towards employability of the local youth. Such expressions of interest should be facilitated through a nodal agency to ensure prompt implementation.
  - Active participation in curriculum design and content through continuous feedback to institutes
  - Participation in placements through career guidance and counseling workshops and recruitment drives for relevant trades.

- **Internship opportunities:** According to a training provider, industry prefers to recruit only those candidates with experience. Hence internship at an industry is important to obtain the hands-on training which will improve the employability of the trainee. Industry interactions also indicated the need for mandating internships and increasing the time-frame of internships between 6 months to one year.
  - In particular, pre-hire training concept may be popularised among industry to encourage them to employ interns from various institutes and offer employment to the best performers, after successful completion of internships. It is essential that industry offers certificates to all successful candidates, irrespective of whether candidates are hired or not. Industry may approach the Government with suggestions for cost-sharing arrangements for such paid internships, and CSR funds may be directed for this purpose, in particular.
  - Since the state has 44 Public Sector Enterprises (PSEs), employing a significant share of personnel in the organized sector, apprenticeship programs can be designed and conducted in collaboration with these enterprises. This will provide the necessary industrial exposure to the students and can also form a source of potential employment especially in industries like textile,

chemical, engineering units including electrical equipment, electronics and wood & agro based sectors.

- **Up-Skilling and Continuous Learning**[51]**:** Apart from skilling new entrants into the workforce, it is also important to equip the existing workforce with relevant skills based on evolving needs of the industry.
  - For priority sectors such as Banking, Financial Services and Insurance, Communication, Food processing, Textiles and Garments etc. industry can be encouraged by the Government to engage their workforce in such courses by including them in curriculum design, certification and recognising their efforts for the same
  - Industry players in priority sectors can encourage their employees to engage in up-skilling certifications in respective sectors through accredited courses of short-term duration, i.e. 3 to 6 months (in line with NVQF in partnership with Sector Skill Councils). Industry players can collaborate with industry bodies such as CII and Sector Skill Councils to develop skill assessment tools for existing employees to ascertain their skill gaps and training needs. These assessments can serve as a valuable input while designing specific courses for up-skilling.
  - For flexible training options, Massively Online Open Courses (MOOCs) may be considered to address other issues such as lack of skilled trainers or outdated course content. Entities such as Coursera and EdX offer such courses from American universities with web content through videos.[52]Online education may be promoted along the lines of the virtual classroom initiatives across select ITIs in Kerala, which can be designed to be conducted at offices in conference/meeting rooms. Such initiatives can be designed after the training needs have been ascertained for employees according to the business needs of the organization as well.
  - Employees may be encouraged to actively participate in skill gap assessment and up-skilling through appropriate awareness campaigns which highlight the benefits of acquiring additional training through up-skilling programs.

- **Changing attitudes towards blue-collar jobs:** Industry can also actively promote the concept of dignity of labour and aim to reform the attitude among youth and society about blue-collared jobs.
  - Companies can consider various measures to enhance the value of acquisition of skills among the employees and/or potential employees. This may include preferential recruitment or wage differential for certified applicants, prioritizing the regularization of contract employees who opt for skill enhancement, especially in sectors such as construction and hospitality, security services etc.
  - Companies can provide identity cards to all sections of employees, whether in blue-collared or white-collared jobs. Companies can also aim to provide uniforms for personnel in blue-collared jobs to instill a sense of pride and recognition among such personnel.[53]
  - In addition, providing employee benefits such as stipulated leave with pay, health insurance and social security may be considered.
  - To ensure an inclusive work-place, companies may strongly consider including blue-collared staff in festival celebrations in the workplace such as Onam, Deepavali etc. This will also work towards reducing the attitude of distinction between various levels of employees.

[51] Skill Gap Study for the State of Kerala, CII-KPMG 2010
[52] Interim report of the Expert Committee on Employment and Skills Development, submitted to the State Planning Board, August 2013
[53] Interim report of the Expert Committee on Employment and Skills Development, submitted to the State Planning Board, August 2013

- **Industry- SSC collaborations:** The overall engagement of the local industries in Kerala with the Sector Skill Councils can be enhanced. This can include increased membership of prominent industry players from Kerala within the SSCs, Kerala being positioned as a location for the pilot initiatives and setting up of centres of excellence (CoEs) in Kerala. Industry bodies like CII Kerala and NASSCOM can provide the platform for such initiatives.
  Given the increase in the skill development initiatives across the country, there will be a huge need for trainers in the country. One of the areas where Kerala can emerge as a leader is in the field of skill development trainers. Centres of excellence to develop trainers for key sectors like travel, tourism & hospitality, healthcare, BFSI, retail, etc. can be established with the help of relevant SSCs, CII, international training providers and state agencies like KASE. Similar to the field of school education, Kerala can be positioned as a hub for technical trainers for the entire country.

3.8.4 Recommendations – Skill Development Institutes

- **Key Trends in skilling requirements:** The semi-skilled segment is expected to emerge as the largest category of supply over the 2012-22 period. While this employee segment would have undergone some skill based training post schooling, to ensure their employability, this training has to be aligned to the industry demands. Also, the training should be augmented with non-technical skills like soft skills, life skills, etc. since most of the new entrants are expected to be absorbed in the services sector.

  The excess demand in the skilled segment is expected to continue in the state. However, such a trend also presents an opportunity for upward mobility of those initially in the semi-skilled segments to augment their skills according to the industry demand.

- **Sector Specific Initiatives:** Some of the sector-specific initiatives that are recommended for private training providers include -
  - **Agriculture and allied sectors:** Within the agro based/ food processing sector, the courses can be specifically designed for the handling, processing and value addition for export oriented food products such as spices, pickles and marine products apart from other key food items produced e.g. dairy products, rice/wheat products, fish/meat products, masala powders, bakery products, coconut and other oils, fruit juices, ayurvedic products etc.
    As suggested earlier in the report, key crops where skilling interventions can be considered include coconut in Kozhikode, Malappuram & Kannur, rubber in Kottayam, Ernakulam & Pathanamthitta, coffee in Wayanad, pepper in Idukki, Wayanad and Kannur, cashew in Kannur and cardamom in Idukki and Wayanad.
    Collaborations with the Sector Skill Councils for Agriculture, Rubber, etc. can be considered to identify specific skills that need to be imparted to improve the productivity and livelihood opportunities in these areas. Courses related to value addition, processing, quality and marketing can be designed e.g. cashew processing into kernels and value added products like cashew soup, cashew vita, cashew bitz and cashew powder in Kollam. The respective boards like coir board, spices board, cashew board can also be part of such initiatives
  - **Manufacturing and Construction sector:** Within Manufacturing, the key industries expected to contribute to employment include Agro-based/ Food processing and Textiles & garments followed by Engineering Units. The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers. Employability linked skills have emerged as a key area of concern among industry. These are especially true in manufacturing industries where traditional processes and practices are being replaced by newer production techniques.

In light of increase in urbanization and development of infrastructure in the state, building & construction and allied sectors like real estate are expected to generate incremental demand of HR.

- **Services Sector:** Sectors like BFSI, Communication and IT and ITeS emerge as key sectors in Kerala. Education and Health care (including AYUSH) sectors are important both from the point of view of local and external demand.
  In case of healthcare, especially in the nursing profession, skills related to language and communication need to be provided in addition to the domain skills. In case of security, there is a need to impart skills on technology based surveillance, etc.
  For the travel, tourism and hospitality industry a wide range of courses can be offered to the youth. The training programs should focus on the preferences of the domestic and international tourists. They can be designed in collaboration with KITTS and KTDC and implemented by a wide range of institutes.
    - Based on the feedback from industry awareness on aspects like history and culture of Kerala, eco-tourism, hygiene, etc. are important aspects to be integrated as part of the training. In addition given the nature of the working conditions, life skills should also be integrated as part of the training to reduce turnover and improve employee satisfaction.
    - With the tourism sector following subsectors can be focussed in the corresponding districts- Ayurveda and rejuvenation in Ernakulam, Alappuzha, Kottayam & Thiruvananthapuram, Beach tourism in Thiruvananthapuram, Alappuzha & Kannur, Backwaters in Kottayam, Alappuzha, Kollam, Ernakulam & Kozhikode, Hill stations in Idukki, Wayanad & Thiruvananthapuram, Wildlife tourism in Idukki, Ernakulam & Palakkad and Heritage Tourism in Ernakulam, Kozhikode & Thiruvanathapuram.
    - While the basic courses may be similar in all tourism related courses for a particular job role e.g. communication and customer service module for tour guides, each type of tourism would require specific modules to cater to the unique demands of the sub-sector. E.g. for a tour guide organizing treks should be included as an module for wildlife tourism, culture and history of the region as part of the heritage tourism, life guard and emergency handling for beach tourism, etc. Entrepreneurship Development Programme is also important in this sector as there are many avenues for self-employment.

- **Informal Sector**: For the informal sectors like domestic help, housekeeping, etc., the potential NSDC partners can explore collaboration with the Kudumbashree Mission. Within the informal sector industries like the security and surveillance, facilities management and housekeeping, etc. which are important from the view of skill enhancement.
- **Language Training and Soft Skills**: Private training providers may consider setting up centres that function as 'finishing schools' which focus on providing communicative English and soft skills training to new employees and existing employees in the workforce across sectors. Additionally, foreign language courses may also be imparted in German, French, and Spanish etc. to enable graduates across all streams to improve their employability in the global job market.[54]
- **Life Skills:** One of the industry representatives from the hospitality industry emphasised the importance of life skills including goal setting, career planning, self- awareness, etc. Further they opined that such training should be imparted through interactive holistic sessions for it to be effective.

[54] Interim report of the Expert Committee on Employment and Skills Development, submitted to the State Planning Board, August 2013

Skill development institutes can focus on the following sectors, districts in order to address some of the skill gaps identified in the priority sectors:

Table 28: Priority Sectors and Focus Districts

Sector	Priority	Key Districts
Building and Construction	High	Ernakulam, Thiruvananthapuram, Thrissur, Kozhikode, Malappuram, Palakkad
BFSI	High	Ernakulam, Thrissur, Thiruvananthapuram
Communication	High	Across districts
Education and Skill development	High	Ernakulam, Kozhikode, Thiruvananthapuram, Kottayam, Thrissur
Food Processing	High	Ernakulam, Idukki, Alappuzha (Sea Food), Palakkad, Kottayam, Thiruvananthapuram, Thrissur, Kollam
IT/ ITeS	High	Thiruvananthapuram, Ernakulam and Kozhikode
Travel, Tourism and Hospitality	High	Thiruvananthapuram, Alappuzha, Kollam, Ernakulam, Idukki, Wayanad, Kozhikode, Kasaragod, Malappuram, Thrissur and Kannur.
Engineering Products	Medium	Thiruvananthapuram, Palakkad, Kozhikode
Manufacturing – Rubber, Coir, Cashew	Medium	• Rubber- Kottayam, Idukki, Kozhikode, Wayanad, Ernakulam, Thrissur • Coir- Alappuzha, Thiruvananthapuram, Kollam, Kozhikode • Cashew- Kollam • Others- Ernakulam, Palakkad, Thrissur, Thiruvananthapuram, Kozhikode
Retail	Medium	Thiruvananthapuram, Ernakulam
Healthcare	Medium	• Ernakulam, Palakkad, Thiruvananthapuram • Ayurveda - Thrissur, Palakkad • Medical Tourism- Kozhikode, Ernakulam, Malappuram, Thiruvananthapuram
Security and Facilities Management	Medium	Ernakulam, Palakkad, Thrissur, Thiruvananthapuram, Kozhikode
Transportation and Logistics	Low	Ernakulam, Thrissur, Thiruvananthapuram, Kozhikode

Source: Primary Interactions and Deloitte Analysis

4 District Level Skill Gap Assessment

4.1 Alappuzha

Located in the south-west of Kerala, Alappuzha lies between the north latitudes 9 05' and ' and east longitudes 76 17' and 76 40'. It is bounded on the North by the Ernakulam district, on the east by Kottayama and Pathanamthitta districts, on the west by Arabian Sea and on the south by the Kollam district of Kerala. The district is spread over an area of 1414 Sq. kms, which accounts for 3.6 % of the total area of the state. The district is divided into 6 taluks, 73 Gram Panchayats and 91 villages.

4.1.1 Demography

Alappuzha has a population of 21.3 Lakhs according to the 2011 Census of which about 54% reside in urban areas[55]. The growth rate of population in the district is 0.8% which is much less in comparison to the state growth rate of 4.8%. The district ranks second in the state in terms of the population density[56] after Thiruvananthapuram with a population density of 1504.[57] The district has a sex ratio (1100) comparable to the state (1084), as indicated in the table below.

Table 29: Demographic Indicators – Alappuzha

Demography	Alappuzha	Kerala
Population (2011)	2127789	3,34,06,061
Decadal Population Growth Rate (2001-11)	+0.8	+4.8
Population density per sq. km (2011)	1504	859
Sex Ratio (2011)	1100	1084
Percentage of Urban Population (2011)	53.9%	47.7%
Percentage of SC population(2011)	9.4%	9.1%
Percentage of ST population(2011)[58]	0.3%	1.5%

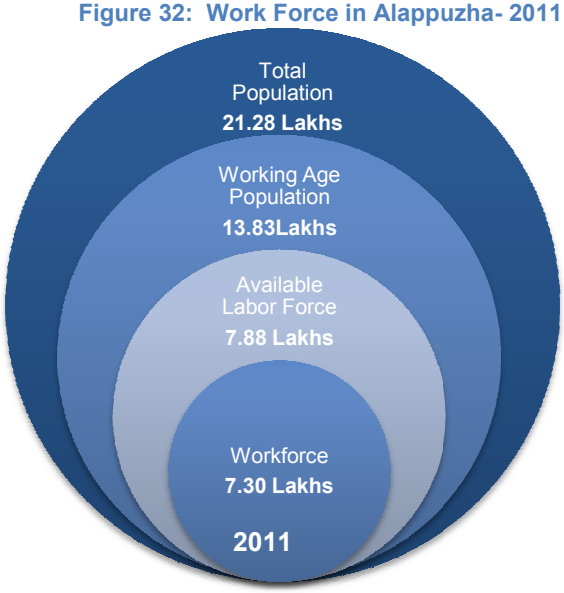
Source: Census 2011

The adjoining figure depicts the estimated workforce in Alappuzha in the context of the population of the district.

Out of the total population of 21.3 Lakhs the working age population (between 15-59 age group) constitutes to 13.8 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 7.3 lakhs or nearly 52.8% of the working age population.

Figure 32: Work Force in Alappuzha- 2011



Source: Census 2011 and Deloitte Analysis

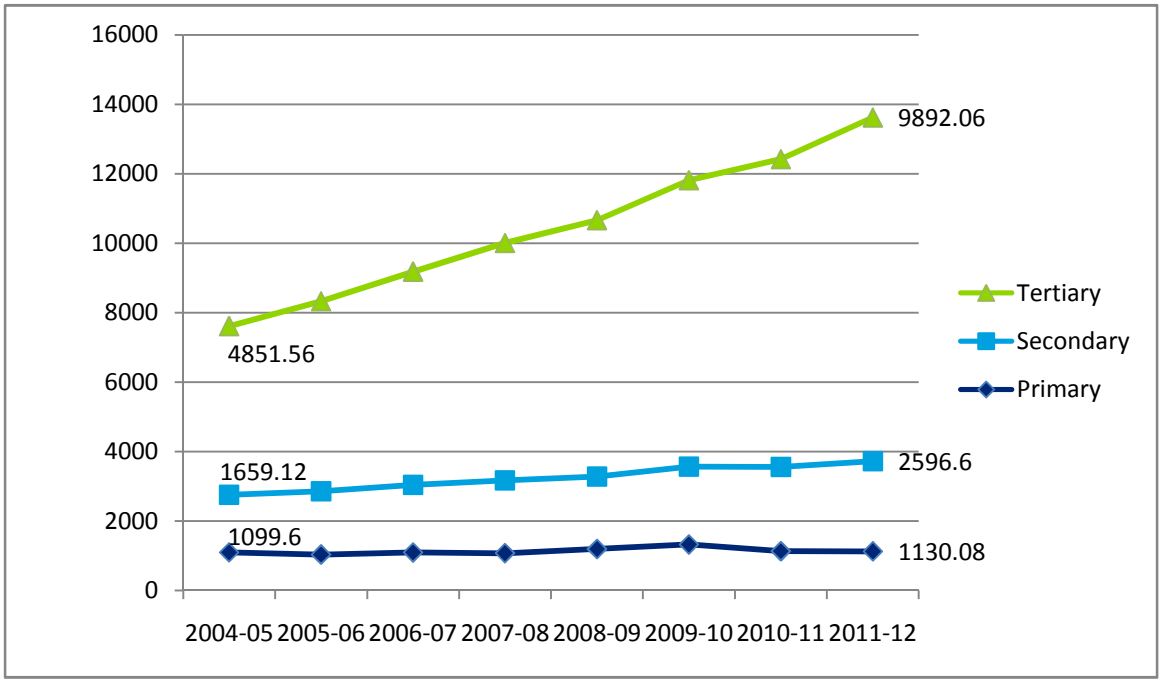
[55] Census of India, 2011
[56] Kerala Economic Review 2012-13
[57] Kerala Human Development Report 2012
[58] Census 2011

4.1.2 Economic Profile

The Gross District Domestic Product (GDDP) of Alappuzha has grown at a growth rate (CAGR) of 8.7% between 2004-05 (Rs. 7610 Cr.) and 2011-12 (Rs. 13618 Cr.). In 2011-12, tertiary sector contributed about 72.6% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the secondary sector at 19.1% and the primary sector at 8.3%.

As indicated in the graph below, the contribution of primary sector has shown a slight increase from 1099.6 Cr. (2004-05) to 1130.1 Cr. (2011-12). The secondary sector and tertiary sector also registered positive growth in its share to GDDP from 1659.6 Cr. to 2596.6 Cr. and from 4851.6 Cr. to 9892.1 Cr. respectively, over this period.

Figure 33: Sector Level Contribution to GDDP, Alappuzha



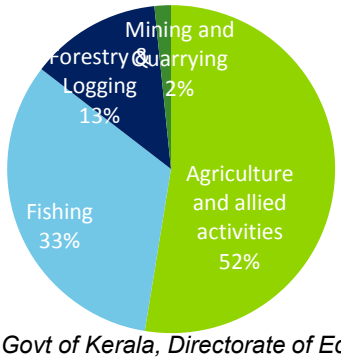
Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 8.3% to the GDDP in 2011-12. The primary sector contribution to the GDDP has seen a decline of 6.2% between 2004-05 and 2011-12.

The CAGR for primary sector is 0.39% with agriculture registering a growth of 0.8% and mining and quarrying showing a growth of 7.8%, while fishing showed a negative growth of 0.1%.

In the district, net sown area is 60.4% of

Figure 34: Primary Sector Contribution to GDDP, Alappuzha 2011



Source: Govt of Kerala, Directorate of Economics and Statistics

total geographic area of 1, 41,011 hectares, which is higher than that for Kerala (52.5%). The total irrigated area is 34795 Ha. The major crops cultivated in the district include paddy, mango, plantains, tapioca, papaya, etc. In terms of area under cultivation, Alappuzha occupies the second position for paddy.[59]

Key characteristics[60] of the primary sector in Alappuzha are presented below:

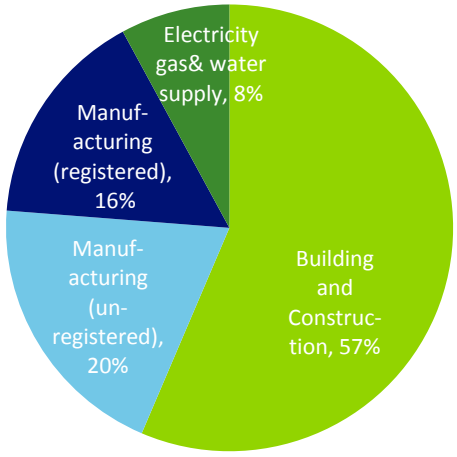
- Agriculture & Allied activities constitute about 52% of the contribution of primary sector to the GDDP.
- The district is rich in crops like paddy, mango, plantains, tapioca, papaya etc.
- Alappuzha district stands 2nd in the cultivation of paddy which accounts for 17.4% of the total area under rice in the state
- In terms of fishermen communities, Alappuzha district has the highest share in the state.
- It is an important district in the state for mining. The important minerals in the district are granite, laterite building stone, sand, lime shell, etc.

Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was approximately 19.1%. The sector has registered a growth of 6.6% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a growth rate of 6.18%.

According to the MSME District Profile for Alappuzha, there are a total of 20738 registered industrial units with 32 medium and large units in the district. The total employment in the large scale units is 6895 workers with a total turnover of Rs. 26306 lakhs (Small scale: 28442 lakhs and medium and large scale: 235164).[61]

Figure 35: Secondary Sector Contribution to GDDP, Alappuzha 2011-12



Source: Govt of Kerala, Directorate of Economics and Statistics

The key identified clusters[62] in the manufacturing sector include Vasthra Garments Cluster, Swasraya Coir Cluster, Kuttanad paddy producers Cluster.

[59] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[60] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[61] District wise MSME Report
[62] Brief Industrial Profile of Alappuzha District 2011-12, MSME Development Institute

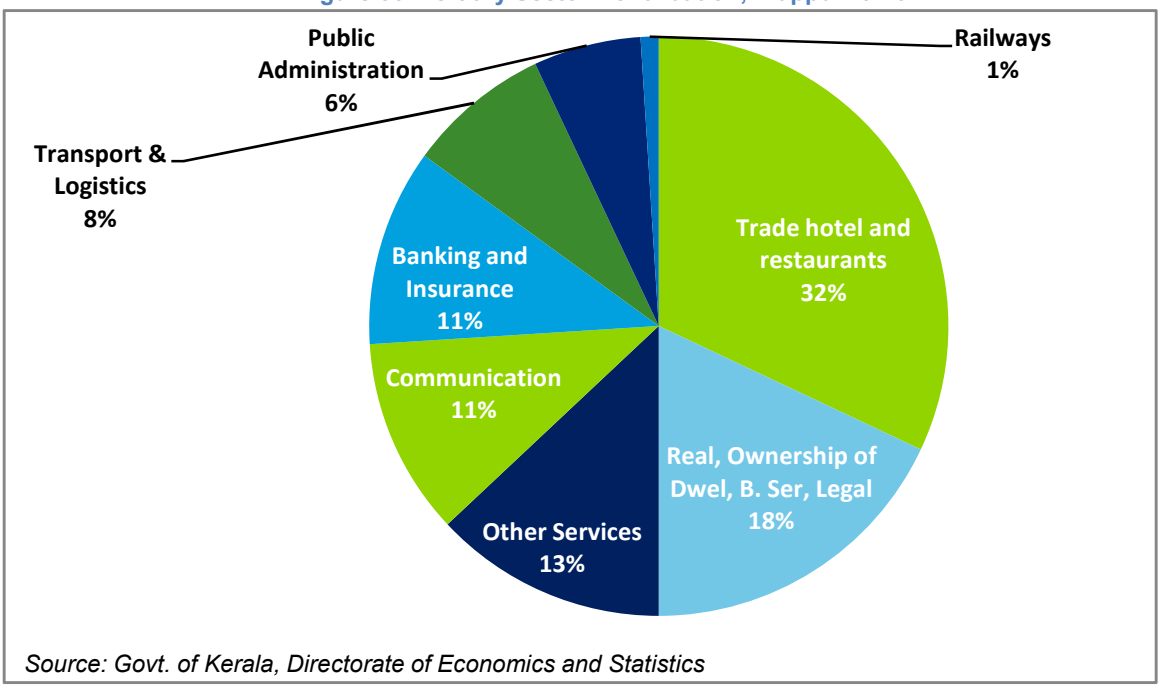
Key characteristics[63] of the secondary sector in Alappuzha are presented below:

- Building and Construction (56%) contributes the highest followed by Manufacturing (36%).
- The KSIDC Industrial Growth Centre is located in Pallipuram over 279 acres is ideally suited for "coir clusters/ marine / silica/ cement-based projects/ educational/ engineering" projects.
- Kerala State Electronics Development Corporation, Aroor, Autocast Limited, Cherthala, K.S.D.P.Kalavoor, Alleppey Co-operative spinning mill Ltd are some of the large scale industries in the district.
- Mangala Marine Exports, Koncheri Coir Factories, Travancore Cocotuft, Innovative Foods, Ezhupunna are some of the medium scale industries in the district
- Coir products are an important manufacturing activity in the district.
- The district has a Seafood park which deals with the cleaning and storage of fishes.

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 63.8% to 72.6% to GDDP between 2004-05 and 2011-12. The sector grew by 10.7% during the same period, in real terms. In terms of growth rate, communication was the fastest growing sector (CAGR=29.1%) followed by Banking and Finance CAGR=14.5%). Key contributors in the sector include trade, hotels and restaurants, real estate services and other services.

Figure 36: Tertiary Sector Contribution, Alappuzha 2011-12



Source: Govt. of Kerala, Directorate of Economics and Statistics

Key characteristics[64] of the tertiary sector in Alappuzha are presented below:

- The tertiary sector (services) contributes a significant share of 72.6% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate, Communication and Other Services sub-sectors.
- Alappuzha is one of the significant tourist destinations in Kerala. Marari beach, Backwaters of Alappuzha are important tourist attractions.
- It houses the InfoPark which is important for the growth of IT sector in the district.

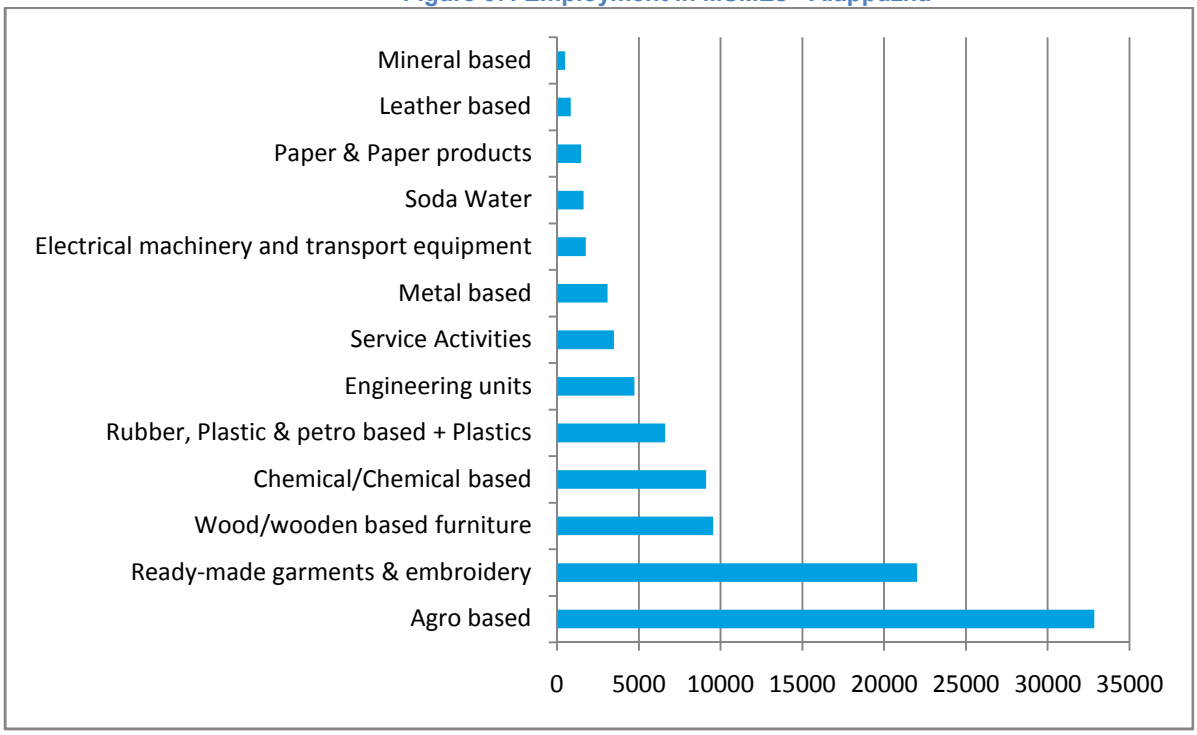
[63] Emerging Kerala website, District MSME Report and Kerala Economic Review
[64] Emerging Kerala Website

4.1.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors[65] presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (51.4%), and followed by the secondary sector (27.9%) and the primary sector (20.6%)[66]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (35.6%) and other services (21.9%) sectors. Within the secondary sector, the largest employer is the building and construction sector (52.5%) and manufacturing (45.9%).

The figure below indicates the employment in MSMEs in the district.

Figure 37: Employment in MSMEs - Alappuzha



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, agro based industries units employ the largest share of workers (32840), followed by readymade garments and embroidery (22016) and wood/ wood based furniture (9542).

[65] Primary Sector = Agriculture and Allied, Forestry and Logging, Mining and Quarrying, Secondary Sector = Manufacturing, Electricity Gas and Water Supply, Building and Construction, Tertiary Sector =Trade, hotel and restaurants, Railways, Transport/Storage, Communication, Banking and Insurance, Real Estate, Ownership of buildings, Business Services, Public Administration and Other Services

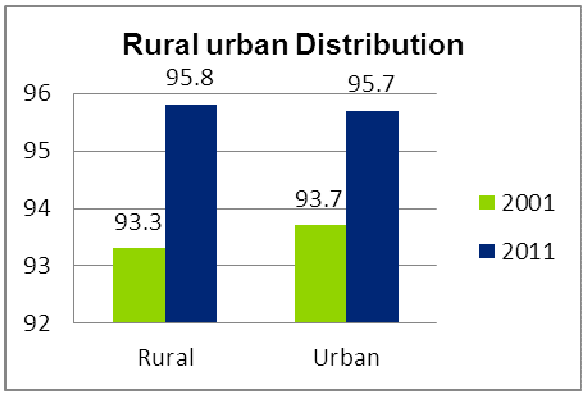
[66] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.1.4 Education Infrastructure

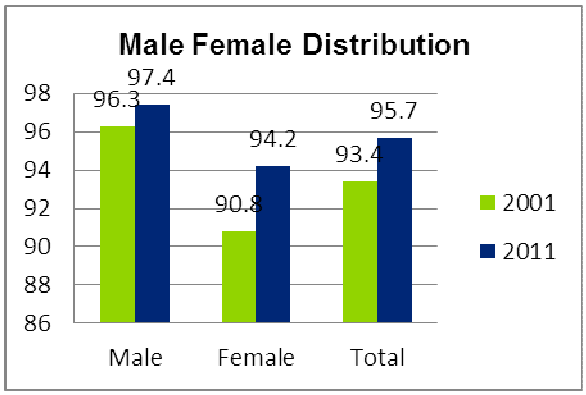
Alappuzha has a higher literacy rate of 95.7% in comparison to the state average of 93.9%. In 2011, male and female literacy rates were 97.4% and 94.2% respectively with a total literacy rate of 95.7% as compared to 2001 literacy rate of 93.4%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 95.8% and 95.7% for rural and urban respectively in the year 2011.

Figure 38: Literacy Rate by Residence and Gender - Alappuzha

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Alappuzha has 952 schools with enrolments of 98696, 87425 and 79291 in lower primary, upper primary and high school levels respectively. The total number of schools in Alappuzha account for 6.2% of the total schools in the state while the enrolments in the school level (up to class X) account for 5.7% of the total state enrolments. The total number of teachers (10092) over the three sections account for 5.5% of the total teachers in the state.[67]

Table 30: School Education Profile - Alappuzha

School category	Alappuzha	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	468	5.9%
Upper Primary Schools (V-VII)	222	5.9%
High Schools (VIII-X)	262	7.2%
Total	**952**	**6.2%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	98,696	5.5%
Upper Primary Schools (V-VII)	87,425	5.7%
High Schools (VIII-X)	79291	5.9%
Total	**265,412**	**5.7%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	2,548	5.2%
Upper Primary Schools(V-VII)	2,599	4.6%
High Schools (VIII-X)	4,945	6.4%
Total	**10,092**	**5.5%**
Source: DISE and SEMIS data 2011-12		

[67] DISE and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Alappuzha has 21 vocational higher secondary schools (14-Govt., 7-Aided)[68]. It has a total of 60 ITIs and ITCs[69]. Some of the trades offered in the Government ITIs and ITCs are Computer Operator and Programming Assistant, Electronics Mechanic, Welder, and Machinist and Turner whereas most of the private ITIs and ITCs offer courses on trades like Electrician, Draughtsman (Civil), Fitter, Electronics Mechanic, and Mechanic Radio and Television. The ITIs of the district have a total intake of 7436 of which 1312 is in the government and 6124 in the ITCs. Further it is to be noted that while being 6 in number (10% of the total), the government ITIs account for 1312 seats (17.6% of total).

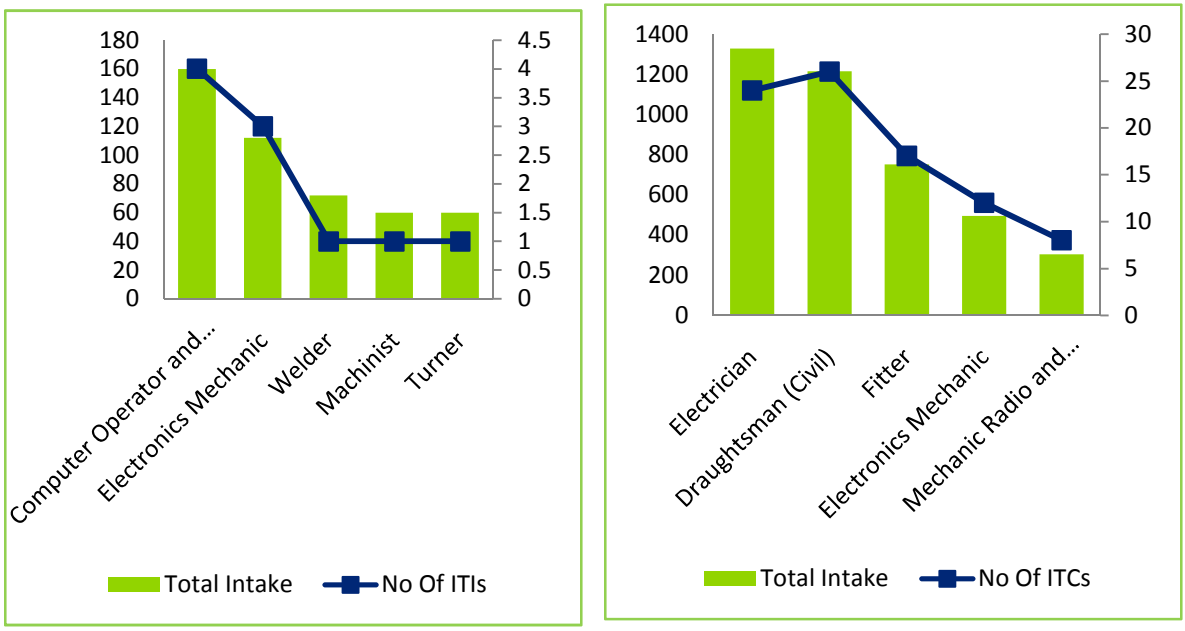
Table 31: Govt. ITIs in Alappuzha and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Women Govt ITI, Chengannur	5	10
Govt ITI Chengannur	24	59
Women Govt ITI Chengannur	3	5
Govt. ITI Purakkad	2	4
Govt. ITI, Kayamkulam	2	4
Datatec Computers & Industrial Training Institute	1	2

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Alappuzha is given in the figure below:

Figure 39:Trades with max seats in ITI and ITCs- Alappuzha



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Alappuzha has 3 Polytechnic Colleges, which includes one Government polytechnic and one Government Women's polytechnic offering Diploma programs in Electronics

[68] Kerala Economic Review, 2012
[69] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm

Engineering and Commercial Practice with approved intake of 60 students. The Government polytechnic offers diploma programme in Computer Hardware Maintenance, Electronics & Instrumentation and Electronics Production technology with approved intake ranging from 50 to 60 seats.[70]

Higher Education Infrastructure

As depicted in the table below, there are 10 engineering colleges, and 22 arts and science colleges in the district with intake of 2700 and 6694 respectively. The district has 1 medical and 4 Nursing colleges. It has 3 Management institutes as well. .

The Centres of Excellence in Alappuzha include Central Coir Research Institute[71].

Table 32: Higher Education Profile – Alappuzha

Educational Infrastructure	Number of Institutes		Source
	Alappuzha	Intake	
Engineering/ Technology	10	**2,700**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	22	6694	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture			*CEE website*
Medicine (including Ayurveda, Homeopathy,	1	**214**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	4	**344**	
BPharm	3	**234**	
Paramedical and Applied Sciences	1	**30**	
Management	3	**180**	*AICTE list*
Total	44	**10396**	

[70] Department of Technical Education, GOK
[71] Emerging Kerala Website

4.1.5 Youth Aspirations

The key observations about aspirations of the youth in Alappuzha have been captured below along the broad dimensions of education and employment:

Table 33: Youth Aspirations- Alappuzha

Parameters	Responses
Preferred Jobs	• Respondents would prefer Govt. jobs but are open to private sector jobs as well. • The average salary expectations of the youth is Rs. 9,000 (per month) • Respondents have opportunities in micro and small enterprises in rural areas • Respondents are willing to relocate and preferable to gulf countries. However, ideally they would prefer to find jobs in their home district.
Preferred Course	• There is a delay in issuing certificates to students this hinders students in finding jobs and migrating.
Issues with VET Infrastructure	• More frequent industry visits and workshops on fitter trade should be provided. • Most students are unaware of opportunities available on course on completion.
Suggestions by Youth	• Industry and institutes should join hands and provide apprenticeship programmes to students. • Students would like to visit other reputed college to learn from their training models and benefit from interactions with other students.

4.1.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a significant role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Within the secondary sector, the expected growth sectors include agro food processing sector, building and construction and coir products. In the tertiary sector, the sectors expected to show growth include tourism, other services and real estate services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 14.9%. The secondary and tertiary sector contributions are estimated to increase to 26.5% and 58.6% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the building and construction (15.8%), trade, hotels and restaurants (15.8 %) and other services (15.7%) which are also confirmed by our primary interactions with government stakeholders, institutes and industries in Alappuzha. Accordingly, building and construction, retail sector which constitute the trade, hotels and restaurants segment and other services are expected to be key sectors of employment in the future.

Table 34: Projected Employment Contribution and Growth Rate - Alappuzha

#	Economic Sector [72]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-1.6%	14.6%
2	Mining and Quarrying	-1.4%	0.3%
3	Manufacturing	-0.5%	10.3%
4	Electricity, Gas & Water supply	0.5%	0.4%
5	Building and Construction	2.4%	15.8%
6	Trade, Hotels and Restaurants	0.1%	15.8%
7	Railways	-2.3%	0.2%
8	Transport & Storage	-1.3%	3.9%
9	Communication	5.8%	6.5%
10	Banking and Insurance	8.4%	5.4%
11	Real estate services and business services etc.	4.6%	6.5%
12	Public Administration	2.2%	4.7%
13	Other Services	5.1%	15.7%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology adopted, the estimated incremental manpower demand in the period 2012-22 will be about 1.74 lakhs. Building and Construction sector is expected to contribute a significant proportion of this demand (17.7%) based on the relatively higher anticipated growth rates, along with Banking and Finance and Communication segments.

Table 35: Incremental Demand (in 00's) – Key sectors- Alappuzha

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	22	58	65	25	65	74
Banking/ Insurance/ Finance	56	51	6	84	76	8
Communication	22	45	45	30	59	59
Education/ Skill development services	70	16	21	89	21	27
Select Informal Sector	9	30	48	11	39	61
Other Services	43	20	3	54	25	4
Public Administration	24	10	6	27	11	7
IT / ITES Services	19	9	1	24	11	2
Healthcare services	9	14	6	11	18	7
Real estate services	3	11	8	4	14	10
Total +ve demand	281	273	213	363	350	264
Overall Incremental Demand	**1,743**					
Workers exiting sectors						
Agriculture and allied activities	-4	-15	-127	-3	-10	-89
Total workers exiting[73]	-12	-4	-154	-10	-30	-115

[72] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

[73] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 25,000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *In terms of incremental demand, Building and Construction, Communication and BFSI sectors are expected to contribute the highest shares between 2012 and 2022.*

Manpower Supply

The population of Alappuzha in 2011 was about 21.3 lakhs which is expected to increase to about 22.1 lakhs in 2017 and about 22.8 lakhs in 2022. As per the methodology highlighted in section 2 the estimated incremental manpower supply from 2012 to 2022 will be about 1.65 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 36: Incremental Labour-force as per Skill Levels (in '00s) - Alappuzha

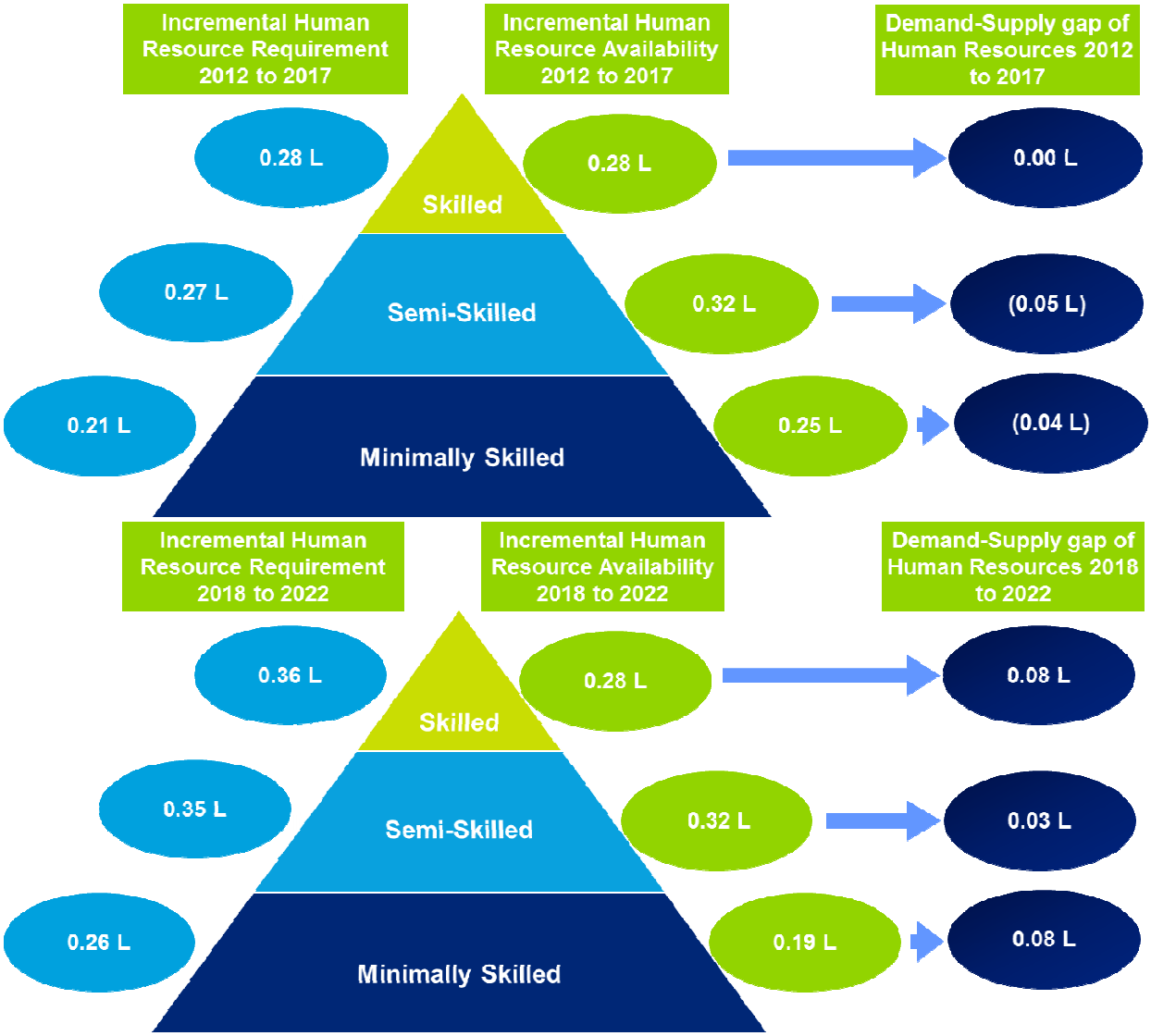
	2012-17	2017-22	Total
Skilled	284	285	569
Semi-Skilled	322	323	645
Minimally-Skilled	254	185	438
Incremental manpower supply (2012-22)	1652		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 30% in the 2012-17 period to 23% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 40: Incremental HR Demand Supply Gap- Alappuzha



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 9000 with the excess demand across skilled segment over the period. When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources. There is also an increase in the gap of skilled labour over the years while there is excess supply in the other 2 segments which requires a shift in the distribution of supply which in turn presents a case for introducing training programs to augment the skills of this segment to cater to the demand in the key sectors of growth.*

- *Even in cases of excess supply, it is pertinent to note that it does not imply industry demand for skills is being sufficiently met. Employability linked skills have emerged as a key area of concern among industry. The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers.*
- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Alappuzha are given in the table below.

Table 37: Qualitative Skill Gaps – Agro-Based Industries and Tourism, Hospitality and Travel

Sector	Level	Skill Gap
Food Processing	Plant Associates and operators	• Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	• Limited awareness on quality, health and hygiene awareness • Limited basic computer skills including barcode reading
	Sales and marketing-	• Limited Communication skills, ability and willingness to understand the manufacturing process
Tourism, Hospitality and Travel	Tour Operators and Guides	• Lack of English and Communication Skills • Lack of grooming and punctuality • Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels/Resorts -Customer facing staff	• Lack of English and Communication Skills • Low Customer service levels
	Restaurants and Hotels/Resorts – Management and Proprietors	• Limited Management skills • Limited Accounting and business knowledge
	Restaurants and Hotels/Resorts – Kitchen Staff	• Limited Knowledge of variety cuisines • Lack of Adherence to hygiene standards
	Drivers – Auto rickshaws, Taxis	• Inadequate communication skills • Limited Adherence to driving rules and regulations • Inadequate Knowledge of safety norms

4.1.7 Recommendations

Future Growth Opportunities in Alappuzha

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Alappuzha.

Table 38: Key Growth Sectors - Alappuzha

Sector	Growth Opportunities
Tourism and Hospitality	• Trade, Hotels & Restaurants is the highest contributor to the economy (32%) within the tertiary sector. • Alappuzha is being positioned as a key tourism destination for backwater and beach tourism and Ayurveda-based medical tourism.
Building & Construction	• In terms of anticipated employment in 2021-22, building and construction contributed the highest to incremental demand (17.7%).
Manufacturing – Coir Products	• Alappuzha is the hub for the coir industry which produces coir fibre, coir pith, coir rope, coir yarn, geo-textile, handloom mattings, Power loom Mats etc.
Food Processing	• Alappuzha has a Seafood Park with processing, cleaning and storage units and is a hub for marine-based food processing.

Considering economic and skill landscape of Alappuzha, the table below indicates the priority areas of focus for key stakeholders involved. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 39: Key Recommendations for stakeholders - Alappuzha

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Tourism and Hospitality • Building and Construction • Manufacturing – Coir products • Food Processing
Private training providers	• More frequent industry visits and workshops on fitter trade should be provided. • Institutes should assist students in placements by providing information on job opportunities from the beginning of the academic year. • Industry and institutes should join hands and provide apprenticeship programmes to students.
Government	• Institutes which provide diplomas in hotel management should provide more training on communication skills and behavioural skills • Students would like to visit other reputed institutes to learn from their training models and benefit from interactions with other students.
Industry	• Industry players should encourage training apprenticeships for trainees from institutes with reasonable stipend • More industry interactions could be initiated in the Building & Construction sector, and private skill training providers for Tourism/Hospitality • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Construction, Tourism/Hospitality etc.

4.2 Ernakulam

Located in the central portion of Kerala, the District lies between 9 degree 47' and 10 degree 17' north latitude and 76 degree 9' and 76 degree 47' east longitudes. It is bounded on the North by Trissur District, on the East by Idukki District, on the West by the Arabian Sea and on the south by the Kottayam and Alappuzha districts. The district is spread over an area of 2407 Sq. kms, which accounts for 6.2% of the total area of the state. It is divided into 7 taluks, 88 Panchayats and 124 villages. Muvattupuzha and Periyar are the main rivers of the district.

4.2.1 Demography

Ernakulam has a population of 32.8 Lakhs according to the 2011 Census of which about 68.1% reside in urban areas.[74] The growth rate of population in the district is 5.7% which is much higher in comparison to the state growth rate of 4.8%. The district has a sex ratio (1027), lower compared to the state (1084), as indicated in the table below. It has the lowest sex ratio in the state.

Table 40: Demographic Indicators – Ernakulam

Demography	Ernakulam	Kerala
Population (2011)	3282388	3,34,06,061
Decadal Population Growth Rate (2001-11)	5.7%	+4.8
Population density per sq. km (2011)	1072	859
Sex Ratio (2011)	1027	1084
Percentage of Urban Population (2011)	68.1%	47.7%
Percentage of SC population(2011)	8.2%	9.1%
Percentage of ST population(2011)[75]	0.5%	1.5%

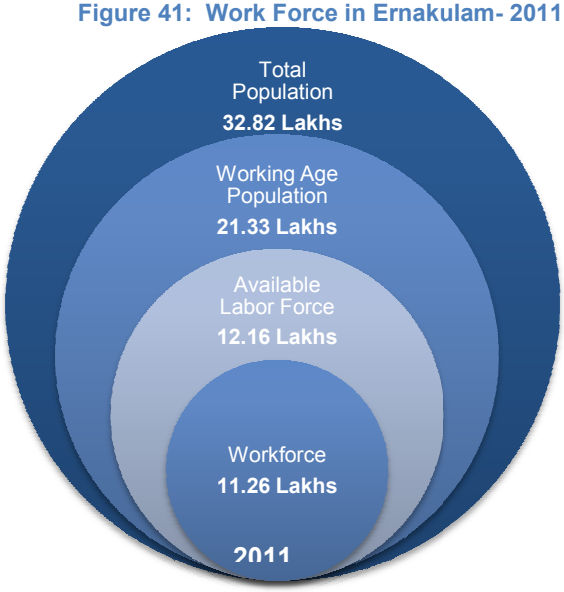
Source: Census 2011

The district ranks sixth in the state in terms of the population density. Ernakulam district has highest share of urban population (68.1%) [76]

The adjoining figure depicts the estimated workforce in Ernakulam in the context of the population of the district. Out of the total population of 32.8 Lakhs the working age population (between 15-59 age group) constitutes to 21.3 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 11.3 lakhs or nearly 53% of the working age population.

Figure 41: Work Force in Ernakulam- 2011



Source: Census 2011 and Deloitte Analysis

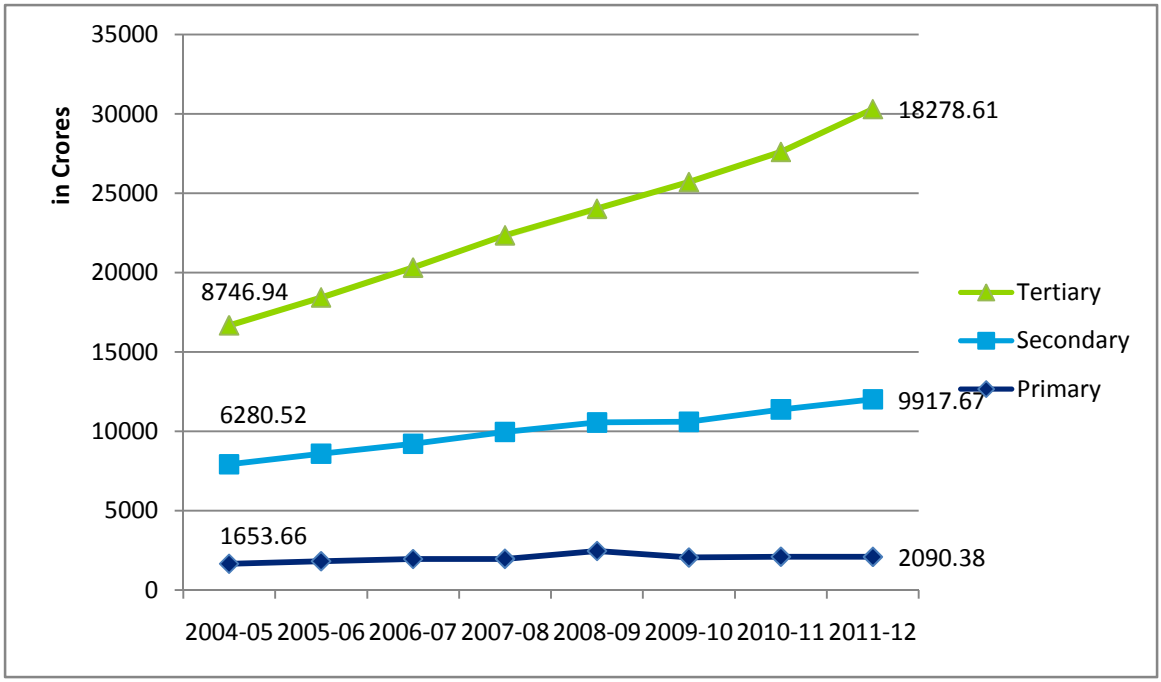
[74] Census of India, 2011
[75] Census 2011
[76] Kerala Economic Review 2012-13

4.2.2 Economic Profile

The Gross District Domestic Product (GDDP) of Ernakulam has grown at a growth rate (CAGR) of 8.9% between 2004-05 (Rs. 16681 Cr.) and 2011-12 (Rs. 302867 Cr.). In 2011-12, tertiary sector contributed about 60.4% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the secondary sector at 32.8% and the primary sector at 6.9%.

As indicated in the graph below, the contribution of primary sector has shown an increase from 1653.7 Cr. (2004-05) to 2090.4 Cr. (2011-12). The secondary sector and tertiary sector also registered positive growth in its share to GDDP from 6280.5 Cr. to 9917.7 Cr. and from 8746.9 Cr. to 18278.6 Cr. respectively, over this period.

Figure 42: Sector Level Contribution to GDDP, Ernakulam

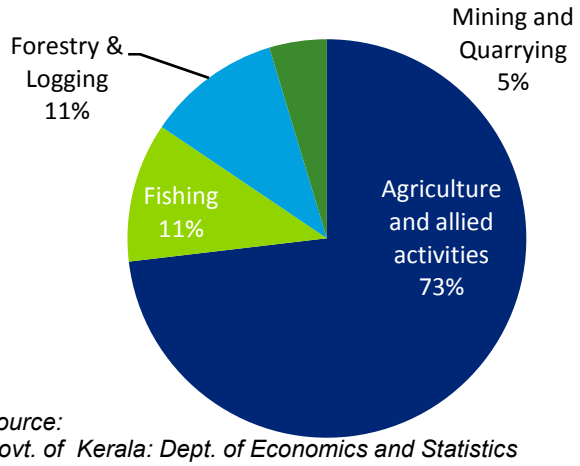


Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 6.9% to the GDDP in 2011-12. The primary sector contribution to the GDDP has seen a decline of 3.0% between 2004-05 and 2011-12. The CAGR for primary sector is 3.4% with agriculture registering a growth of 3.4% and mining and quarrying showing a growth of 16.8%.

In the district, net sown area is 46.9% of total geographic area of 305826 hectares, which is lower than that for Kerala (52.5%). The total

Figure 43: Primary Sector Contribution to GDDP, 2011-12



Source:
Govt. of Kerala: Dept. of Economics and Statistics

irrigated area is 25545 Ha. The major crops cultivated in the district include nutmeg, pineapple, plantains, banana, cocoa, papaya, etc. In terms of area under cultivation, Ernakulam occupies the first position for pineapple and second position for nutmeg and rubber, and third position for cocoa.[77]

It is important to note that forests cover approximately 23% of the total geographical area..[78]

Key characteristics[79] of the primary sector in Ernakulam are presented below:

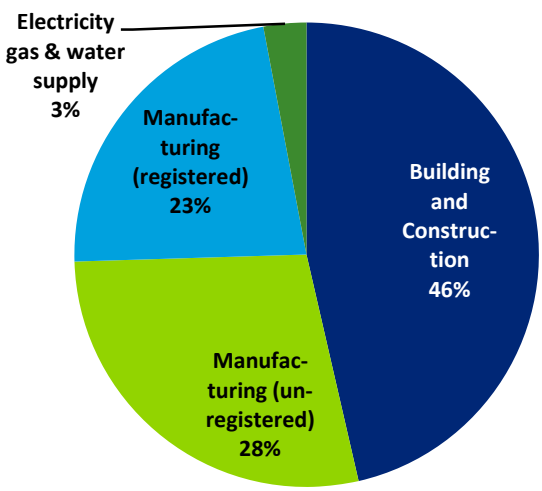
- Agriculture & Allied activities constitute about 73% of the contribution of primary sector to the GDDP.
- The district is rich in crops like nutmeg, pineapple, plantains, banana, cocoa, papaya, etc.
- It is the highest contributor to the state primary output (10.5%)
- In terms of fisherman communities Ernakulam districts has a high share in the state
- Ernakulam district stands 1st in pineapple cultivation and 2nd in the cultivation of nutmeg and rubber which accounts for 62%, 32% and 11%of the total area in the state
- It is an important district in the state for mining. The important minerals in the district are granite, laterite building stone, sand, lime shell, etc.

Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was approximately 32.8%. The sector has registered a growth of 6.7% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a growth rate of 6.18%.

According to the MSME District Profile for Ernakulam, there are a total of 25387 registered industrial units with 22 medium units in the district. The total employment in the medium industries is 2990 workers with a total turnover of Rs. 1923669 lakhs(Small scale= 1841206 lakhs and medium and large scale: 82463 lakhs).[80]

Figure 44: Secondary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

The key identified clusters[81] in the manufacturing sector include Kerala Furniture Consortium, Plywood Cluster, Fabrication and General Engg Cluster and Kalady Rice Mill Cluster.

Key characteristics[82] of the secondary sector in Ernakulam are presented below:

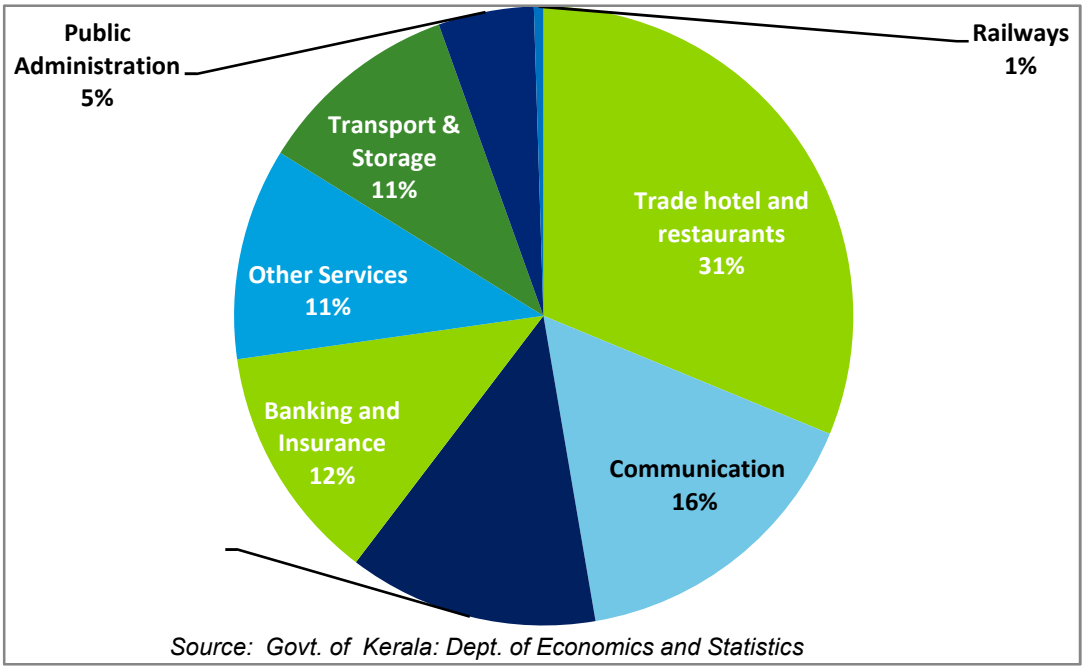
[77] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[78] Kerala economic review 2012-13
[79] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[80] District wise MSME Report
[81] Brief Industrial Profile of Ernakulam District 2011-12, MSME Development Institute
[82] Emerging Kerala website, District MSME Report and Kerala Economic Review

- Manufacturing (51%) contributes the highest followed by Building and Construction (46%).
- It is the highest contributor to the secondary output of the state (23.3%).
- India's first KINFRA Export Promotion Industrial Park at Ernakulam with export commitment in engg. products, textile and garments, food products, ceramic products, rubber/plastic/leather products, chemicals, pharmaceuticals/herbal medicines.
- KINFRA small industries park is located in Ernakulam which focuses on Rubber/plastic products, furniture, food processing, light engineering, packaging, ceramic products
- Rubber park is also present which focus on Rubber/rubber wood products, latex
- The food processing parks in Ernakulam and Malappuram have the highest number of units.
- Ernakulam district is famous for wood work and lacquer and also handlooms.

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 52.4% to 60.3% to GDDP between 2004-05 and 2011-12. The sector grew by 10.7% during the same period, in real terms. In terms of growth rate, communication was the fastest growing sector (CAGR=29.1%) followed by Banking and Finance CAGR=14.5%). Key contributors in the sector include trade, hotels and restaurants, communication and real estate services and other services.

Figure 45: Tertiary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics[83] of the tertiary sector in Ernakulam are presented below:

- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Communication , Real estate, and Banking and Insurance sub-sectors.
- It is the highest contributor to the state tertiary product (12.4%).
- Ernakulam and Thiruvananthapuram emerge as the top districts in terms of number of tourist arrivals. It is famous for its Ayurveda, backwaters, Thattekad wildlife reserve and heritage tourism.
- It houses the InfoPark which is important for the growth of IT sector in the district.

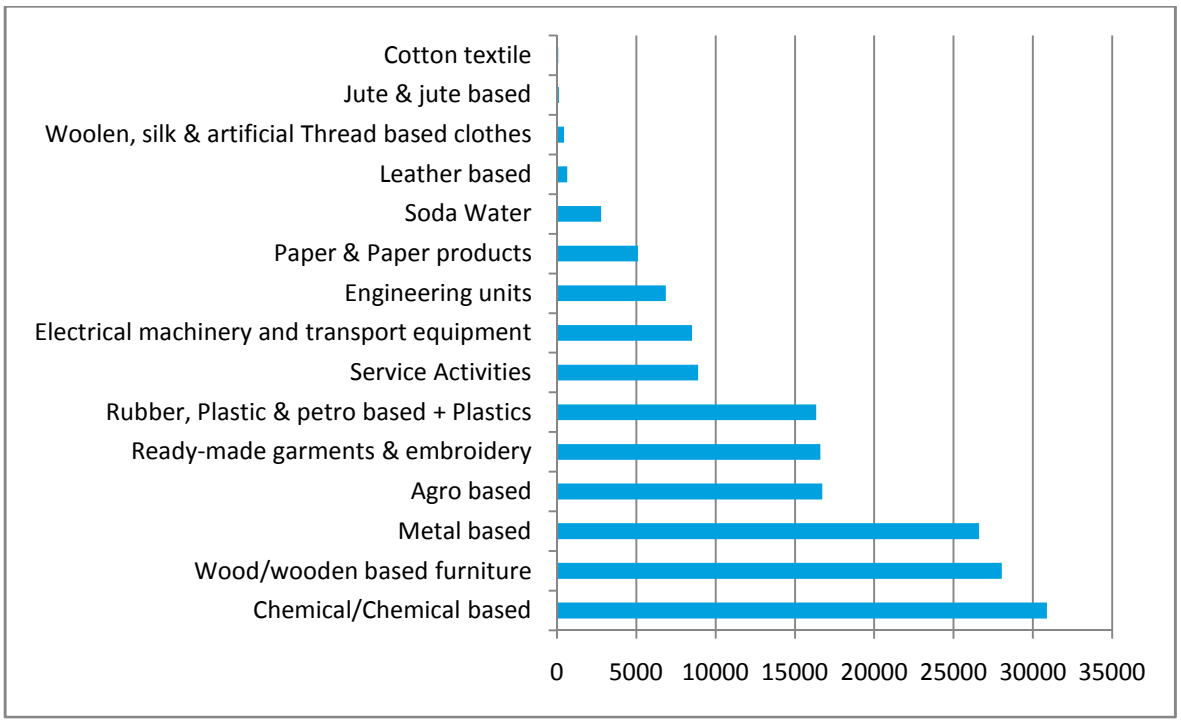
[83] Emerging Kerala Website

4.2.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the secondary sector (47.2%), and followed by the tertiary sector (37.7%) and the primary sector (15.1%)84. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (35.3%) and other services (17.7%) sectors. Within the secondary sector, the largest employer is the manufacturing (60.8%) and building and construction sector (38.7%).

The figure below indicates the employment in MSMEs in the district.

Figure 46: Employment in MSMEs - Ernakulam



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, chemical based industries units employ the largest share of workers (30885), followed by wood/wooden based units (28044) and metal based (26608).

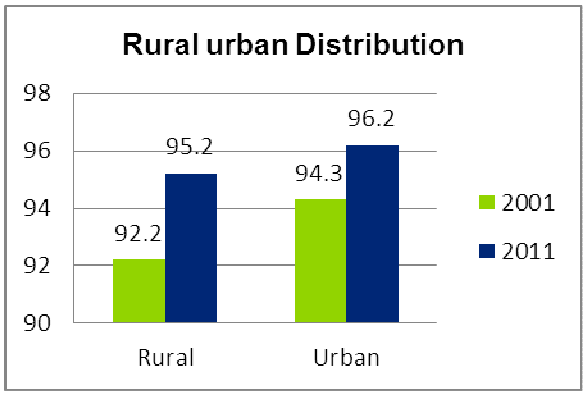
[84] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.2.4 Education Infrastructure

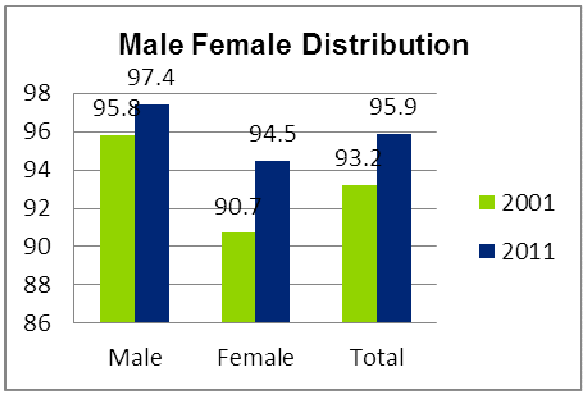
Ernakulam has a higher literacy rate of 95.9% in comparison to the state average of 93.9%. In 2011, male and female literacy rates were 97.4% and 94.5% respectively with a total literacy rate of 95.9% as compared to 2001 literacy rate of 93.2%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 95.2% and 96.3% for rural and urban respectively in the year 2011.

Figure 47: Literacy Rate by Residence and Gender - Ernakulam

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Ernakulam has 1291 schools with enrolments of 164911, 141434 and 125282 in lower primary, upper primary and high school levels respectively. The total number of schools in Ernakulam account for 8.4% of the total schools in the state while the enrolments in the school level (up to class X) account for 9.2% of the total state enrolments. The total number of teachers (15424) over the three sections account for 8.4% of the total teachers in the state.[85]

Table 41: School Education Profile - Ernakulam

School category	Ernakulam	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	538	6.8%
Upper Primary Schools (V-VII)	304	8.1%
High Schools (VIII-X)	449	12.3%
Total	**1,291**	**8.4%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	164,911	9.2%
Upper Primary Schools (V-VII)	141,434	9.3%
High Schools (VIII-X)	125282	9.3%
Total	**431,627**	**9.2%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	3,352	6.9%
Upper Primary Schools(V-VII)	3,427	6.0%
High Schools (VIII-X)	8,645	11.1%
Total	**15,424**	**8.4%**
Source: DISE and SEMIS data 2011-12		

[85] DISE and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Ernakulam has 34 vocational higher secondary schools (22-Govt., 12-Aided) [86]. It has a total of 61 ITIs and ITCs[87]. Some of the major trades offered in the Government ITIs and ITCs are fitter, electronics mechanic, electrician, turner and draughtsman (civil), whereas most of the private ITIs and ITCs offer courses on diverse trades like electronics mechanic, electrician, draughtsman (civil), fitter and mechanic (motor vehicle). The ITIs of the district have a total intake of 8460 of which 1500 is in the government and 6960 in the ITCs. Further it is to be noted that while being 4 in number (6.6% of the total), the government ITIs account for 1500 seats (17.7% of total).

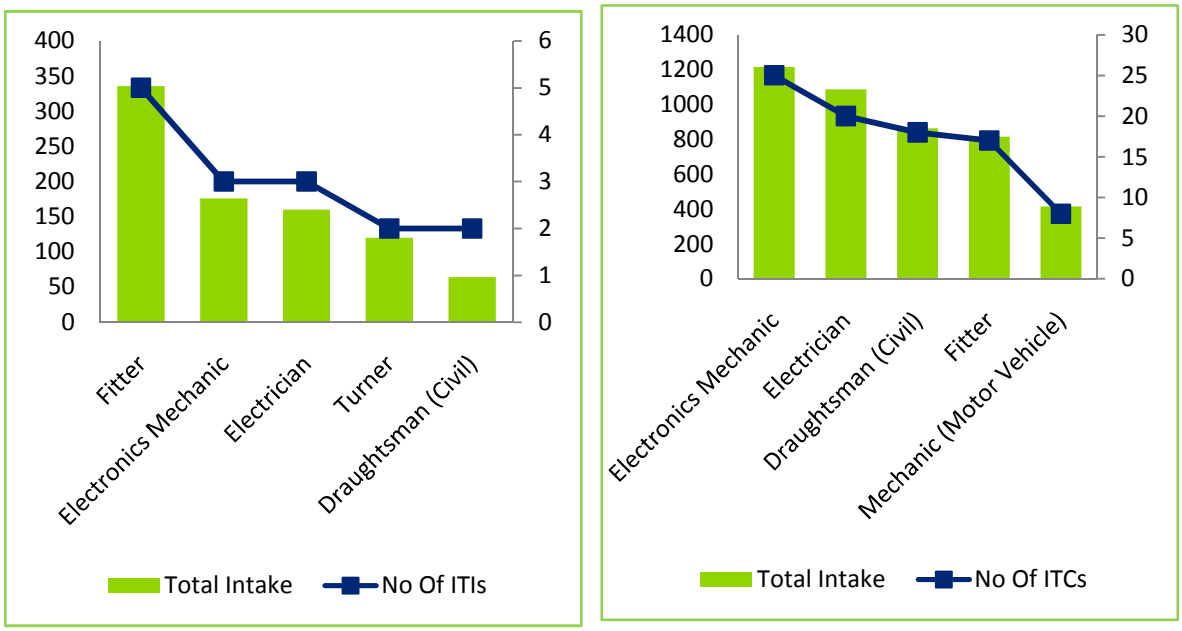
Table 42: Govt. ITIs in Ernakulam and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Govt Industrial Training Institute Kalamassery	18	49
Govt Industrial Training Institute for Women Kalamessery	8	22
Amulia Industrial Training Centre	1	3

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Ernakulam is given in the figure below:

Figure 48:Trades with max seats in ITI and ITCs- Ernakulam



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Ernakulam has 4 Polytechnic Colleges, which includes three Government polytechnic and one Government Women's polytechnic. The Women's Polytechnic offers Diploma programs in Electronics Engineering, Architecture, Computer Engineering and Commercial Practice with approved intake of 30 to 60 students.. The Government polytechnics offers diploma programme in civil,

[86] Kerala Economic Review, 2012
[87] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm

mechanical, automobile, electrical & electronics, chemical & computer science engineering with approved intake ranging from 40 to 60 seats.[88]

Higher Education Infrastructure

Ernakulam district has the highest proportion of institutes of higher education institutes in the state which is 144 colleges (16.1%). Thiruvananthapuram and Ernakulam district account for 27.2% of the institutes of higher education in the district.

As depicted in the table below, Ernakulam is a major higher education hub with 29 engineering college, and 52 arts and science colleges in the district. The district has 10 medical and 16 Nursing colleges. It has 26 Management and 3 law colleges as well. .

The Centres of Excellence in Ernakulam include Cochin University of Science and Technology (CUSAT), National Institute of Oceanography (Regional Centre), Central Marine Fisheries Research Institute, National Institute of Fisheries Post Harvest Technology & Training, Infopark, Cochin Special Economic Zone, Spices Board, Marine Products Export Development Authority (MPEDA), Coconut Development Board, Coir Board[89].

Table 43: Higher Education Profile – Ernakulam

Educational Infrastructure	Number of Institutes		Source
	Ernakulam	Intake	
Engineering/ Technology	29	**10,120**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	52	**11632**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	1	**50**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	10	**721**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	16	**1,072**	
BPharm	3	**234**	
Paramedical and Applied Sciences	4	**150**	
Law	3	**375**	*CEE website*
Management	26	**2490**	*AICTE website*
Total	144	**23979**	

4.2.5 Youth Aspirations

The key observations about aspirations of the youth in Ernakulam have been captured below along the broad dimensions of education and employment:

Table 44: Youth Aspirations- Ernakulam

Parameters	Responses
Preferred Jobs	• Most of the respondents want to relocate to another country or even another state. For students of catering, hotel management and tourism, preferred locations include Singapore and New Zealand.

[88] Department of Technical Education, GOK
[89] Emerging Kerala Website

Parameters	Responses
	• None of the Hotel Management and Tourism students want to work in the govt. sector. • Job options include Hotel industry, airline industry and catering services. The average salary expectation of the youth is Rs.15,000 (per month) for freshers.
Issues with VET Infrastructure	• IT infrastructure needs improvement. • Awarding of degree certificates gets delayed by one year, this needs to be addressed.
Suggestions by Youth	• Hospitality industry values good communication skills, positive attitude, grooming capabilities and experience, which must be inculcated in the students. • Govt. needs to ramp up salaries in the tourism sector (including Kerala Tourism Development Corporation) to match the private sector. • Govt. should encourage and promote setting up of new 5 star properties which will increase revenue generation and employment capabilities of the sector.

4.2.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector contribution will continue to decline and people will continue to move out of this sector. Within the secondary sector, Building and Construction, Wood/ wooden based furniture, Chemical/Chemical based, Mineral based units. In the tertiary sector, the sectors expected to show growth include tourism, other services and real estate services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector and secondary sector employment is expected to decline to 9.9% and 46.1% respectively. The tertiary sector contribution is estimated to increase to 44%, as indicated in the table below.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the manufacturing sector (26.9%), building and construction (19.0%), and trade, hotels and restaurants (11.8 %). Accordingly, building and construction, retail sector which constitute the trade, hotels and restaurants segment and other services are expected to be key sectors of employment in the future.

Table 45: Projected Employment Contribution and Growth Rate - Ernakulam

#	Economic Sector [90]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-2.0%	9.4%
2	Mining and Quarrying	-2.6%	0.4%
3	Manufacturing	1.5%	26.9%
4	Electricity, Gas & Water supply	0.9%	0.2%
5	Building and Construction	2.5%	19.0%
6	Trade, Hotels and Restaurants	1.0%	11.8%
7	Railways	-3.0%	0.1%

[90] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

8	Transport & Storage	0.1%	4.1%
9	Communication	6.7%	7.0%
10	Banking and Insurance	10.2%	5.2%
11	Real estate services and business services etc.	7.9%	4.8%
12	Public Administration	1.6%	2.6%
13	Other Services	4.4%	8.3%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology, the estimated incremental manpower demand in the period 2012-22 will be about 5.34 lakhs. Building and Construction sector is expected to contribute a significant proportion of this demand (19.5%) based on the relatively higher anticipated growth rates, along with Manufacturing and Communication segments.

Table 46: Incremental Demand (in '00s) – Key sectors- Ernakulam

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	73	196	220	83	222	249
Manufacturing	81	223	142	87	241	153
Communication	70	140	140	97	193	193
Banking/ Insurance/ Finance	153	138	15	249	224	25
Other Services	94	44	7	134	62	10
Education/ Skill development	90	21	28	112	26	34
Select Informal Sector	11	39	62	14	49	77
IT / ITES Services	51	24	4	75	35	6
Organized retail	13	44	31	14	46	32
Real estate services	9	30	21	13	43	30
Total +ve demand	697	957	700	934	1208	844
Overall Incremental Demand	**5340**					
Workers exiting sectors						
Agriculture and allied activities	-10	-32	-278	-7	-23	-202
Total workers exiting[91]	-11	-37	-288	-9	-28	-211

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 55000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *In terms of anticipated incremental demand between 2011-12 and 2021-22, the building and construction sector (19.5%) and manufacturing sectors (17.3%) are expected to be key contributors.*

Manpower Supply

[91] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

The population of Ernakulam in 2011 was about 32.8 lakhs which is expected to increase to about 34.1 lakhs in 2017 and about 35.2 lakhs in 2022. As per the methodology the estimated incremental manpower supply from 2012 to 2022 will be about 2.95 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 47: Incremental Labour-force as per Skill Levels (in 00's) - Ernakulam

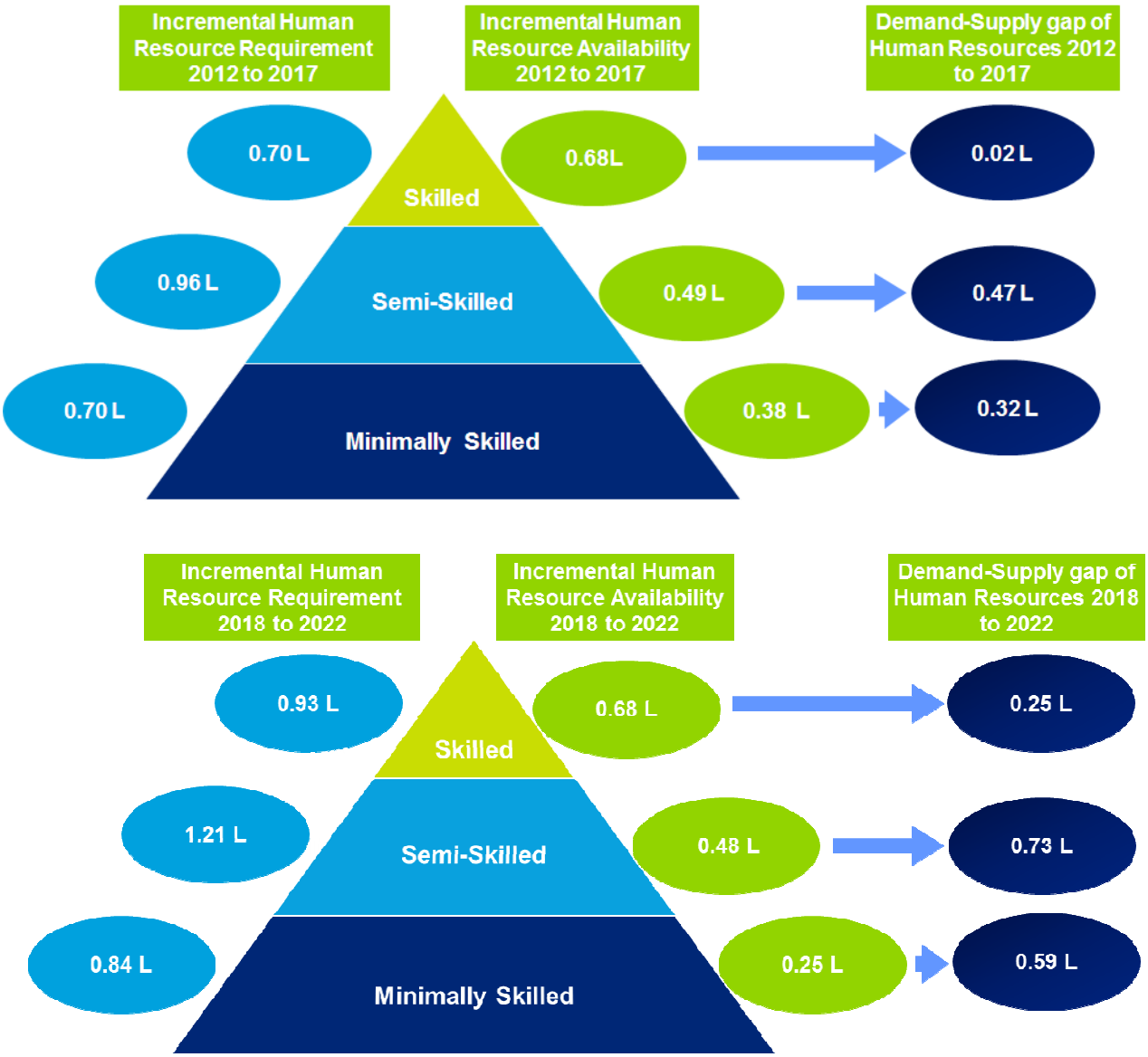
	2012-17	2017-22	Total
Skilled	675	680	1355
Semi-Skilled	484	481	965
Minimally-Skilled	378	253	631
Incremental manpower supply (2012-22)	2951		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 25% in the 2012-17 period to 18% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 49: Incremental HR Demand Supply Gap- Ernakulam



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 238836 with the excess demand across all the segments over the period.

- *The excess demand in the semi-skilled segment is highest across the period, followed by minimally skilled and skilled segments. This reflects a need for skill development training across the key sectors.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Ernakulam are given in the table below.

Table 48: Qualitative Skill Gaps

Sector	Level	Skill Gap
Food Processing	Plant Associates and operators	Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	Limited awareness on quality, health and hygiene awareness Limited basic computer skills including barcode reading
	Sales and marketing-	Limited Communication skills, ability and willingness to understand the manufacturing process
Tourism, Hospitality and Travel	Tour Operators and Guides	Lack of English and Communication Skills Lack of grooming and punctuality Inadequate knowledge of history and cultural aspects
	Restaurant and Hotels/Resorts - Customer facing staff	Lack of English and Communication Skills Low Customer service levels
	Restaurants and Hotels/Resorts – Management and Proprietors	Limited Management skills Limited Accounting and business knowledge
	Restaurants and Hotels/Resorts – Kitchen Staff	Limited Knowledge of variety cuisines Lack of Adherence to hygiene standards
	Drivers – Auto rickshaws, Taxis	Inadequate communication skills Limited Adherence to driving rules and regulations Inadequate Knowledge of safety norms
Building & Construction	Engineers	Knowledge of design and tools such as AutoCAD etc. Knowledge of green/eco-building design Project Management and People Management Skills
	Supervisors: plumbing, electrical, carpentry, masonry, panting, drilling	Skills in civil- operations of ready mix m/c, earth movers, etc. Basic repair and maintenance Attitude towards safety and quality
	Workmen: plumbing, electrical works, carpentry, masonry, panting, drilling	Basic skills related to relevant category Attitude towards safety
IT/ITeS	ITeS- BPO, KPO	Basic computer skills Customer services attitude
	IT	Project management skills Entrepreneurial skills (in smaller companies)
Retail	Front end services	Communication and customer services knowledge Cashier- data entry and basic computer skills
	Stocking and Inventory	Industry knowledge Documentation skills
	Procurement, Supply Chain and Store managers	Communication Skills People Management skills
Select Informal – Security & Facilities Management	Security Guards	Armed/Un-armed Training
	Cash management services	Bank ATMs operations knowledge
	Security Supervisor	Surveillance, CCTV operations Communication Skills People Management skills, Crisis management
Communication	Customer care executive at call centre	Verbal communication especially related to selling Basic computer skills
	Customer care executive at repair centre	Basic knowledge of products Documentation Communication
Education/Skill Development	Faculty and Trainers	Knowledge and experience in use of modern teaching aids and activity-based learning modules Industry exposure or experience (for Higher Education and Vocational Education) Technical knowledge in trades such as fashion design; fine arts, visual communication Soft Skills and Inter-Personal Skills

4.2.7 Recommendations

Future Growth Opportunities in Ernakulam

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Ernakulam.

Table 49: Key Growth Sectors - Ernakulam

Sector	Growth Opportunities
Tourism and Hospitality	• Trade, Hotels & Restaurants is the highest contributor to the economy (31%) within the tertiary sector, in 2011-12. • Ernakulam is a key district for backwater tourism, Ayurveda, heritage tourism and wildlife tourism
Banking, Financial Services & Insurance (BFSI)	• In terms of growth rate, the banking and insurance sector has registered a high growth rate of 14.5% between 2004-05 and 2011-12.
Manufacturing - Food Processing, Mineral Based, Engineering Units, Textiles/Garments, Chemicals & Pharmaceuticals, Rubber and Plastics, Furniture/Furnishings	• The district is a hub for manufacturing and is expected to contribute the bulk to anticipated employment in 2021-22. • Some of the key investments in the district include India's first KINFRA Export Promotion Industrial Park at Ernakulam with export commitment in engg. products, textile and garments, food products, ceramic products, rubber/plastic/leather products, chemicals, pharmaceuticals/herbal medicines and the KINFRA small industries park which focuses on Rubber/plastic products, furniture, food processing, light engineering, packaging, ceramic products
Building & Construction; Real Estate Services	• This sector contributes the highest share to the secondary sector DDP in the district (46%) in 2011-12. In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from building and construction (19.4%). • The building and construction and real estate sectors are expected to contribute a significant proportion of the incremental demand based on the relatively higher anticipated growth rates.
Education and Skill Development	• Education is expected to contribute significantly to the creation of jobs in the skilled segments. This is in line with the views of government officials and the Emerging Kerala website which indicates that immense investment potential exists in the education space
Communication	• Communication sector has recorded the fastest growth rate of 29% between 2011-12 and 2021-22 in the district and is expected to continue high growth with considerable employment potential
IT/ITeS	• The district is important for IT/ITeS activities with significant potential in software development, BPO/KPO services and software training centres.[92]

Considering economic and skill landscape of Ernakulam, the table below indicates the priority areas of focus for key stakeholders involved. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

[92] Emerging Kerala Website

Table 50: Key Recommendations for stakeholders - Ernakulam

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Tourism and Hospitality • BFSI • Manufacturing – Food Processing, Mineral Based, Engineering Units, Textiles/Garments, Chemicals & Pharmaceuticals, Rubber and Plastics, Furniture/Furnishings etc. • Building and Construction • Education and Skill Development • IT/ITeS • Communication • Retail • Select Informal Sectors
Private training providers	• There is demand for more courses in tourism and hospitality and courses in BFSI, Agro-based Manufacturing, Education and Skill Development sectors can be explored. • Institutes in the Tourism and Hospitality sector should focus on inculcating communication skills, positive attitude, grooming capabilities in students
Government	• Youth interactions indicated the need Govt. to ramp up salaries in the tourism sector (including Kerala Tourism Development Corporation) to match the private sector. • Govt. should encourage and promote setting up of new 5 star properties in the district to promote high-end tourism which will increase revenue generation and employment capabilities of the sector.
Industry	• More industry interactions could be initiated in the Building & Construction BFSI, Tourism/Hospitality sectors • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as BFSI, Tourism/Hospitality etc.

4.3 Idukki

Located in the central portion of Kerala, the District lies between 9 degree 15' and 10 degree 21' of north latitude and 76 degree 37' and 77 degree 25' of east longitudes. It is bounded on the North by Trichur and Coimbatore Districts of Kerala and Tamil Nadu States, on the East by Madurai District of Tamil Nadu State while on the West by Ernakulam and Kottayam Districts of Kerala and on the south it is the Pathanamthitta District. The district is spread over an area of 5,087 Sq. kms, which accounts for 13% of the total area of the state. It has the largest area among all the districts of the state and extends by 115km. from south to north and 67km. from east to west. Periyar, Thalayar and Thodupuzhayar and their tributaries are the main rivers of the district. The River Pamba also has its origin here.

4.3.1 Demography

Idukki has a population of 11.1 Lakhs according to the 2011 Census of which about 4.7% reside in urban areas.[93] The growth rate of population in the district is -1.8% which is much less in comparison to the state growth rate of 4.8%. The district has a sex ratio (1006), lower compared to the state (1084), as indicated in the table below. It has the lowest sex ratio in the state.

Table 51: Demographic Indicators – Idukki

Demography	Idukki	Kerala
Population (2011)	1108974	3,34,06,061
Decadal Population Growth Rate (2001-11)	-1.8%	4.8%
Population density per sq. km (2011)	255	859
Sex Ratio (2011)	1006	1084
Percentage of Urban Population (2011)	4.7%	47.7%
Percentage of SC population(2011)	13.1%	9.1%
Percentage of ST population(2011)[94]	5.0%	1.5%

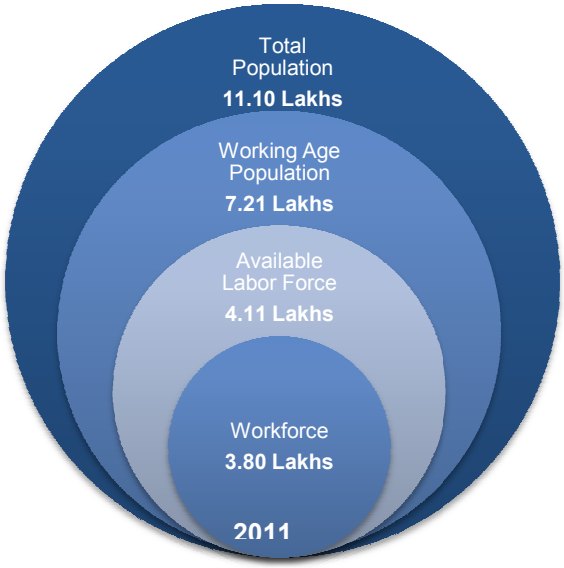
Source: Census 2011

The district ranks last in the state in terms of the population density. It has a high percentage of rural population (95.3%).[95]

The adjoining figure depicts the estimated workforce in Idukki in the context of the population of the district. Out of the total population of 11.1 Lakhs the working age population (between 15-59 age group) constitutes to 7.2 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 3.8 lakhs or nearly 52.8% of the working age population.

Figure 50: Work Force in Idukki- 2011



Source: Census 2011 and Deloitte Analysis

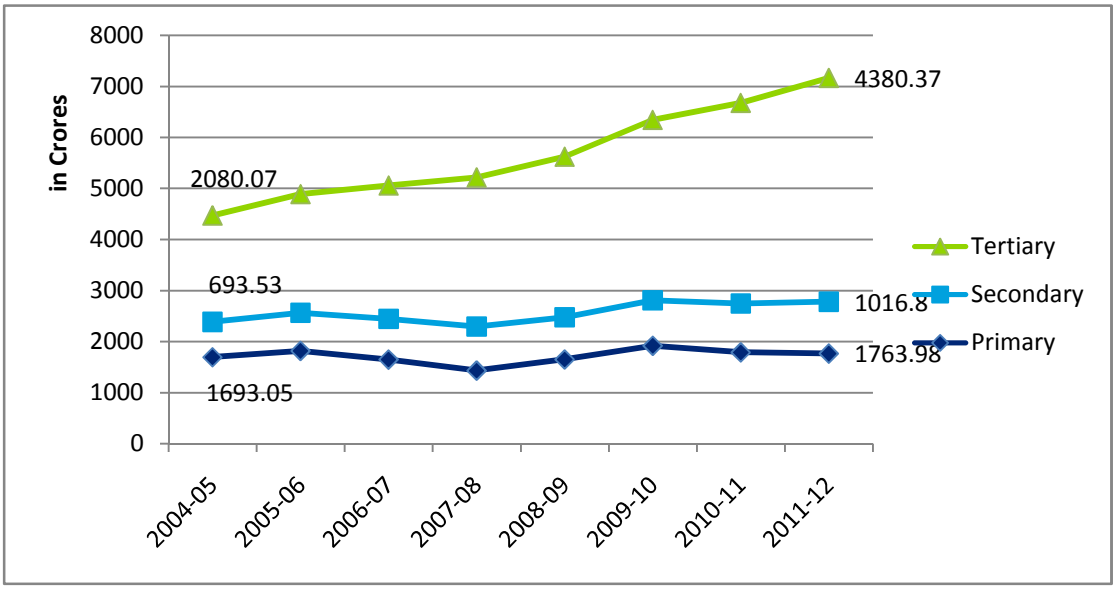
[93] Census of India, 2011
[94] Census 2011
[95] Kerala Economic Review 2012-13

4.3.2 Economic Profile

The Gross District Domestic Product (GDDP) of Idukki has grown at a growth rate (CAGR) of 7% between 2004-05 (Rs. 4467 Cr.) and 2011-12 (Rs. 7161 Cr.). In 2011-12, tertiary sector contributed about 61.2% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the primary sector at 24.6% and the secondary sector at 14.2%.

As indicated in the graph below, the contribution of primary sector has shown a slight increase from 1693 Cr. (2004-05) to 1764.0 Cr. (2011-12). The secondary sector and tertiary sector also registered positive growth in its share to GDDP from 693.5 Cr. to 1016.6 Cr. and from 2080.1 Cr. to 4380.4 Cr. respectively, over this period.

Figure 51: Sector Level Contribution to GDDP, Idukki



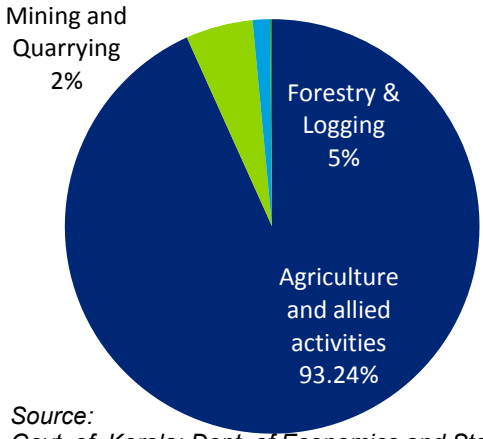
Source: Govt. of Kerala: Department of Economics and Statistics

Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 24.6% to the GDDP in 2011-12. The primary sector contribution to the GDDP has seen a decline of 13.3% between 2004-05 and 2011-12. The CAGR for primary sector is 0.59% with agriculture registering a growth of 0.6% and mining and quarrying showing a growth of 18.9%, while forestry and logging showed a negative growth of 2.5%.

In the district, net sown area is 47.4% of total geographic area of 4,36,328 hectares, which is lower than that for Kerala (52.5%). The

Figure 52: Primary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

total irrigated area is 37897 Ha. The major crops cultivated in the district include pepper, cardamom, nutmeg, sugarcane, tapioca, tea, jack, lemon grass, garlic, cocoa, etc. It occupies the 1st position (in terms of area) in the production of pepper (51% of state),cardamom (79%), sugarcane(81%), tea(67%), jack, lemon grass, cocoa(75%) and garlic, 3nd position in the production of nutmeg (13%) and tapioca (8%).[96]

Key characteristics[97] of the primary sector in Idukki are presented below:

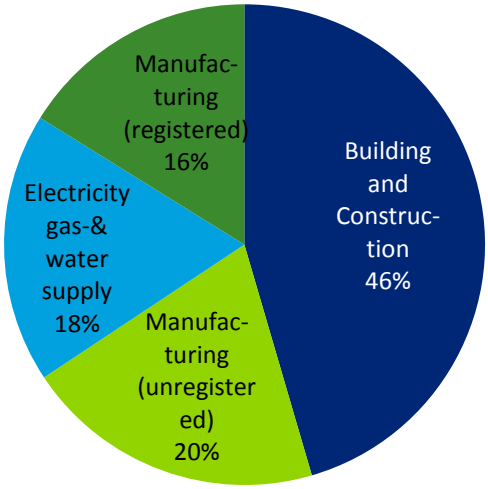
- Agriculture & Allied activities constitute about 24.6% of the contribution of primary sector to the GDDP.
- The district occupies 1st position in the production of spices (pepper (51% of state), cardamom (79%), nutmeg (13%)), 2nd position in the production of fruits (9.1% of state) and vegetables (13% of the state).
- Idukki district stands 5th in the contribution of district to the overall state primary output.
- Pepper (51% of state),cardamom (79%), sugarcane(81%), tea(67%), jack, lemon grass, cocoa(75%) production is concentrated in Idukki.
- The important minerals in the district are granite, building stone and sand.

Secondary Sector

Figure 53: Secondary Sector Contribution to GDDP, 2011-12

The contribution of secondary sector to district GDP in 2011-12 was approximately 14.2%. The sector has registered a growth of 5.6% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a growth rate of 6.18%.

According to the MSME District Profile for Idukki, there are a total of 5064 registered industrial units with 1 medium and large units in the district. The total employment in the small scale units and large scale units are 23597 workers and 532 respectively with a total turnover of Rs. 46448 lakhs (Small scale= 29648 lakhs and medium and large scale: 16800).[98]



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics[99] of the secondary sector in Idukki are presented below:

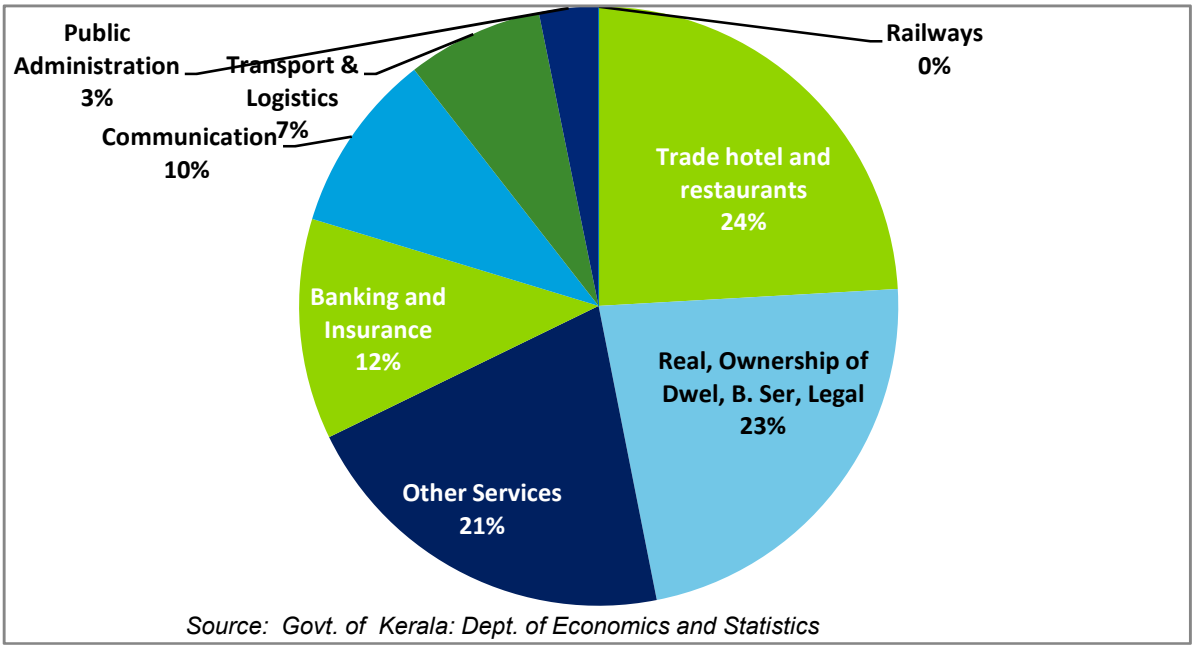
- Building and Construction (45%) contributes the highest followed by Manufacturing (36%).
- The key sectors of the district are agriculture and forest based, rubber and food products.
- Eastern condiments Pvt. Ltd., Adimali is the medium scale enterprise located in the district with major exportable item being spices powder

Tertiary Sector

[96] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[97] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[98] District wise MSME Report
[99] Emerging Kerala website, District MSME Report and Kerala Economic Review

The tertiary sector has been increasing its share of contribution from 47% to 61.2% to GDDP between 2004-05 and 2011-12. The sector grew by 11.2% during the same period, in real terms. In terms of growth rate, communication was the fastest growing sector (CAGR=29.1%) followed by Banking and Finance CAGR=14.5%). Key contributors in the sector include trade, hotels and restaurants, real estate services and other services.

Figure 54: Tertiary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics[100] of the tertiary sector in Idukki are presented below:

- The tertiary sector (services) contributes a significant share of 61.2% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate and Other Services sub-sectors.
- Idukki is one of the significant tourist destinations in Kerala. Munnar hill station and Periyar, Eravikulam wildlife reserves are important tourist attractions which attract tourists.

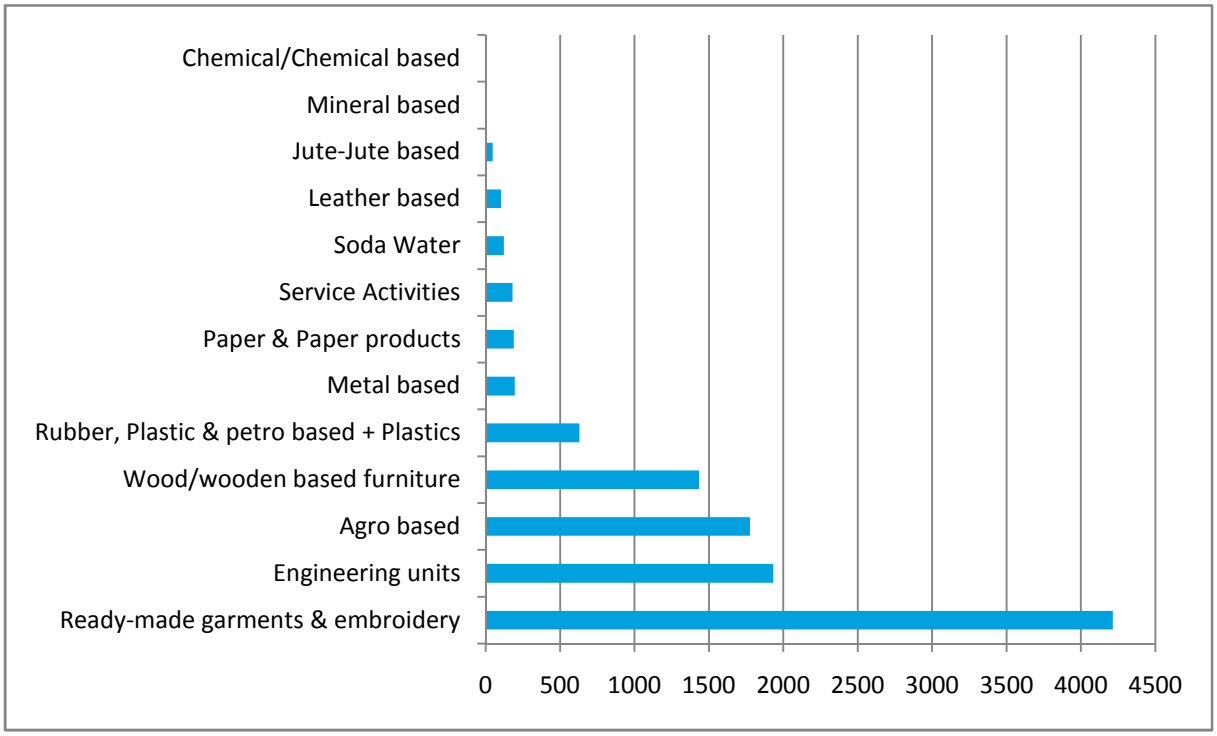
[100] Emerging Kerala Website

4.3.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the primary sector (50%), and followed by the tertiary sector (34.1%) and the secondary sector (16%)101. Within the primary sector, the largest employer is agriculture and allied activities (98%). Within the tertiary sector, the largest employers are the other services (34.4%) sectors and trade, hotels and restaurants (28.3%).

The figure below indicates the employment in MSMEs in the district.

Figure 55: Employment in MSMEs - Idukki



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, readymade garments and embroidery employ the largest share of workers (4214), followed by engineering units(1932) and agro based (1776).

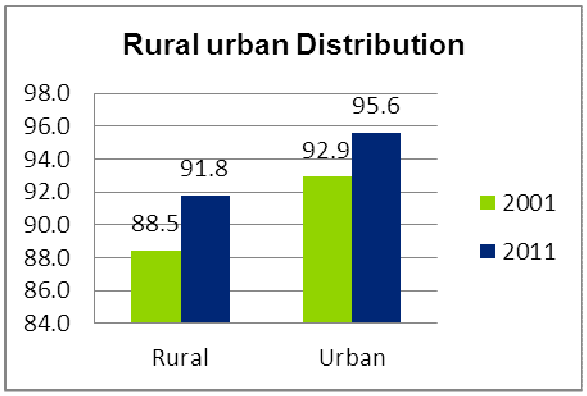
[101] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.3.4 Education Infrastructure

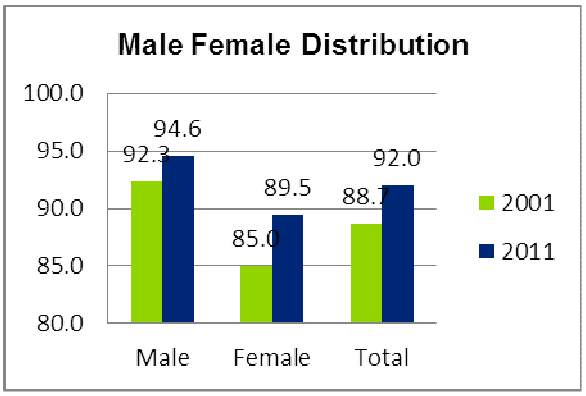
Idukki has a lower literacy rate of 92% in comparison to the state average of 93.9%. In 2011, male and female literacy rates were 94.6% and 89.5% respectively with a total literacy rate of 92.0% as compared to 2001 literacy rate of 88.7%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 91.8% and 95.6% for rural and urban respectively in the year 2011.

Figure 56: Literacy Rate by Residence and Gender - Idukki

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Idukki has 723 schools with enrolments of 61123, 49747 and 38651 in lower primary, upper primary and high school levels respectively. The total number of schools in Idukki account for 4.7% of the total schools in the state while the enrolments in the school level (up to class X) account for 3.2% of the total state enrolments. The total number of teachers (6780) over the three sections account for 3.7% of the total teachers in the state.[102]

Table 52: School Education Profile - Idukki

School category	Idukki	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	393	5.0%
Upper Primary Schools (V-VII)	135	3.6%
High Schools (VIII-X)	195	5.3%
Total	**723**	**4.7%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	61,123	3.4%
Upper Primary Schools (V-VII)	49,747	3.3%
High Schools (VIII-X)	38651	2.9%
Total	**149,521**	**3.2%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	1,669	3.4%
Upper Primary Schools(V-VII)	1,554	2.7%
High Schools (VIII-X)	3,557	4.6%
Total	**6,780**	**3.7%**
Source: DISE and SEMIS data 2011-12		

[102] DISE and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Idukki has 16 vocational higher secondary schools (11-Govt., 5-Aided) [103]. It has a total of 12 ITIs and ITCs[104]. Some of the trades offered in the Government ITIs and ITCs are electrician, electronics mechanic, fitter, mechanic radio and television and stenography (English) whereas most of the private ITIs and ITCs offer courses on diverse trades like electrician, draughtsman (civil), fitter, mechanic (motor vehicle) and electronics mechanic . The ITIs of the district have a total intake of 1016 of which 232 is in the government and 784 in the ITCs. Further it is to be noted that while being 2 in number (16.7% of the total), the government ITIs account for 232 seats (22.8% of total).

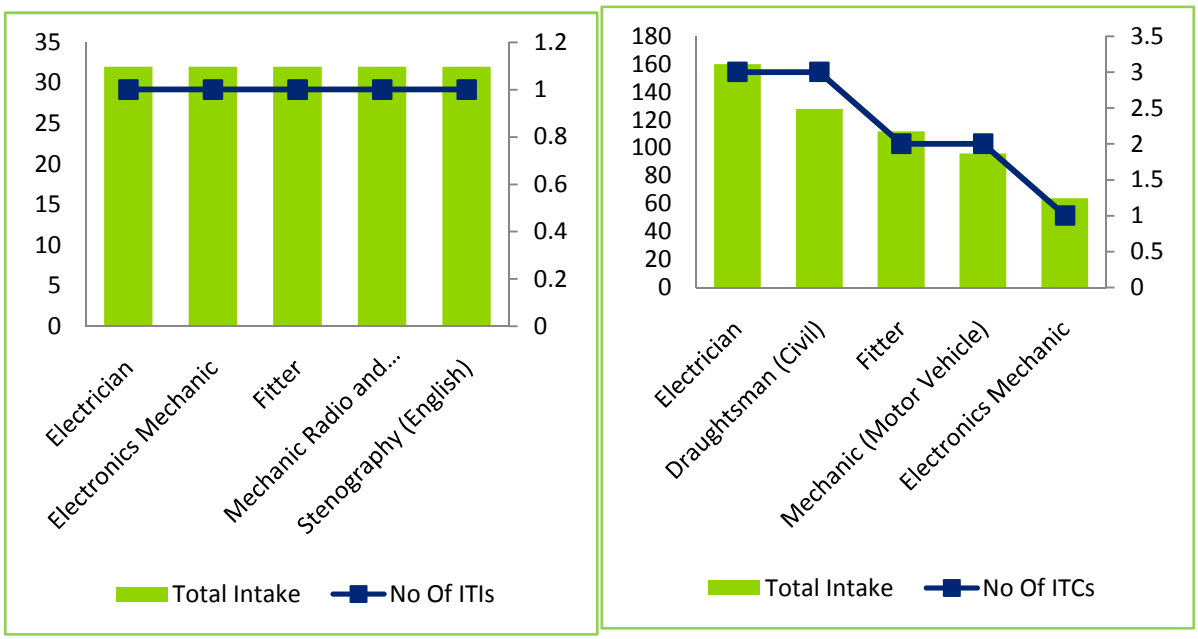
Table 53: Govt. ITIs in Idukki and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Govt Industrial Training Institute Kattapana	7	14
Govt. ITI Rayakad	1	2

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Idukki is given in the figure below:

Figure 57:Trades with max seats in ITI and ITCs- Idukki



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Idukki has 5 Polytechnic Colleges, which includes 4 Government polytechnics offering Diploma programs in Electronics, Civil, Mechanical and Computer Engineering with approved intake of 40 and 60 students respectively.[105]

[103] Kerala Economic Review, 2012
[104] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[105] Department of Technical Education, GOK

Higher Education Infrastructure

As depicted in the table below, there is 5 engineering college, and 17 arts and science colleges in the district with enrolments of 1542 and 3046 respectively. The district has 1 medical and 2 Nursing colleges. It has 2 law and 1 Management colleges as well. Idukki does not have any medical college for pursuing MBBS or Masters. .

The Centres of Excellence in Idukki include Indian Cardamom Research Institute, University College of Engineering, DC School of Management and Technology[106].

Table 54: Higher Education Profile – Idukki

Educational Infrastructure	Number of Institutes		Source
	Idukki	Intake	
Engineering/ Technology	5	**1,542**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	17	**3046**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	0	**0**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	1	**50**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	2	**128**	
BPharm	0	**0**	
Paramedical and Applied Sciences	0	**0**	
Law	2	**120**	*CEE website*
Management	2	**240**	*AICTE website*
Total	29	**5006**	

[106] Emerging Kerala Website

4.3.5 Youth Aspirations

The key observations about aspirations of the youth in Idukki have been captured below along the broad dimensions of education and employment:

Table 55: Youth Aspirations- Idukki

Parameters	Responses
Preferred Jobs	• Respondents from the polytechnic are optimistic about finding jobs on course completion. The polytechnic maintains good relations with the industry. E.g.: Kerala State Electricity Board (KSEB) provides contract employment, which is generally made a permanent position based on performance of the individual. • The average salary expectations of the youth is minimum of Rs. 10,000 (per month) • Most of the respondents prefer to be employed in the district or the state but are open to relocating. • All respondents (except ones pursuing computer science trades) prefer govt. jobs over private jobs.
Preferred Course	• Respondents showed interest in courses such as Electrical, Mechanical, Civil and Computer science trades.
Issues with VET Infrastructure	• Awarding of certificates gets delayed by 1 year, this needs to be addressed as it becomes difficult for students to migrate. • IT Infrastructure needs improvement. More IT labs need to be built and more computers need to be sourced. • Either transport facilities need improvement or new institutes need to be set up in hilly areas as commuting to institutes is a challenge.
Suggestions by Youth	• Soft skills training, including English language, should be given to students. • Openings in govt. jobs should be made known to public through mass media so that students can be aware of vacancies and apply. • Contract based jobs should be given to student associations rather than private players to give exposure and experience to students. • Preference should be given to residents of the state for openings in state govt. jobs. • Diploma students have to compete with B Tech students even though diploma holders have better practical skills. Industries should try and reward practical skills appropriately.

4.3.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a significant role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Within the secondary sector, the expected growth sectors include agro food processing sector, building and construction. In the tertiary sector, the sectors expected to show growth include BFSI, communication and real estate services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 38.3%. The secondary and tertiary sector contributions are estimated to increase to 17.3% and 44.4% respectively, as indicated in the table below. This trend

appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the agriculture and allied sectors (37.8%), other services (15.8%), and trade, hotels and restaurants (9.7 %).

Table 56: Projected Employment Contribution and Growth Rate - Idukki

#	Economic Sector [107]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-1.8%	37.8%
2	Mining and Quarrying	-2.5%	0.5%
3	Manufacturing	1.3%	8.7%
4	Electricity, Gas & Water supply	-3.1%	0.4%
5	Building and Construction	2.2%	8.2%
6	Trade, Hotels and Restaurants	0.9%	9.7%
7	Railways	0.0%	0.0%
8	Transport & Storage	0.2%	1.9%
9	Communication	5.0%	3.8%
10	Banking and Insurance	7.8%	4.1%
11	Real estate services and business services etc.	6.0%	7.3%
12	Public Administration	1.3%	1.7%
13	Other Services	3.8%	15.8%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology highlighted in section 2, the estimated incremental manpower demand in the period 2012-22 will be about 0.86 lakhs. Banking and finance sector is expected to contribute a significant proportion of this demand (14.0%) based on the relatively higher anticipated growth rates, along with education and other services segments.

Table 57: Incremental Demand (in '00s) – Key sectors- Idukki

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Banking/ Insurance/ Finance	25	22	2	36	32	4
Education/ Skill development services	34	8	11	41	9	13
Other Services	30	14	2	39	18	3
Select Informal Sector	4	15	23	5	18	28
Building & construction	6	17	19	7	19	21
Communication	7	14	14	9	18	18
Manufacturing	5	15	9	5	16	10
IT / ITES Services	15	7	1	21	9	2
Real estate services	3	9	6	4	12	8
Healthcare services	4	7	3	5	9	3
Total +ve demand	141	142	101	180	176	120
Overall Incremental Demand	**860**					

[107] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

Key Sectors	2012-17			2017-2022		
	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Workers exiting sectors						
Agriculture and allied activities	-8	-25	-22	-5	-18	-16
Total workers exiting[108]	-9	-29	-223	-6	-21	-160

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 43000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *BFSI, Education and Other Services sectors are key contributors to the anticipated incremental demand between 2011-12 and 2021-22.*

Manpower Supply

The population of Idukki in 2011 was about 11.1 lakhs which is expected to increase to approximately11.5 lakhs in 2017 and approximately 11.9 lakhs in 2022. As per the methodology the estimated incremental manpower supply from 2012 to 2022 will be about 1.08 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district. Please refer annexure 0 for skill definitions.

Table 58: Incremental Labour-force as per Skill Levels (in '00s) - Idukki

	2012-17	2017-22	Total
Skilled	167	167	334
Semi-Skilled	158	157	315
Minimally-Skilled	255	176	431
Incremental manpower supply (2012-22)	1081		

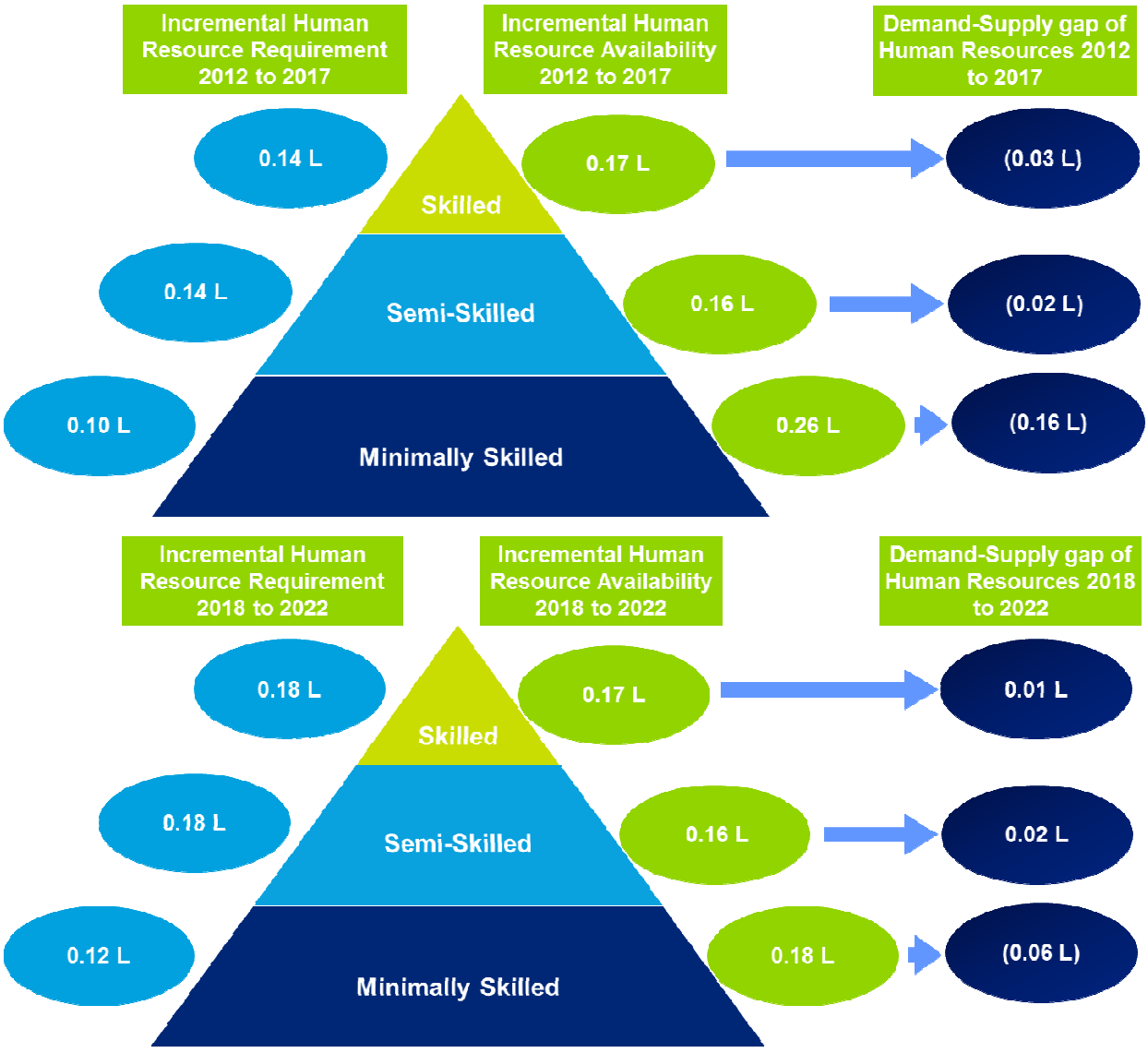
Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 44% in the 2012-17 period to 35% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

[108] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Incremental Demand Supply Gap

Figure 58: Incremental HR Demand Supply Gap- Idukki



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about -22065 with the excess demand across semiskilled segment and excess supply across skilled and minimally skilled segments

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *In line with the rural urban distribution and dominance of agriculture in employment, the major contributor to skill gap is the minimally skilled segment which is in excess in the district and requires skilling and training programs to shift to the semi-skilled and skilled segments. This may also result in some intra state migration in search of employment.*

- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Idukki are given in the table below.

Table 59: Qualitative Skill Gaps – Agro-Based Industries and Tourism, Hospitality and Travel

Sector	Level	Skill Gap
Agro-based Industries	Plant Associates and operators	Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	Limited awareness on quality, health and hygiene awareness Limited basic computer skills including barcode reading
	Sales and marketing-	Limited Communication skills, ability and willingness to understand the manufacturing process
Tourism, Hospitality and Travel	Tour Operators and Guides	Lack of English and Communication Skills Lack of grooming and punctuality Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels/Resorts -Customer facing staff	Lack of English and Communication Skills Low Customer service levels
	Restaurants and Hotels/Resorts – Management and Proprietors	Limited Management skills Limited Accounting and business knowledge
	Restaurants and Hotels/Resorts – Kitchen Staff	Limited Knowledge of variety cuisines Lack of Adherence to hygiene standards
	Drivers – Auto rickshaws, Taxis	Inadequate communication skills Limited Adherence to driving rules and regulations Inadequate Knowledge of safety norms

4.3.7 Recommendations

Future Growth Opportunities in Idukki

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Idukki.

Table 60: Key Growth Sectors - Idukki

Sector	Growth Opportunities
Tourism and Hospitality	• Trade, Hotels & Restaurants is the highest contributor to employment (13.6%) within the tertiary sector, after the other services sector. • Tourism and hospitality sector which contributes significantly to the trade, hotels and restaurants segment is expected to be key sectors of employment in the future. • According to the Emerging Kerala website, Idukki is being positioned as a key tourism destination for adventure tourism and medical tourism.
Banking, Financial Services & Insurance (BFSI)	• In terms of growth rate, the banking and insurance sector has registered the fastest growth rate of 14.5% between 2004-05 and 2011-12. • Idukki is expected to see growth in employment in the BFSI sector at nearly 9% between 2011-21.
Manufacturing	• Agro-based industries will provide immense potential for growth in the district esp., in rubber, coffee, pepper and cardamom, • Manufacturing of spice extracts and herbal medicines will also provide investment opportunities in the district.
Building & Construction	• This sector contributes the highest share to the secondary sector DDP in the district (52%) in 2011-12. In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from building and construction (19.4%). • The building and construction and real estate sectors are expected to contribute a significant proportion of the incremental demand (19%) based on the relatively higher anticipated growth rates.

Considering economic and skill landscape of Idukki, the proposed action plan that would be prepared at the end of the study would include the following priority areas in addition to other areas that may be identified during the course of the study. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 61: Key Recommendations for stakeholders - Idukki

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Tourism and Hospitality • BFSI • Manufacturing • Building and Construction
Private training providers	• There is demand for more courses in tourism and hospitality and courses in BFSI, Agro-based Manufacturing can be explored. • Engage industry practitioners from various fields who may be retired as faculty members in skill development/training institutes

	• Institutes in the Tourism and Hospitality sector may also consider connecting with event management companies, airline companies etc. apart from hotels and restaurants, to provide greater employment opportunities
Government	• Youth interactions indicated the need for Government supervision and monitoring of the hotel industry to ensure better working conditions and compensation for employees. • Soft Skills may be provided at high school level in government schools
Industry	• Industry players should encourage training apprenticeships for trainees from institutes with reasonable stipend • More industry interactions could be initiated in the Building & Construction sector, and private skill training providers for BFSI, Tourism/Hospitality etc. • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as BFSI, Tourism/Hospitality etc.

4.4 Kannur

Kannur, formerly known as 'Cannanore', is one of the northern maritime districts of Kerala. It is situated between 11° 52' 08" North Latitude and 75° 21' 20" East Longitude. The district is bounded by Kannur district in the north, Kozhikode district in the south, Coorg district of Karnataka and Wayanad district in the east and the Lakshadweep Sea in the west. The district has an area of 2,966 square kilometres, which constitutes about 7.6% of the total geographical area of Kerala. The main and longest river of the district is the Valapattanam river.

Kannur district was formed on 1st January 1957, the erstwhile Malabar District and Kannure taluk of Madras state were reconstituted into three districts viz.-Kannur, Kozhikode and Palakkad. It is divided into 3 taluks, 9 blocks and 129 villages, and 81 panchayats.

4.4.1 Demography

Kannur has a population of 25 lakhs as of 2011 of which about 65% reside in urban areas[109]. The urban population of Kannur is much higher in comparison to the state average (48%). The decadal growth rate is 4.84% which is almost as much as the population growth rate of the state (4.86%). The district is as densely populated as the state with a rate of 852 per sq. km[110]. The district has a lower sex ratio (1035) than the state, as indicated in the table below.

Table 62: Demographic Indicators – Kannur

Demography	Kannur	Kerala
Population (2011)	25,23.003	3,34,06,061
Decadal Population Growth Rate (2001-11)	4.7%	4.8%
Population density per sq. km (2011)	852	859
Sex Ratio (2011)	1136	1084
Percentage of Urban Population (2011)	65.0%	47.7%
Percentage of SC population(2011)	3.3%	9.1%
Percentage of ST population(2011)	1.7%	1.5%

Source: Census 2011

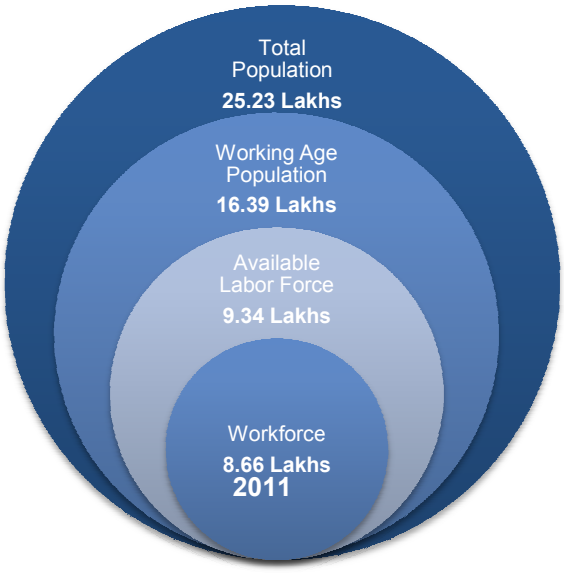
Kannur has the highest sex ratio (1136) among the districts of Kerala. The district ranks 9th in terms of population density in Kerala. It has the lowest population of Scheduled Castes in the State.[111]

The adjoining figure depicts the estimated workforce in Kannur in the context of the population of the district. Out of the total population of 25.2 Lakhs the working age population (between 15-59 age group) constitutes to 16.4 lakhs (65.1%).

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 8.7 lakhs, approximately 52.8% of the working age population.

Figure 59: Work force in Kannur- 2011

Source: Census 2011 and Deloitte Analysis

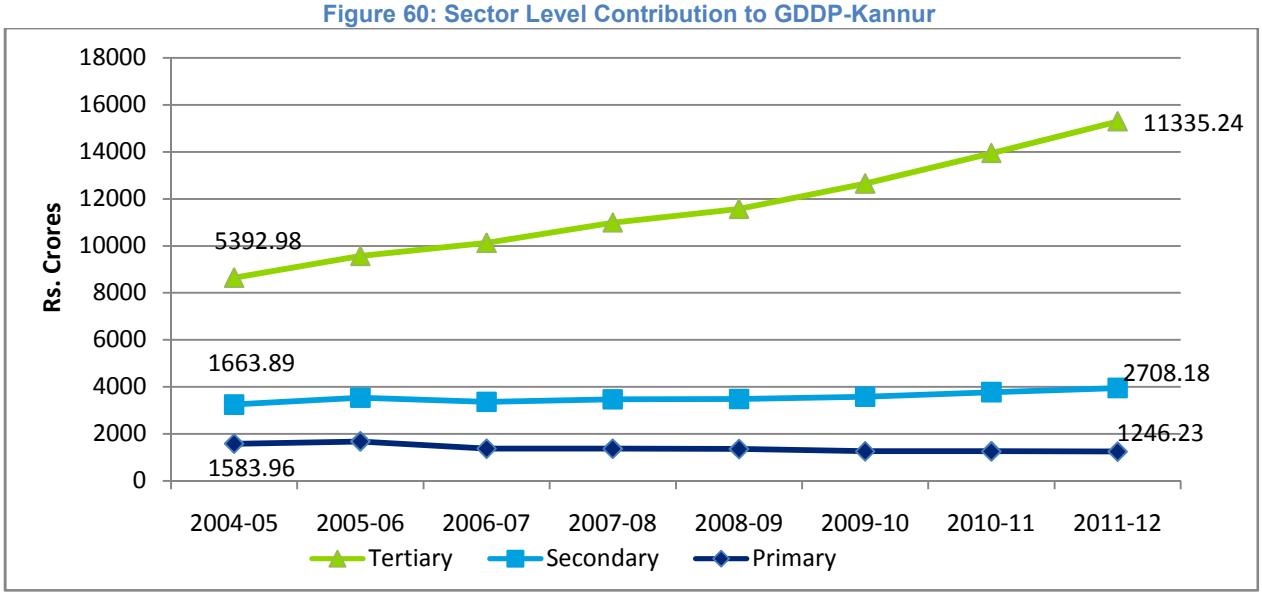


[109] Census 2011
[110] Census 2011
[111] Kerala Human Development Report 2012

4.4.2 Economic Profile

Gross District Domestic Product (GDDP) of Kannur has grown at a growth rate (CAGR) of 8.5% between 2004-05 and 2009-10[112]. In 2011-12, the tertiary sector contributes 74.1%, followed by the secondary sector at 17.7% and primary sector at 8.2%. The contribution of primary sector has declined from 18.3% to 8.2% between 2004-05 and 2011-12, the secondary sector contribution has declined from 19.3% to 17.7% while the tertiary sector has been increasing its contribution from 62.4% to 74.1% during the same period.

Figure 60: Sector Level Contribution to GDDP-Kannur

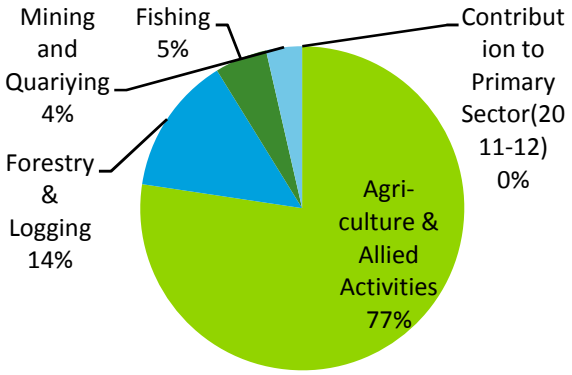


Source: Govt. of Kerala: Department of Economics and statistics

Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 8.2% to the GDDP in 2011-12. The percentage contribution of primary sector to the GDDP has seen a decline in the last few years as seen in the figure above. Agriculture and allied activities is the major contributor to the primary sector (77%), followed by forestry and logging, fishing and mining and quarrying.

Figure 61: Primary Sector Contribution, 2011-12- Kannur



In the district, net cultivated area is 66.0% of total geographic area of 2,97,013 hectares, higher than that for Kerala (52.5%). It has third highest net cutivated area after Kottayam and Kasargod. The major crops cultivated in the district are coconut, pepper, cashew, pappaya, jackfruit and arecnut. The total irrigated area is 21,255 hectares with private wells (14,576 hectares) being the main sources of irrigation.[113]

[112] Govt. of Kerala, Department of Economics and statistics
[113] Agricultural statistics 2011-12

The district has a reserve forest area of 48734 sq. km, which accounts for 16.4% of the total area of the state[114].

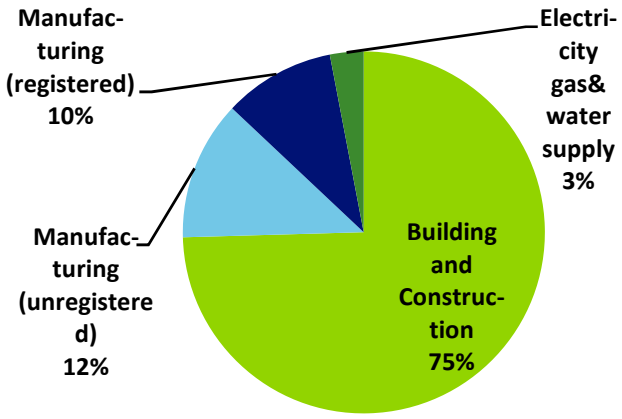
Key characteristics[115] of the primary sector in Kannur are presented below:

- Agriculture and allied activities contribute the most (77%) to the primary sector.
- Raw cashew nuts, arecanut, tapioca, banana are the main produces.
- Mango, Cashew and rubber are other important products in terms of income generation.
- The major minerals produced are Crude clay and Laterite while the key minor mineral produced is Granite.

Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was approximately 17.7%. The percentage contribution of secondary sector to the GDDP declined from 24.9% in 2004-05 to 17.7% in 2011-2012. As shown in the graph below, Construction is the major contributor (75%) of the total followed by manufacturing and electricity gas and water supply.

Figure 62: Secondary Sector Contribution, 2011-12- Kannur



According to the MSME DI report 2011-12, Kannur has a total of 11720 Industrial units of which 5176 are registered industrial units[116]

The key ideentified clusters[117] in the manufacturing sector have been highlighted below:

- **Light Engineering Clusters**: This is a cluster for fabrication of building materials. It has 180 functional units in the cluster with a turnover of more than 250 Cr.. It provides employment to around 8000 people and the major challenges faced by this cluster is lack of new entrepreneurs, lack of skilled labour and monopoly of raw material suppliers.
- **Malbar Furniture Consortium**: This cluster is focused on manufacture of wooden furniture and there are a total of 200 functional units in this cluster.
- **Fabrication and General Engineering Cluster**: This Cluster has 250 functional units with a turnover of 6 Cr.. The cluster employs 1500 people and and the average investment in plant & machinery is around 40Lakhs.

Key characteristics[118] of the secondary sector in Kannur are presented below:

- Building and construction (75%) contributes the highest followed by Manufacturing (22%).
- Kannur district is concentrated with the Handloom sector
- Key traditional industries include handloom, plywood, Cashew, and Beedi making. However, industries such as beedi-making may lose importance in the future given the lower demand.[119]

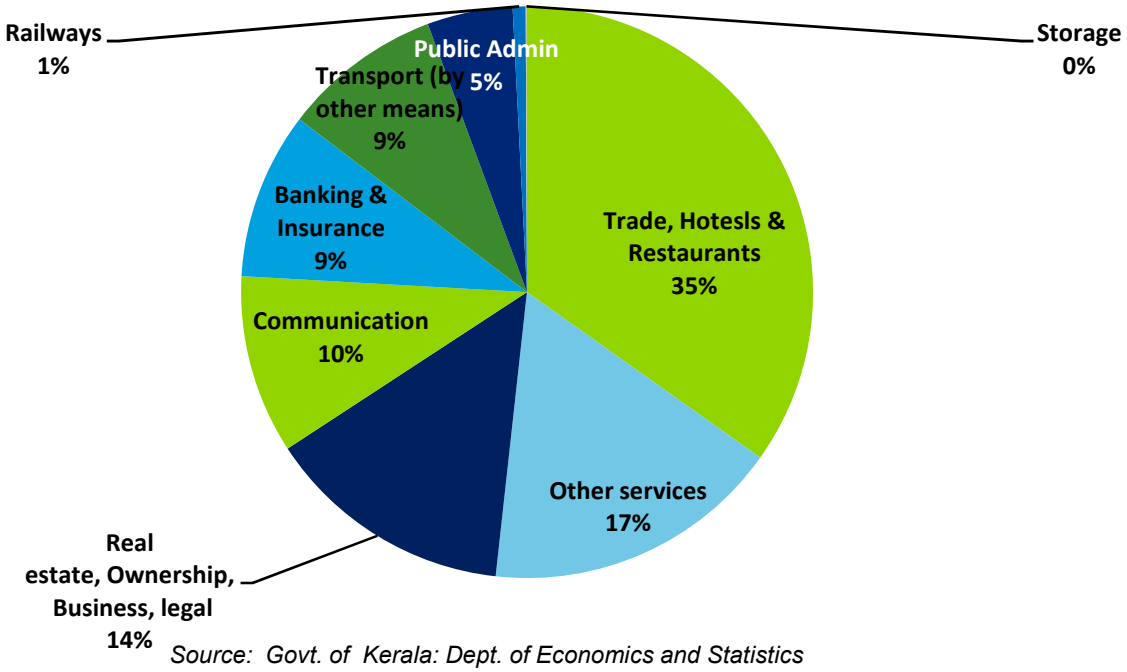
[114] Kerala Economic Review 2012-13 (FSI 2011)
[115] Agricultural statistics 2011-12, Kerala Economic Review 2012-13, Brief Industrial Profile of Kannur District 2011-12, MSME Development Institute
[116] Brief Industrial Profile of Kannur District 2011-12, MSME DI
[117] Brief Industrial Profile of Kannur District 2011-12, MSME Development Institute
[118] Emerging Kerala website, District MSME Report and Kerala Economic Review

- A proposed growth centre is to be developed in Koothupurumba, Kannur over 250 acres with infrastructure facilities such as roads, water supply, power, gas etc. The existing units include a SSI Park, Separate Apparel Zone, Rubber Park and Apparel Training and Design Centre by GoI.

Tertiary Sector

The tertiary sector has been increasing its contribution from 62.41% to 74.14% to GDDP between 2004-05 and 2011-12. Key contributors in the sector include trade, hotels and restaurants, real estate and communication. In terms of growth rate, the communication sector has registered the fastest growth rate of 29.1% between 2004-05 and 2011-12

Figure 63: Tertiary Sector Contribution to GDDP– Kannur



Source: Govt. of Kerala: Dept. of Economics and Statistics

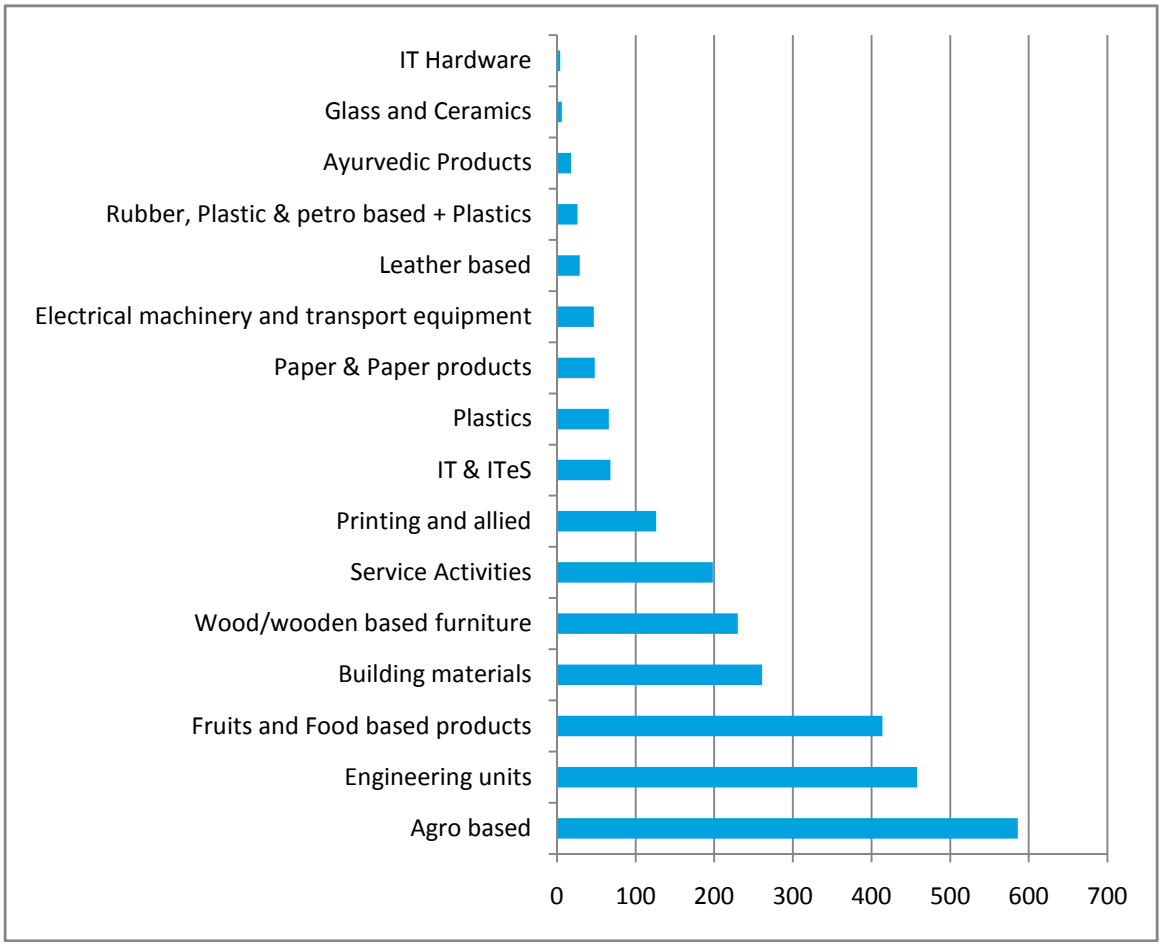
4.4.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (53.7%), and followed by the secondary sector (26%) and the primary sector (20.3%)[120]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (38.8%) and other services (26.8%) sectors. Within the secondary sector, the largest employer is the building and construction sector (69.3%) and manufacturing (30%).

The figure below depicts the employment in MSME units in the district, as of 2011-12. As shown in the graph below, agro based units employ the largest share of workers (586), followed by readymade garments and embroidery (458) and fruits and fruit based products (414).

[119] Industrial and Commercial Policy (Draft), GoK 2011
[120] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis ,

Figure 64: Employment in MSME, Kannur

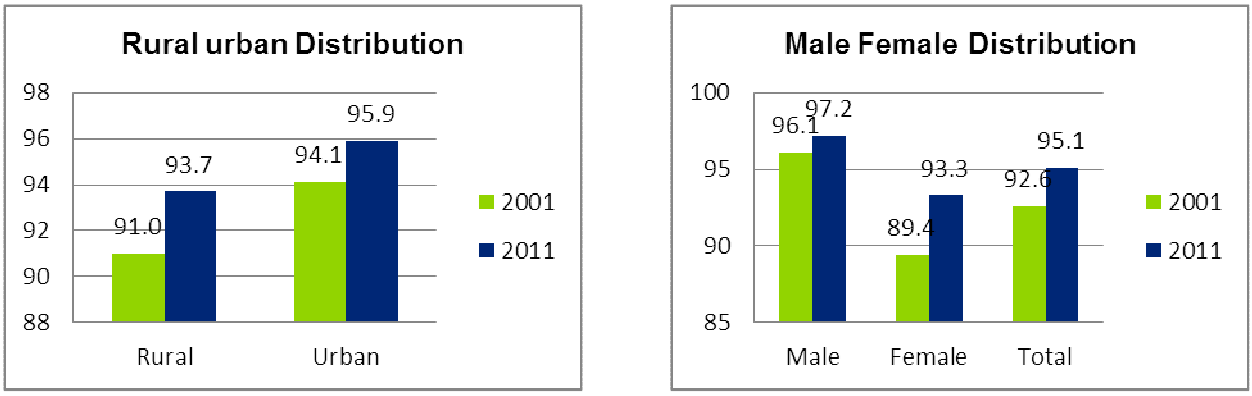


Source: Brief Industrial Profile of Kannur District 2011-12, MSME Development Institute

4.4.4 Education Infrastructure

Kannur has a higher literacy rate of 95.1% in comparison to state average of 93.9%. In 2011, male and female literacy rates were 97.2% and 93.3% respectively with a total literacy rate of 95.1% as compared to 2001 literacy rate of 92.6%. In case of the rural urban distribution, the literacy rates for rural and urban were 91.0% and 94.1% in 2001 which increased to 93.7% and 95.9% in the year 2011 respectively.

Figure 65: Literacy Rate by Gender and Residence-Kannur



Source: Govt. of Kerala, Dept. of Economics and Statistics

Kannur ranks second in the state in terms of the total number of schools. The district has 1466 schools with enrolments of 135950, 114442 and 103455 in lower primary, upper primary and high school levels respectively. The total number of schools in Kannur account for 9.6% of the total schools in the state while the enrolments in the school level (upto class X) account for 7.6% of the total state enrolments. The total number of teachers (14839) over the three sections account for 8.1% of the total teachers in the state.[121]

Table 63: School Education Profile – Kannur

School category	Kannur	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	812	10.3%
Upper Primary Schools (V-VII)	435	11.6%
High Schools (VIII-X)	219	6.0%
Total	**1,466**	**9.6%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	135,950	7.6%
Upper Primary Schools (V-VII)	114,442	7.5%
High Schools (VIII-X)	103455	7.7%
Total	**353,847**	**7.6%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	4,527	9.3%
Upper Primary Schools(V-VII)	6,219	11.0%
High Schools (VIII-X)	4,093	5.3%
Total	**14,839**	**8.1%**
Source: DISE and SEMIS data 2011-12		

[121] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Kannur has 19 vocational higher secondary schools (18-Govt., 1-Aided) [122]. It has a total of 41 ITIs and ITCs[123]. Some of the trades offered in the Government ITIs and ITCs are electronics mechanic, fitter, turner, draughtsman (civil), and machinist whereas most of the private ITIs and ITCs offer courses on diverse trades like draughtsman (civil), electronics mechanic, electrician, mechanic (motor vehicle) and architectural assistant . The ITIs of the district have a total intake of 3804 of which 1056 is in the government and 2748 in the ITCs. Further it is to be noted that while being 3 in number (7.3% of the total), the government ITIs account for 1056 seats (27.8% of total).

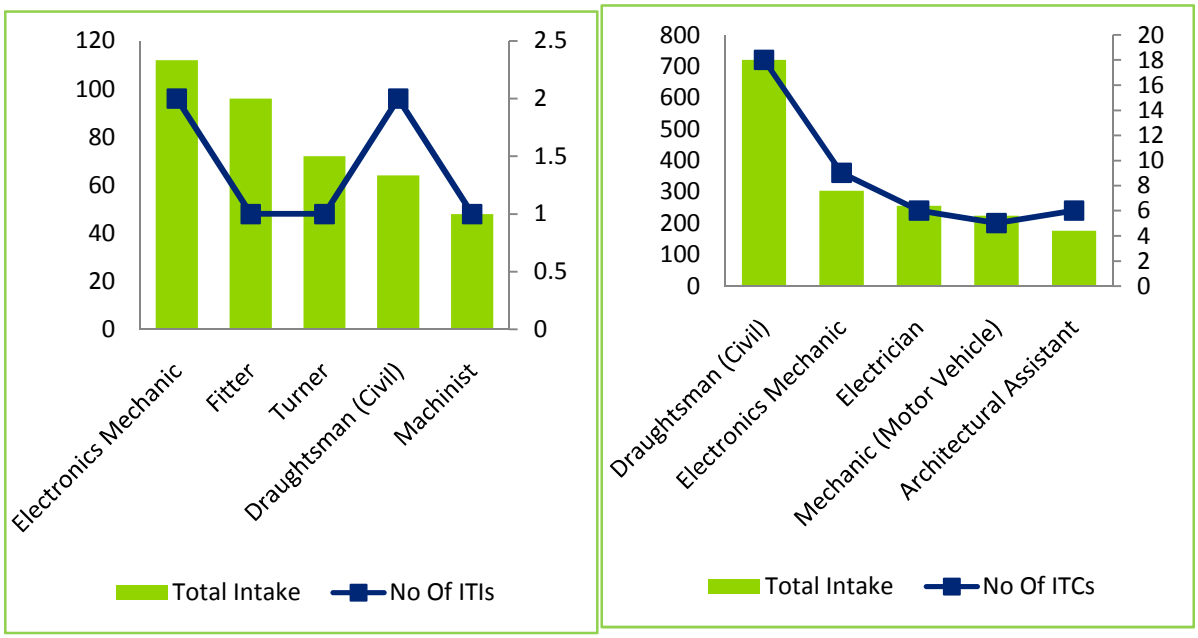
Table 64: Govt. ITIs in Kannur and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Government ITI, Thottada	20	60
Government ITI for Women, Thottada	3	6
SCDD Industrial Training Centre, Vengara	2	3

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Kannur is given in the figure below:

Figure 66:Trades with max seats in ITI and ITCs- Kannur



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Kannur has 3 Polytechnic Colleges, which includes one Government polytechnic and one Government Women's polytechnic offering Diploma programs in Electronics Engineering and Commercial Practice with approved intake of 60 and 50 students respectively. The Government polytechnic offers diploma programme in computer hardware maintenance electronics and

[122] Kerala Economic Review, 2012
[123] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm

instrumentation, & electronics production engineering with approved intake ranging from 50 to 60 seats.[124]

Higher Education Infrastructure

As depicted in the table below, there are 4 engineering colleges, 1 agriculture and 39 arts and science colleges. In terms of medical and related education the district has 2 Medicine, 4 Nursing, 3 paramedical colleges. The total number of colleges in Kannur account for 6.2% of the total colleges in the state.

The Centres of Excellence in Kannur include National Institute of Fashion Technology, Institute of Handloom and Textile Technology, Apparel Training and Design Centre, Indian Naval Academy.[125].

Table 65: Higher Education Profile - Kannur

Educational Infrastructure	Number of Institutes		Source
	Kannur	Intake	
Engineering/ Technology	4	1,170	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	39	11074	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	1	50	*CEE website*
Medicine (including Ayurveda, Homeopathy,	2	150	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	4	240	
Paramedical and Allied Sciences	3	288	
BPharm	1	50	
Law	0	0	*CEE website*
Management	3	300	*AICTE website*
Total	57	13322	

[124] Department of Technical Education, GOK
[125] Emerging Kerala Website

4.4.5 Youth Aspirations

The key observations about aspirations of the youth in Kannur have been captured below along the broad dimensions of education and employment:

Table 66: Youth Aspirations- Kannur

Parameters	Responses
Preferred Jobs	• The average salary expectations of the youth range from Rs. 25,000 to Rs. 50,000 (per month) • Most of the respondents prefer to be employed in their home districts
Preferred Course	• Students prefer studying in Govt. colleges over private colleges since they get more exposure and better job opportunities on completion of programme. • Most students want to continue studies and go for PG programmes.
Issues with VET Infrastructure	• Students highlighted lack of infrastructure and resources such as wi-fi facilities, library etc as a challenge • Teaching quality is satisfactory however, there is shortage of faculty that needs to be addressed. • Getting internships and postings for final year students of Ayurveda/traditional healthcare is a challenge as students of modern medicine are given priority. • Participation in study tours, seminars is a challenge since institutes do not provide transport facilities
Suggestions by Youth	• Soft skills training, including English language and positive attitude training should be given to students. • IT infrastructure should be improved in Ayurveda Institutes. • Government should work towards creation of job opportunities for the students instead of increasing intake in the institutes. • Presentations should be used to shift the teaching mechanism from theory oriented to a more practical one.

4.4.6 Skill Gap Assessment

Based on our analysis and primary interaction, the primary sector is expected to continue to decline and will experience people moving out of this sector in terms of employment. In terms of employment growth rates, building and construction and manufacturing show positive growth in the secondary sector. In the tertiary sector, banking and insurance, real estate services and communication sectors are expected to be high growth sectors for employment.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 10.9%. The secondary and tertiary sector contributions are estimated to increase to 26.3% and 63% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from trade, hotels and restaurants (19.0%), building and construction (18.8%) and other services (18.6%).

Table 67: Projected Employment Contribution and Growth Rate - Kannur

#	Economic Sector [126]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-4.3%	10.5%
2	Mining and Quarrying	-1.8%	0.4%
3	Manufacturing	1.2%	7.4%
4	Electricity, Gas & Water supply	0.7%	0.1%
5	Building and Construction	2.2%	18.8%
6	Trade, Hotels and Restaurants	0.9%	19.0%
7	Railways	-3.2%	0.2%
8	Transport & Storage	0.2%	3.1%
9	Communication	6.7%	6.4%
10	Banking and Insurance	9.0%	5.0%
11	Real estate services and business services etc.	6.9%	6.8%
12	Public Administration	1.6%	3.6%
13	Other Services	4.4%	18.6%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology highlighted in section 2 the estimated incremental manpower demand in the period 2012-22 will be approximately 2.38 lakhs. While building and construction and communication sectors are expected to contribute a significant proportion of this demand (30%) based on the relatively higher anticipated growth rates, Banking, Financial Services and Insurance (BFSI) and Education/Skill Development segments are also expected to contribute to the incremental demand.

Table 68: Incremental Demand (in 00's) – Key sectors- Kannur

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	28	74	83	31	83	93
Communication	27	54	54	38	75	75
Banking/ Insurance/ Finance	61	55	6	94	84	9
Education/ Skill development	86	20	26	106	25	33
Select Informal Sector	11	37	59	13	46	73
Other Services	60	28	5	82	38	6
Organised retail	9	29	20	9	30	21
IT / ITES Services	29	13	2	41	19	3
Real estate services	5	17	12	7	24	17
Manufacturing	5	17	17	6	18	18
Total Incremental demand	356	389	306	466	492	372
Overall Incremental Demand	**2,381**					
Workers exiting sectors						
Agriculture and allied activities	-11	-37	-318	-8	-26	-230
Total workers exiting[127]	-12	-38	-322	-8	-28	-233

Some of the key trends observed on the demand side include

- *A significant number of the workforce (over 23,000) is expected to exit from the agriculture sector between 2012-22 and added to the incremental supply of workers in this period. From a skilling*

[126] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

[127] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

perspective, this is an important target segment for reskilling so that they can positively contribute to the economy..

- *Education sector contribute significantly to the creation of jobs in the skilled (23.4%).*

Manpower Supply

The population of Kannur in 2011 was 25 lakhs which is expected to increase to about 26.2 lakhs in 2017 and about 27.1 lakhs in 2022. As per the methodology highlighted in section 2 the estimated incremental manpower supply from 2012 to 2022 will be about 2.06 lakhs.

The incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 69: Incremental Labour-force as per Skill Levels (in '00s) - Kannur

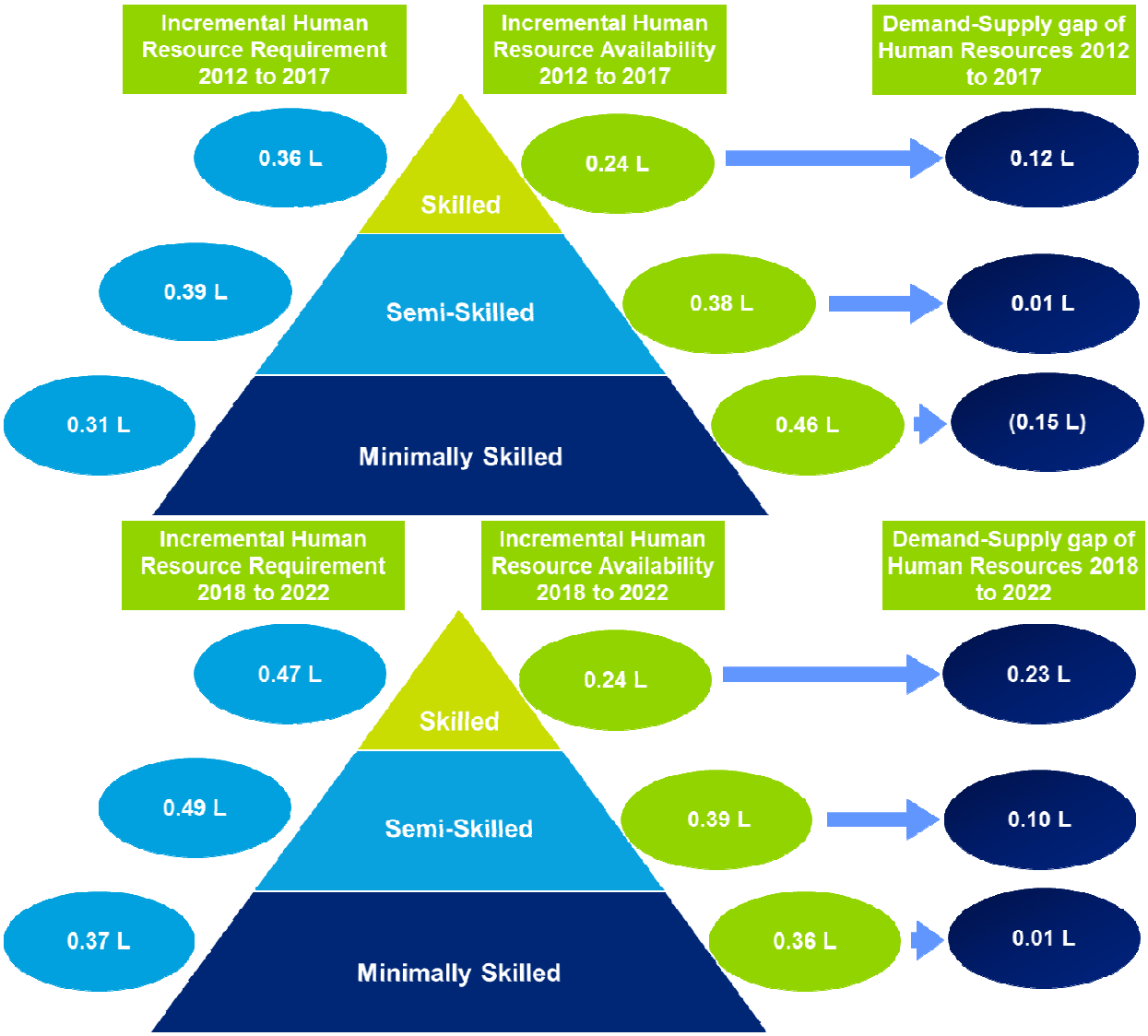
	2012-17	2017-22	Total
Skilled	236	236	472
Semi-Skilled	379	394	773
Minimally-Skilled	457	360	817
Incremental manpower supply (2012-22)	**2,062**		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 43% in the 2012-17 period to 36% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 67: Incremental HR Demand Supply Gap- Kannur



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 31,919 with the excess demand across skilled segment and semi- skilled segments and excess supply in the minimally skilled segments.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources. There is also excess supply in the minimally skilled segmens which requires a shift in the distribution of supply which in turn presents a case for introducing training programs to augment the skills of this segment to cater to the demand in the key sectors of growth.*

- *Even in cases of excess supply, it is pertinent to note that it does not imply industry demand for skills is being sufficiently met. Employability linked skills have emerged as a key area of concern among industry. The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers.*
- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Indicative Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Kannur are given in the table below.

Table 70: Qualitative Skill Gaps –Construction and Tourism/Hospitality Sector

Sector	Level	Skill Gap
Construction	Engineers	Lack of exposure to latest technology Inadequate understanding of practical application of theory Lack of awareness on safety standards
	Supervisors	Inadequate understanding of theoretical concepts Inadequate communication skills
	Construction Labourers	Limited Communication skills in local language Limited ability to understand drawings Lack of hygiene Poor awareness of safety standards
Tourism, Hospitality and Travel	Tour Operators and Guides	Poor English and Communication Skills Lack of grooming and punctuality Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels - Customer facing staff	Poor English and Communication Skills Poor customer service levels
	Restaurants and Hotels – Management and Proprietors	Poor management skills Limited accounting and business knowledge
	Restaurants and Hotels – Kitchen Staff	Limited knowledge of variety cuisines Lack of adherence to hygiene standards
	Drivers – Autorickshaws, Taxis	Lack of adequate communication skills Lack of adherence to driving rules and regulations Inadequate knowledge of safety norms

4.4.7 Recommendations

Future Growth Opportunities in Kannur

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high incremental demand of workers, high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Kannur.

Table 71: Key Growth Sectors - Kannur

Sector	Growth Opportunities
Building & Construction	• This sector contributes the highest share to the secondary sector DDP in the district (75%) in 2011-12. In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from building and construction (18.8%). • The building and construction is expected to contribute a significant proportion of the incremental demand (16.4%) based on the relatively higher anticipated growth rates.
Tourism and Hospitality	• Trade, Hotels & Restaurants is the highest contributor within the tertiary sector (35%) and is expected to contribute the highest to employment in 2021-22 (19%). Tourism and hospitality sector which contributes significantly to the trade, hotels and restaurants segment is expected to be a key sector of employment in the future. • Kannur is a popular beach destination and investment opportunities in the district include medical tourism.ayurveda, hotels and resorts.
Banking, Financial Services & Insurance (BFSI)	• In terms of growth rate, the banking and insurance sector has registered the fastest growth rate of 14.5% between 2004-05 and 2011-12. • Kannur is expected to see growth in employment in the BFSI sector at nearly 9% between 2012-22.
Manufacturing - Textiles & Handlooms, Wood-Based and Rubber Industries	• The proposed KSIDC Industrial Growth Centre, Kuthuparamba, will house several units in garments, hosiery, plastic, rubber and wood based industries. • KINFRA Small Industries Park, Thalassery and KINFRA Textile Park, Nadukani – also have units in the textiles and garments space.
Education/Skill Development	• Education and Skill Development Services are expected to comprise 12.4% of the estimated incremental demand (2012-22). • The need for skilling/up-skilling in this sector is validated by primary interactions with institutes and industry in the district.

Considering economic and skill landscape of Kannur, the table below provides a list of suggested recommendations for various stakeholders. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government.

Table 72: Initial recommendations for stakeholders - Kannur

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Building and Construction • Tourism and Hospitality • BFSI • Manufacturing • Education/Skill Development
Private training providers	• There is demand for more courses in tourism and hospitality and new courses in construction, BFSI, Manufacturing sectors can be explored. • Soft skills training, including English language skills may be imparted in training institutes • IT facilities could be improved in training institutes.
Government	• Government training institutes can initiate/enhance multi-disciplinary courses in sectors such as textiles/garments, Building/Construction etc • In traditional industries such as Beedi, alternative livelihood options may be provided to workers through re-skilling/multi-skilling initiatives, given the anticipated decline in demand for beedi in the future.[128]
Industry	• Industry players may provide inputs in curriculum for ITIs and skill development institutes to improve the practical component of learning • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as BFSI, Tourism/Hospitality etc.

[128] Industrial and Commercial Policy (Draft) 2011, GoK

4.5 Kasaragod

Kasaragod is the northernmost district of Kerala. It is situated between North latitudes 12° 30' North Latitude & 75° 0' East Longitude. The district is bounded by the Western ghats in the east, Arabian sea in the west and Kannur District in the south. The district has an area of 1,989 square kilometres, which constitutes about 5.12% of the total geographical area of Kerala. Many rivers flow through the district. The longest among them is the Chandragiri river. Other rivers include Kariankod, Shiriya, Uppala, Mogral river etc. Kasaragod is divided into 2 taluks, 4 blocks and 77 villages, and 39 panchayats.

4.5.1 Demography

Kasaragod has a population of 13.1 lakhs as of 2011 of which about 38.9% reside in urban areas[129]. The urban population of Kasaragod is lower in comparison to the state average. The decadal growth rate is 8.5% which is almost double the growth rate of the state (4.8%). The population density is reported to be 657 per sq. km[130]. The sex ratio for the district (1080) is comparable to the state sex ratio of 1084.

Table 73: Demographic Indicators – Kasaragod

Demography	Kasaragod	Kerala
Population (2011)	1307375	33,406,061
Decadal Population Growth Rate (2001-11)	8.5%	4.8%
Population density per sq. km (2011)	657	859
Sex Ratio (2011)	1080	1084
Percentage of Urban Population (2011)	38.9%	47.7%
Percentage of SC population(2011)	4.07%	9.1%
Percentage of ST population(2011)[131]	37.4%	1.4%

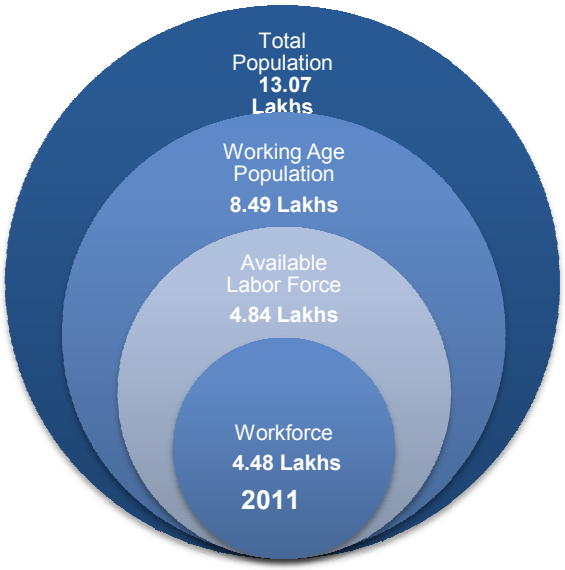
Source: Census 2011

The district ranks tenth in terms of the population density in Kerala.[132] Highest concentration of Scheduled Tribes is seen in Kasaragod followed by Idukki and Palakkad and these three districts together account for over 60 % of STs in the State.[133]

Figure 68: Work Force in Kasaragod- 2011

The adjoining figure depicts the estimated workforce in Kasaragod in the context of the population of the district. Out of the total population of 13.1 Lakhs the working age population (between 15-59 age group) constitutes to 8.49 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 4.5 lakhs or nearly 53% of the working age population.



Source: Census 2011 and Deloitte Analysis

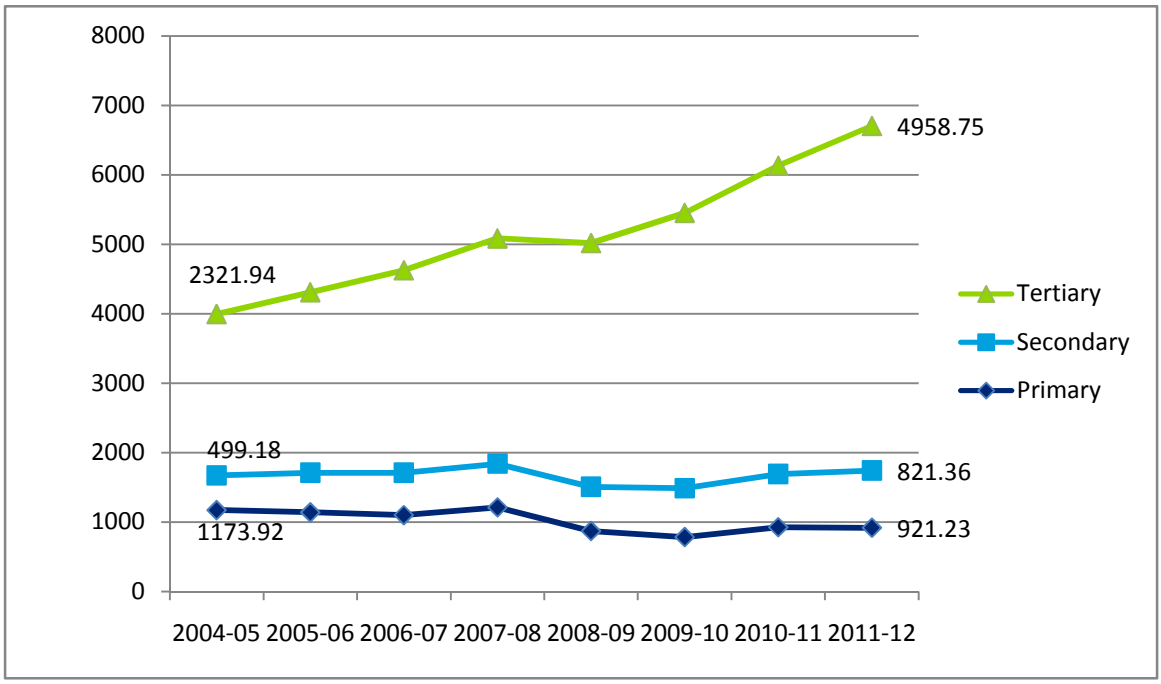
[129] Census 2011
[130] Census 2011
[131] Census 2011
[132] Kerala Economic Review 2012-13
[133] Kerala Human Development Report 2012

4.5.2 Economic Profile

The Gross District Domestic Product (GDDP) of Kasaragod has grown at a growth rate (CAGR) of 7.7 % between 2004-05 (Rs. 3995 Cr.) and 2011-12 (Rs. 6701 Cr.). In 2011-12, tertiary sector contributed about 74% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by primary sector at 13.7% and secondary sector at 12.3%. This is in contrast to most of the districts of the state where the secondary sector contributes more than the primary sector.

As indicated in the graph below, the contribution of primary sector has been steadily declining from 1173.9 Cr. (2004-05) to 921.2 Cr. (2011-12). On the other hand, the secondary sector and tertiary sector have registered positive growth in its share to GDDP from 499.2 Cr. to 821.4 Cr. and from 2322 Cr. to 6701.3 Cr. respectively, over this period.

Figure 69: Sector Level Contribution to GDDP, Kasaragod

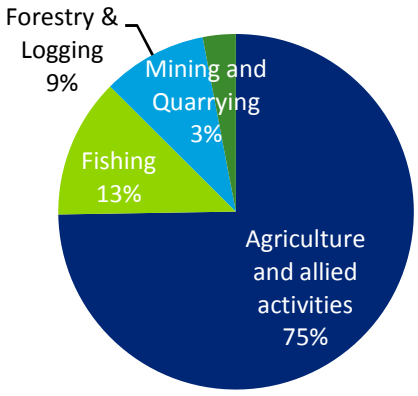


Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 13.7% to the GDDP in 2011-12. The percentage contribution of primary sector to the GDDP has seen a decline in the last few years as seen in the figure above. Agriculture and allied activities is the major contributor to the primary sector, (75%) followed by fishing, forestry and logging and mining and quarrying.

In the district, net sown area is 70.7% of total

Figure 70: Primary Sector Contribution to GDDP, 2011-12



Source:
Govt. of Kerala: Dept. of Economics and Statistics

geographic area of 1,99,166 hectares, which is much higher than that for Kerala (52.5%). The total irrigated area is 51092 Ha. The major crops cultivated in the district include paddy, arecanut, pepper, cashew, banana, tobacco etc. It ranks first in the state in terms of arecanut production. It also accounts for 16% of the cashew produced in the state.[134]

It is important to note that forests cover approximately 2.8% of the total geographical area, one of the lowest in the state.[135]

Key characteristics[136] of the primary sector in Kasaragod are presented below:

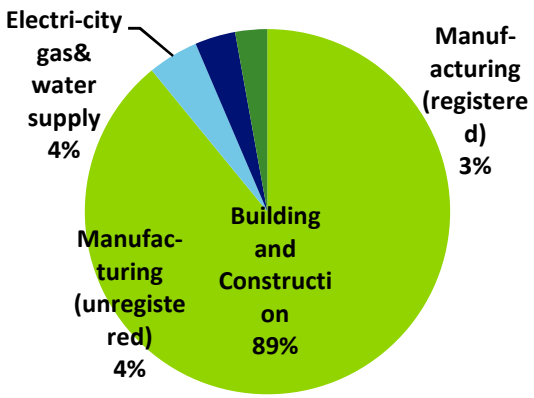
- Agriculture & Allied activities constitute about 75% of the contribution of primary sector to the GDDP.
- The major crops of the district are paddy, arecanut, pepper, cashew, banana, tobacco etc.
- Kasaragod is the only district in the state that produces tobacco. It is also the highest producer of arecanut in the state with a production of38143 tonnes.

Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was approximately 11.3%. The sector has registered a growth of 7.4% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a slight lesser growth of 6.19%.

According to the MSME District Profile for Kasaragod, there are a total of 10078 registered industrial units in the district with a total turnover of Rs. 10462 lakhs.[137]

Figure 71: Secondary Sector Contribution to GDDP, 2011-12



Source: Govt of Kerala, Directorate of Economics and Statistics

Key characteristics[138] of the secondary sector in Kasaragod are presented below:

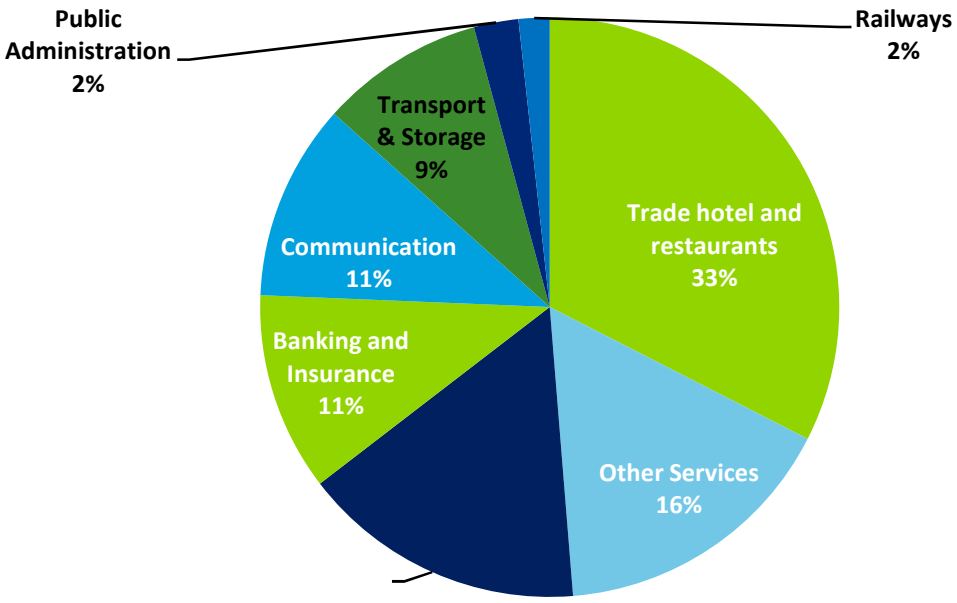
- Building and Construction (89%) contributes the highest followed by Manufacturing (6.4%).
- Handloom, minerals and mining are the major sectors in thedistrict
- KINFRA Small Industries Park, Kasaragod mini industrial estate and SIDCO are the major industrial areas
- KINFRA Small Industries Park in the district focuses on building materials/ wood products, rubber/leather, ceramic and mineral based industries, light engineering, electronics repair/servicing, sericulture/silk processing, plastic, food processing, paper, garments.

[134] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[135] Kerala economic review 2012-13
[136] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[137] District wise MSME Report
[138] Emerging Kerala website, District MSME Report and Kerala Economic Review

Tertiary Sector

Tertiary sector has been increasing its contribution from 58.12% to 74% of GDDP between 2004-05 and 2011-12. The sector grew by 11.4% during the same period, in real terms. Key contributors in the sector include trade, hotels and restaurants, other services, real estate services, banking and insurance and communication.

Figure 72: Tertiary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala, Directorate of Economics and Statistics

Key characteristics[139] of the tertiary sector in Kasaragod are presented below:

- The tertiary sector (services) contributes a significant share of 74.0% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate and other services, Services and communication sub-sectors.
- Bekal beach, Ananthapura Lake Temple, Kasaragod wildlife Sanctuary are some of the important tourist attractions which attract tourists to the district.

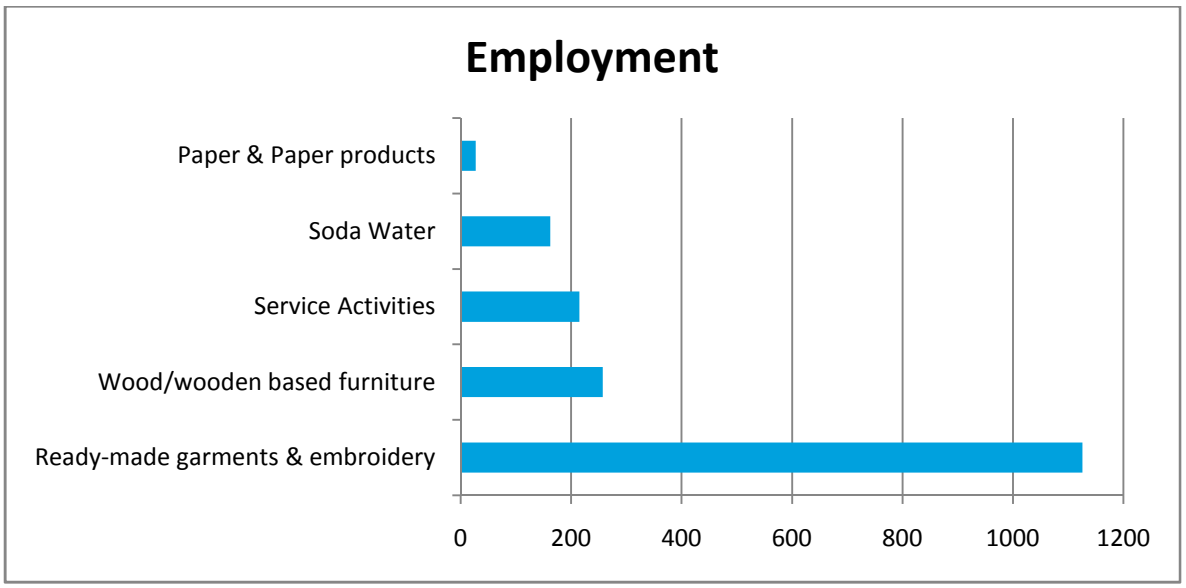
[139] Emerging Kerala Website

4.5.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (50.2%), and followed by the primary sector (33.6%) and the secondary sector (16.2%)[140]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (37.6%) and other services (26.7%) sectors. Within the secondary sector, the largest employer is the building and construction sector (89.7%) and manufacturing (9.3%).

The figure below indicates the employment in MSMEs in the district.

Figure 73: Employment in MSMEs - Kasaragod



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, readymade garments and embroidery employ the largest share of workers (1126), followed by wood/wood based furniture (2200) and repairs and servicing activities (215).

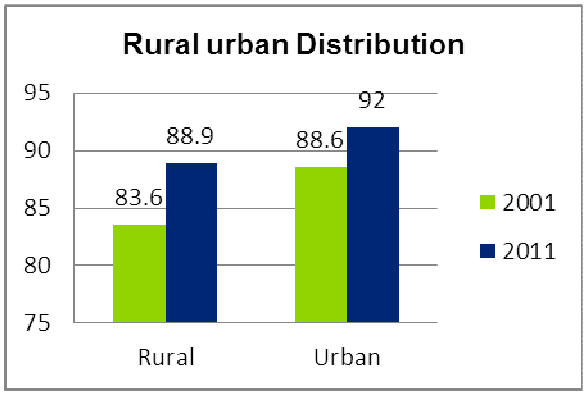
[140] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.5.4 Education Infrastructure

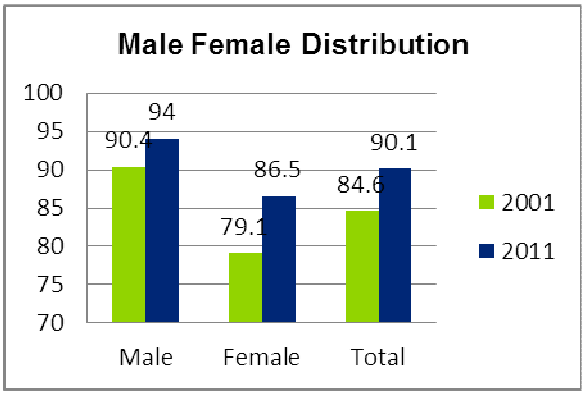
Kasaragod has a low literacy rate of 90.1% in comparison to the state average of 93.9%. In 2011, male and female literacy rates were 94% and 86.5% respectively with a total literacy rate of 90.1% as compared to 2001 literacy rate of 84.6%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 88.9% and 92% for rural and urban respectively in the year 2011.

Figure 74: Literacy Rate by Residence and Gender - Kasaragod

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Kasaragod has 706 schools with enrolments of 77527, 63135 and 69301 in lower primary, upper primary and high school levels respectively. The total number of schools in Kasaragod account for 4.6% of the total schools in the state while the enrolments in the school level (upto class X) account for 4.5% of the total state enrolments. The total number of teachers (7430) over the three sections account for 4.1% of the total teachers in the state.[141]

Table 74: School Education Profile - Kasaragod

School category	Kasaragod	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	354	4.5%
Upper Primary Schools (V-VII)	192	5.1%
High Schools (VIII-X)	160	4.4%
Total	**706**	**4.6%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	77,527	4.3%
Upper Primary Schools (V-VII)	63,135	4.1%
High Schools (VIII-X)	69301	5.1%
Total	**209,963**	**4.5%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	1,851	3.8%
Upper Primary Schools(V-VII)	2,588	4.6%
High Schools (VIII-X)	2,991	3.8%
Total	**7,430**	**4.1%**
Source: DISE and SEMIS data 2011-12		

[141] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Kasaragod has 22 vocational higher secondary schools (19-Govt., 3-Aided) [142]. It has a total of 12 ITIs and ITCs[143]. Some of the trades offered in the Government ITIs and ITCs are data entry operator, draughtsman (civil), mech. computer hardware, architectural assistant, and computer operator and programming assistant whereas most of the private ITIs and ITCs offer courses on diverse trades like draughtsman (civil), computer operator and programming assistant, electrician, electronics mechanic and mechanic (motor vehicle).. The ITIs of the district have a total intake of 1128 of which 584 is in the government and 544 in the ITCs. Further it is to be noted that while being 6 in number (33.3% of the total), the government ITIs account for 584 seats (51.7% of total).

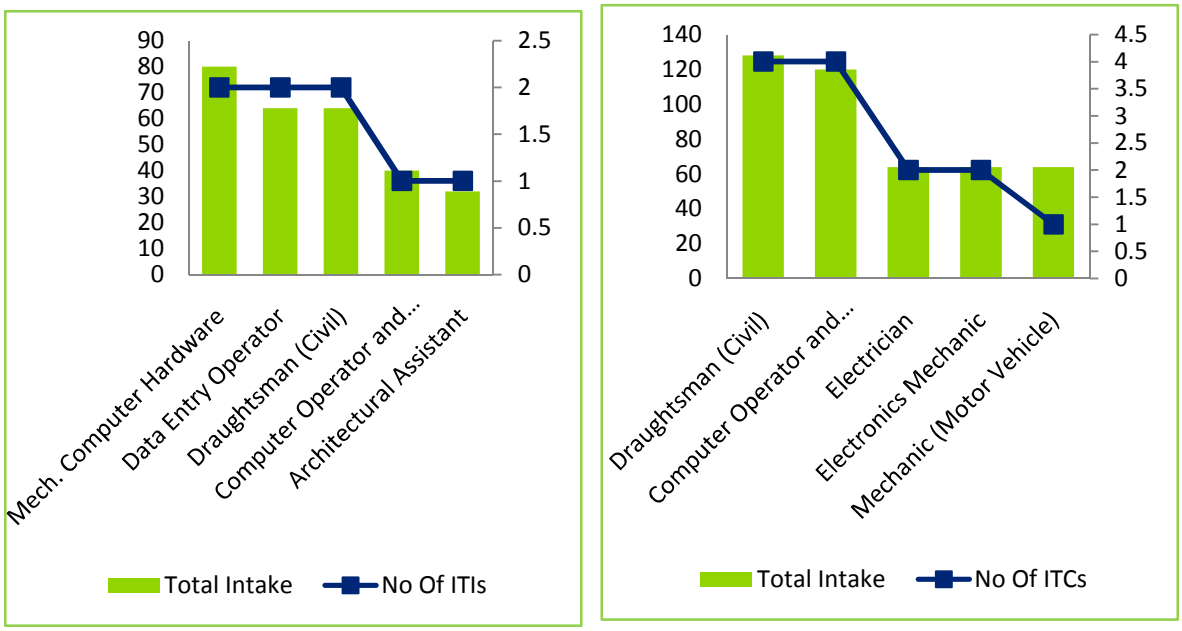
Table 75: Govt. ITIs in Kasaragod and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Government ITI, Kasargore	10	18
Government ITI for Women, Cheruvathoo	1	1
Government ITC, Kayyur	7	14
Government ITC (SCDD), Neeleswarma	1	2

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Kasaragod is given in the figure below:

Figure 75:Trades with max seats in ITI and ITCs- Kasaragod



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Kasaragod has 3 Government Polytechnic Colleges, offering diploma programme in civil, automobile, mechanical, electronics, chemical & computer science engineering with approved intake ranging from 40 to 60 seats.[144]

[142] Kerala Economic Review, 2012
[143] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[144] Department of Technical Education, GOK

Higher Education Infrastructure

As depicted in the table below, there are 4 engineering colleges, and 5 arts and science colleges in the district. The district has 2 medical and 4 Nursing colleges. It has 1agriculture and 1 management college as well. .The number of colleges in Kasaragod accounts for 3.3% of the total colleges in the state.

The Centres of Excellence in Kasaragod include Central Plantation Crops Research Institute, LBS College of Engineering, Rajiv Gandhi Institute of Pharmacy[145].

Table 76: Higher Education Profile – Kasaragod

Educational Infrastructure	Number of Institutes		Source
	Kasaragod	Intake	
Engineering/ Technology	4	**1,170**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	18	**3743**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	1	**50**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	2	**150**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	4	**240**	
BPharm	3	**288**	
Paramedical and Applied Sciences	1	**50**	
Law	0	**0**	*CEE website*
Management	3	**300**	*AICTE website*
Total	36	**5991**	

[145] Emerging Kerala Website

4.5.5 Youth Aspirations

The key observations about aspirations of the youth in Kasaragod have been captured below along the broad dimensions of education and employment:

Table 77: Youth Aspirations- Kasaragod

Parameters	Responses
Preferred Jobs	• Most of the respondents prefer Govt. jobs as they offer security of employment, pension and other benefits. • In case of govt. jobs respondents are willing to take up low salaries and women are willing to move out of their home districts. • The average salary expectations of the youth range from Rs. 10,000 to Rs. 12,000 (per month) on completion of diploma • Employment opportunities are limited in the district.
Preferred Course	• Electronics trade is sought after but is available in only 1 polytechnic. • Quality of training in private polytechnics is sub-standard, hence there should be a cap on number of students admitted.
Issues with VET Infrastructure	• Getting quality full time faculty in the district is a challenge as it is less developed compared to other districts. • While the infrastructure and lab facilities are good, the instructors lack experience. • Visiting faculty is not thoroughly motivated to bring out the best in the students. Hence, hiring of local full time faculty should be encouraged. • Ladies hostel facility should be available in close proximity to the college/polytechnic.
Suggestions by Youth	• Soft skills training, including English language, should be given to students. • Government should encourage and help establish companies that provide jobs to natives. • Administrative control over teachers and students must improve. A good monitoring and evaluation mechanism should be put in place for teachers. • Entrepreneurship development training should be provided to all students and not select students.

4.5.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a major role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Being a predominantly rural district, agriculture and allied activities contribute significantly to employment (14.7%) among the sectors in the year 2021-22. Within the secondary sector, the expected growth sectors include construction and handlooms, textiles and garments sectors. In the tertiary sector, the sectors expected to show growth include trade/hotels & restaurants, banking/insurance, and real estate services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 15.6%. The secondary and tertiary sector contributions are estimated to increase to 18.8% and 65.5% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the trade, hotels and restaurants (19.0%), other services (18.8 %) and building and construction (17.1%).

Table 78: Projected Employment Contribution and Growth Rate - Kasaragod

#	Economic Sector [146]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-6.7%	14.7%
2	Mining and Quarrying	-2.4%	0.9%
3	Manufacturing	1.2%	1.6%
4	Electricity, Gas & Water supply	0.8%	0.2%
5	Building and Construction	2.5%	17.1%
6	Trade, Hotels and Restaurants	1.0%	19.0%
7	Railways	-3.2%	0.5%
8	Transport & Storage	0.2%	3.4%
9	Communication	6.7%	7.4%
10	Banking and Insurance	9.0%	6.3%
11	Real estate services and business services etc.	6.9%	8.1%
12	Public Administration	1.6%	2.0%
13	Other Services	4.4%	18.8%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology, the estimated incremental manpower demand in the period 2012-22 will be about 1.04 lakhs. Building and Construction sector is expected to contribute a significant proportion of this demand (16.0%) based on the relatively higher anticipated growth rates, along with Banking and finance and Communication segments.

Table 79: Incremental Demand (in '00s) – Key sectors- Kasaragod

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	12	31	35	13	35	40
Banking/ Insurance/ Finance	31	28	3	48	43	5
Communication	13	26	26	18	36	36
Education/ Skill development services	36	8	11	45	10	14
Other Services	29	13	2	39	18	3
Select Informal Sector	4	16	25	5	19	30
IT / ITES Services	14	7	1	20	9	2
Organised retail	4	112	9	4	13	9
Real estate services	2	8	6	4	12	8
Healthcare services	4	7	3	6	9	4
Total +ve demand	158	169	127	210	219	157
Overall Incremental Demand	**1039**					
Workers exiting sectors						

[146] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

	2012-17			2017-2022		
Agriculture and allied activities	-12	-39	-340	-8	-26	-225
Total workers exiting[147]	-13	-42	-346	-8	-28	-230

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 65,000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *In terms of anticipated incremental demand, Building and Construction, BFSI and Communication sectors are expected to be key contributors for the period 2011-12 to 2021-22.*

Manpower Supply

The population of Kasaragod in 2011 was about 13.1 lakhs which is expected to increase to about 13.6 lakhs in 2017 and about 14.0 lakhs in 2022. As per the methodology highlighted the estimated incremental manpower supply from 2012 to 2022 will be about 1.65 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 80: Incremental Labour-force as per Skill Levels (in '00s) - Kasaragod

	2012-17	2017-22	Total
Skilled	128	125	252
Semi-Skilled	295	269	565
Minimally-Skilled	481	351	832
Incremental manpower supply (2012-22)	1649		

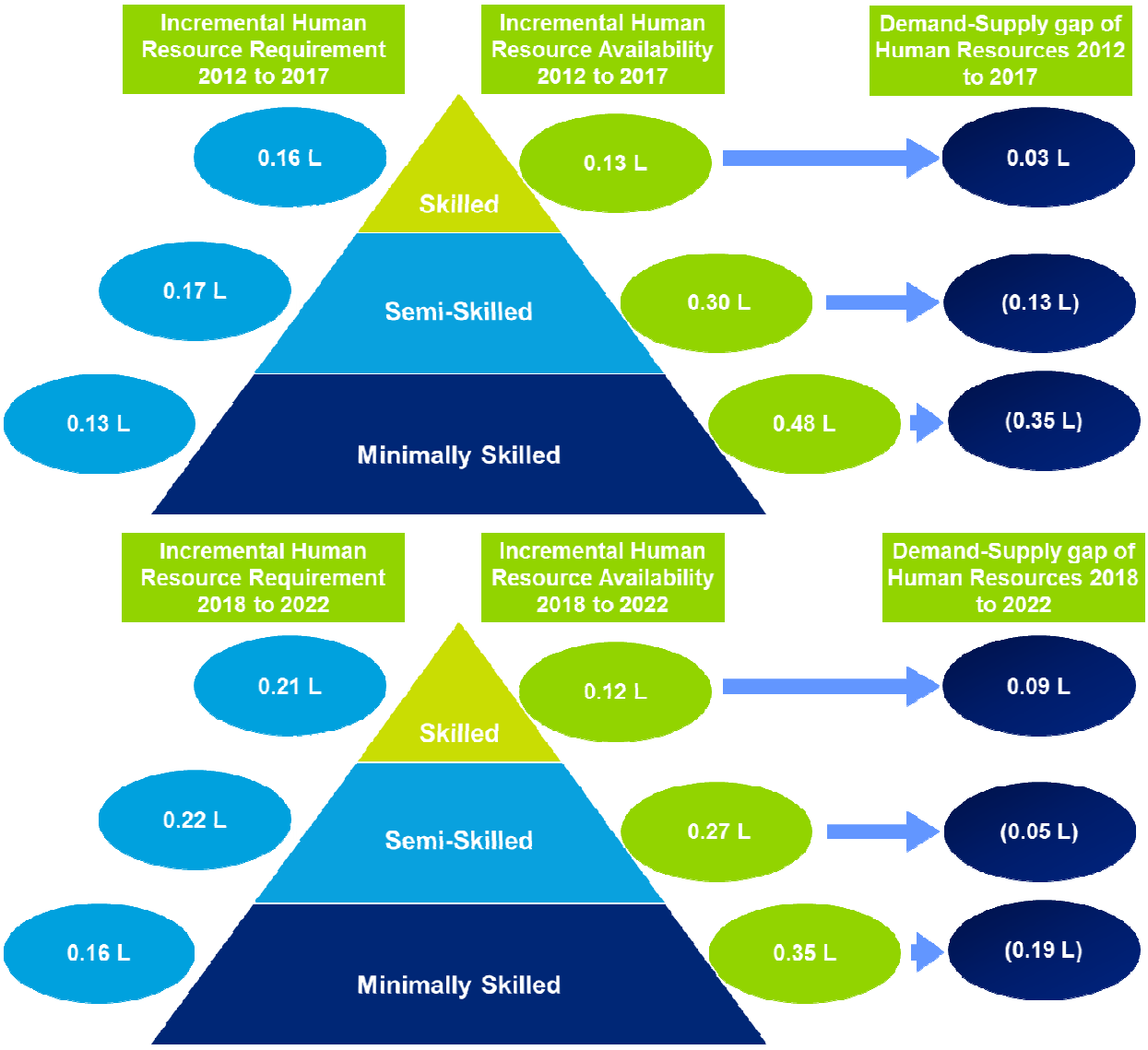
Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 53% in the 2012-17 period to 47% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

[147] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Incremental Demand Supply Gap

Figure 76: Incremental HR Demand Supply Gap- Kasaragod



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about -60,917 with the excess demand across skilled segment and excess supply in the semi-skilled and minimally skilled segments. Further the major contributor to the skill gap is the excess of minimally skilled population which accounts for almost 90% of the excess supply.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources. There is also an increase in the gap of skilled labour over the years while there is excess supply in the other 2 segments which*

requires a shift in the distribution of supply which in turn presents a case for introducing training programs to augment the skills of this segment to cater to the demand in the key sectors of growth.

- *In line with the rural urban distribution and dominance of agriculture in employment, the major contributor to skill gap is the minimally skilled segment which is in excess in the district and requires skilling and training programs to shift to the semi-skilled and skilled segments.*
- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Kasaragod are given in the table below.

Table 81: Qualitative Skill Gaps – Communication and Tourism, Hospitality and Travel

Sector	Level	Skill Gap
Communication	Customer care executive at call centre	Verbal communication especially related to selling Basic computer skills
	Customer care executive at repair centre	Basic knowledge of products Documentation Communication
Tourism, Hospitality and Travel	Tour Operators and Guides	Lack of English and Communication Skills Lack of grooming and punctuality Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels/Resorts -Customer facing staff	Lack of English and Communication Skills Low Customer service levels
	Restaurants and Hotels/Resorts – Management and Proprietors	Limited Management skills Limited Accounting and business knowledge
	Restaurants and Hotels/Resorts – Kitchen Staff	Limited Knowledge of variety cuisines Lack of Adherence to hygiene standards
	Drivers – Autorickshaws, Taxis	Inadequate communication skills Limited Adherence to driving rules and regulations Inadequate Knowledge of safety norms

4.5.7 Recommendations

Future Growth Opportunities in Kasaragod

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Kasaragod.

Table 82: Key Growth Sectors - Kasaragod

Sector	Growth Opportunities
Tourism and Hospitality	• In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the trade, hotels and restaurants (19.0%) • Tourism and hospitality sector which contributes significantly to the trade, hotels and restaurants segment is expected to be key sectors of employment in the future.

Sector	Growth Opportunities
	• Kasaragod has significant potential for beach-based tourism.
Communication	• In terms of growth rate, the communication sector has registered the fastest growth rate of 29% between 2004-05 and 2011-12. • In terms of anticipated incremental demand between 2011-12 and 2021-22, it is expected to contribute 15% to total incremental demand.
Textiles & Garments	• The garment industry is the highest employer in the MSME sector in the district • There is significant investment potential in the district for garment manufacturing, handlooms and handicrafts.
Building & Construction	• This sector contributes the highest share to the secondary sector DDP in the district (89%) in 2011-12. • The building and construction sector is expected to contribute a significant proportion of the incremental demand (16%) between 2011-12 and 2021-22

Considering economic and skill landscape of Kasaragod, the table below indicates the priority areas of focus for key stakeholders involved. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 83: Key Recommendations for stakeholders - Kasaragod

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Tourism and Hospitality • Communication • Textiles & Garments • Building and Construction
Private training providers	• Engage industry practitioners from various fields to be involved in curriculum design and development • Training providers may consider imparting new courses in tourism/hospitality, textiles & garments manufacturing etc.
Government	• Soft skills training, including English language, should be given to students. • Youth interactions also indicated the need for entrepreneurship development courses to be imparted to all students • Youth interactions also indicated the need for hiring and training full-time local faculty, which seems to be in short supply in the district
Industry	• More industry interactions could be initiated in the Tourism/Hospitality, Textiles & Garments sectors to improve the industry-institute interface. • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Textiles & Garments Tourism/Hospitality etc.

4.6 Kollam

Kollam, located on the South west coast of Kerala, lies between the north latitudes 8 27' and 8 88' and east 76 36' and 76 60’. It is bound on the north by Alappuzha and north east by Pathanamthitta Districts on the east by Thirunelveli District of Tamilnadu, on the South by the Thiruvavanathapuram District and on the west by Arabian sea. The district is spread over an area of 2491 Sq. kms, which accounts for 6.4 percent of the total area of the state. The district is divided into 5 taluks and 71 Gram Panchayats and 104 villages.

4.6.1 Demography

Kollam has a population of 26.35 Lakhs as of 2011 of which about 45.1% reside in urban areas.[148] According to Kerala Economic review 2012-13, Kollam has a lower population growth rate of 1.9% in comparison to the state (4.86%) and a population density of 1061 persons per Km^2. The district has a higher sex ratio (1113) than the state (1084), as indicated in the table below.

Table 84: Demographic Indicators – Kollam

Demography	Kollam	Kerala
Population (2011)	26,35,375	3,34,06,061
Decadal Population Growth Rate (2001-11)	1.9%	4.8%
Population density per sq. km (2011)	1061	859
Sex Ratio (2011)	1113	1084
Percentage of Urban Population (2011)	45.1%	47.7%
Percentage of SC population(2011)	12.5%	9.09%
Percentage of ST population(2011)[149]	0.4%	1.45%

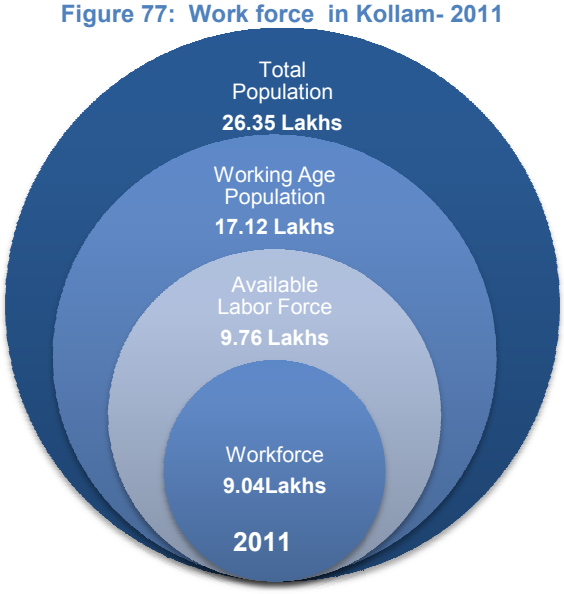
Source: Census 2011

The district ranks fourth in terms of the population density in Kerala.[150] The percentage of SC and ST population in the district is 12.5% and 0.4% respectively.[151]

The adjoining figure depicts the estimated workforce in Kollam in the context of the population of the district. Out of the total population of 26.4 Lakhs the working age population (between 15-59 age group) constitutes to 17.1 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 9.0 lakhs or nearly 52.8% of the working age population.

Figure 77: Work force in Kollam- 2011



Source: Census 2011 and Deloitte Analysis

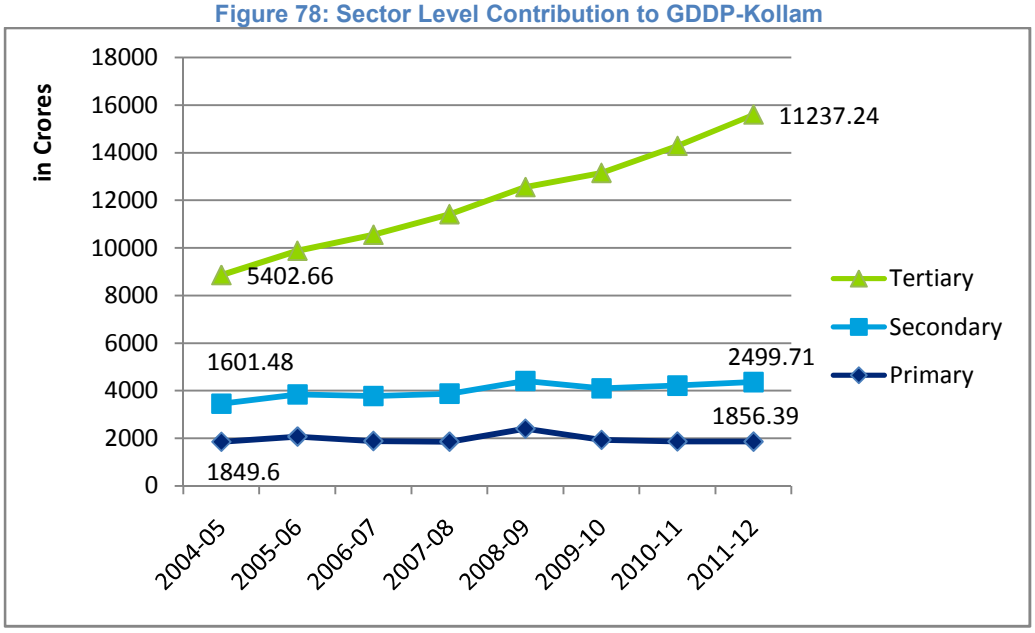
[148] Census of India, 2011
[149] Census 2011
[150] Kerala Economic Review 2012-13
[151] Kerala Human Development Report 2012

4.6.2 Economic Profile

The Gross District Domestic Product (GDDP) of Kollam has grown at a growth rate (CAGR) of 8.4% between 2004-05 (Rs. 8854 Cr.) and 2011-12 (Rs. 15593 Cr.). In 2011-12, tertiary sector contributed about 72.0% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the secondary sector at 16.0% and the primary sector at 11.9%.

As indicated in the graph below, the contribution of primary sector has shown a slight increase from 1849.8 Cr. (2004-05) to 1856.4 Cr. (2011-12). The contribution of secondary sector also increased from 1601.5 Cr. to 2499.7 Cr. during the same period. The tertiary sector has also registered positive growth in its share to GDDP from 5402.7 Cr. to 11237.2 Cr. over this period.

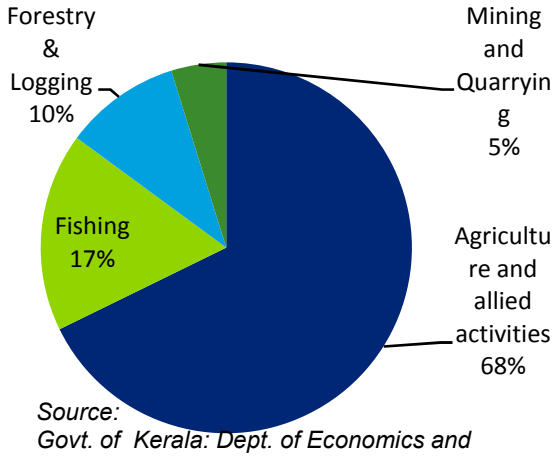
Figure 78: Sector Level Contribution to GDDP-Kollam



Source: Govt. of Kerala: Department of Economics and statistics

Primary Sector

Figure 79: Primary Sector Contribution, 2011-12- Kollam



Source: Govt. of Kerala: Dept. of Economics and Statistics

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 11.9% to the GDDP in 2011-12

The primary sector to the GDDP has seen a slight increase (CAGR of 0.05%) between 2004-05 and 2011-12, with a positive CAGR for agriculture and allied activities (CAGR +0.2%) and forestry and logging (CAGR +1.8%) and a negative CAGR for mining and quarrying (CAGR -0.3%) and fishing (CAGR -1.3%).

In the district, net sown area is 50.15% of total geographic area of 2,48,788 hectares, which is slightly lower than that for Kerala (52.5%). The total irrigated area is 3307 Ha with most contribution from private wells (1804 Ha). The major crops

cultivated in the district include sesamum, pepper, jack, tubers, etc. In terms of area under cultivation, Kollam stands first in position for tapioca, tubers, colocasia, yam and second in position for sesamum, and third for arecanut. It is also a major producer of Banana.[152]

It is important to note that forest covers approximately 33% of the total geographical area. The forests are an important source of hard wood (teak, sandalwood, etc), softwood (eucalyptus, rubber), medicinal plants, etc.[153]

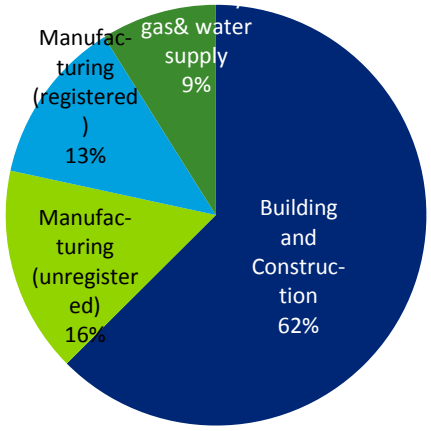
Key characteristics[154] of the primary sector in Kollam are presented below:

- Agriculture & Allied activities constitute about 68% of the contribution of primary sector to the GDDP.
- The district is rich in crops like tapioca, tubers, sesamum, yam, colocasia, plantain, papaya, etc.
- The minerals in the district are granite building stone, laterite, sand, china clay, limonite, etc.
- It ranks second among the districts in terms of revenue generated from mining and quarrying

Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was about 16%.

Figure 80: Secondary Sector Contribution, 2011-12– Kollam



Source: Govt. of Kerala: Dept. of Economics and Statistics

The sector has nregistered a growth of 6.6% between 2004-05 and 2011-12. Building and Construction sector recorded highest growth rate of 7.8%, while electricity and water supply sector showed least growth (1.1%).

According to the MSME District Profile for Kollam, there are 1820 registered units of which there are 17 large, and one medium scale industry in the district, of which, two are Central Government undertakings. Cashew, coir, wood & handloom production are the major manufacturing industries in the district.[155] 60 clusters have been identified and 32 clusters have been developed and approved under the Cluster Development Programme in Kerala. The key identified clusters[156] in the manufacturing sector have been highlighted below:

- **Coir And Coir Products Cluster, Kollam**: There are 6000 micro spinning units in the cluster which is used for the production of coir and coir products.
- **Wood Empire consortium:** There are 66 functional units in the cluster with a turnover of 250 crore per annum

[152] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[153] Kerala economic review 2012-13
[154] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[155] District wise MSME Report
[156] Brief Industrial Profile of Kollam District 2011-12, MSME Development Institute

Key characteristics of the secondary sector in Kollam are presented below:

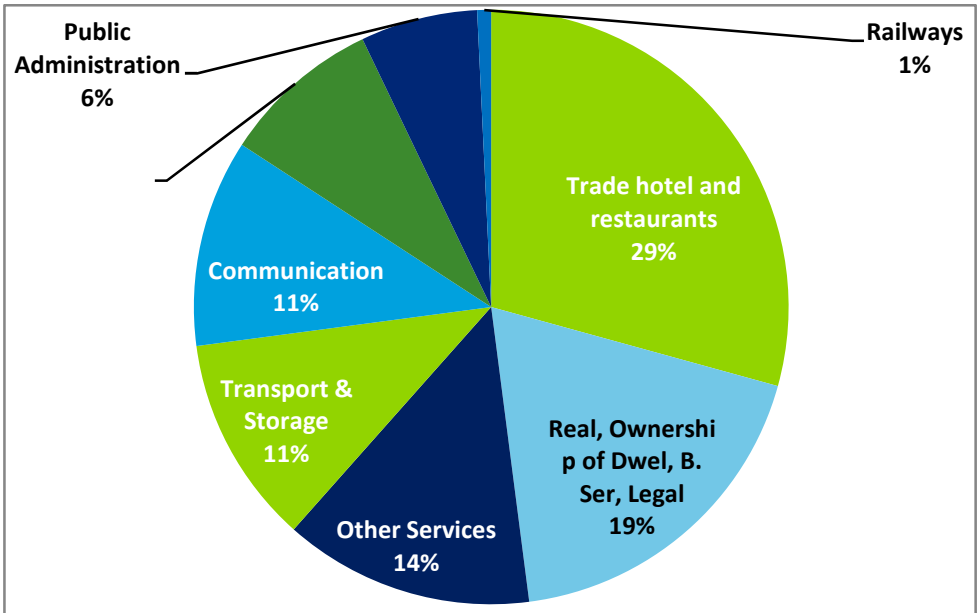
- Building and Construction (62%) contributes the highest followed by Manufacturing (29%).
- The cashew industry is a labour-intensive traditional industry centred in Kollam district, employing a large proportion of illiterate women.
- Some of the large scale industries include Indian Rare Earths, Chavara, Parvathi Mills Ltd., Kollam, Kerala Ceramics Ltd., Kundar, Travancore Plywood Industries, Punalur, Kerala Electrical and Allied Engineering Company, Kundara Kerala Premo Pipe factory Chavara.
- The district is important for cashew, textiles and coir.

Source: Emerging Kerala website, District MSME Report and Kerala Economic Review

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 61.0% to 72.1% to GDDP between 2004-05 and 2011-12. The sector grew by 11.0% during the same period, in real terms. Key contributors in the sector include trade, hotels and restaurants, real estate services, transport and storage and communication. It ranks 7th among the districts in terms of the total tertiary output which accounts for 7.6% of the state.

Figure 81: Tertiary Sector Contribution to GDDP– Kollam



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics[157] of the tertiary sector in Kollam are presented below:

- The tertiary sector (services) contributes a significant share of 72.1% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real Estate and Business Services and Other Services.
- Kollam is also one of the key tourist destinations in Kerala. Backwaters, Palaruvi Falls, Thenmala, and Agasthyamalai Biosphere Reserve are some of the important tourist attractions

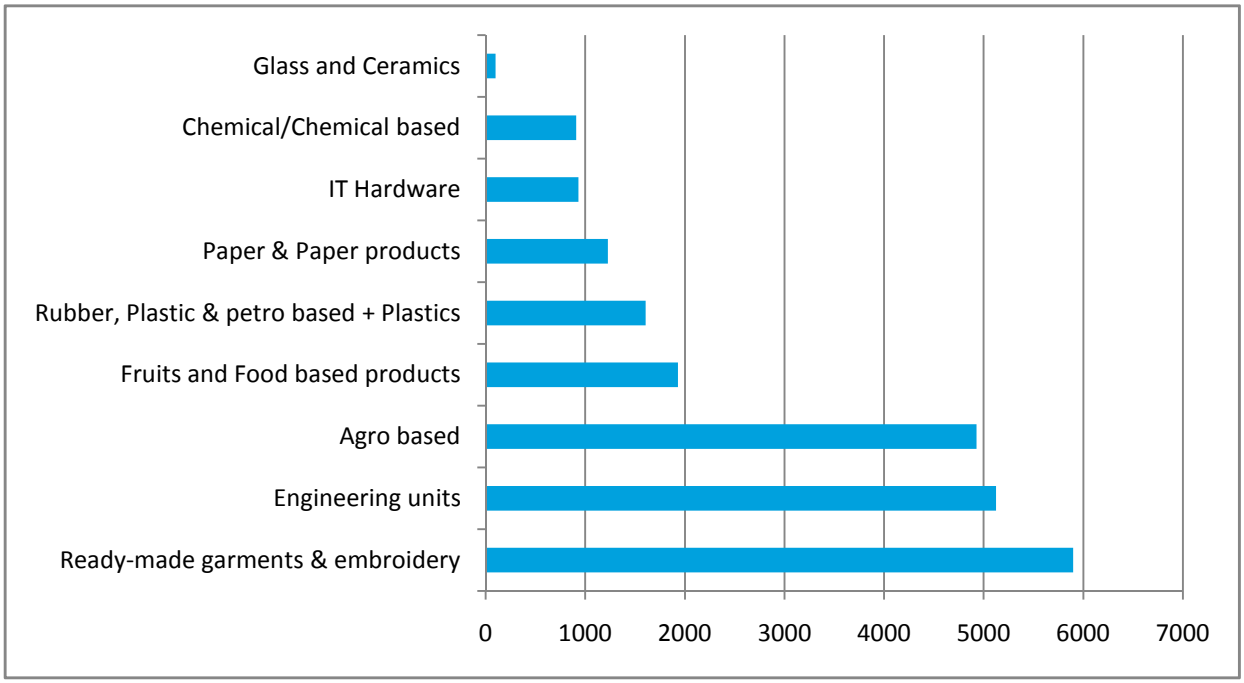
[157] Emerging Kerala Website

4.6.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectorspresented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (48.9%), and followed by the secondary sector (22.6%) and the primary sector (17.3%)[158]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (33.7%) and other services (22.4%) sectors. Within the secondary sector, the largest employer is the building and construction sector (59.4%) and manufacturing (38.8%).

As shown in the graph below, readymade garments and embroidery employ the largest share of workers (5899), followed by Engineering Units (5125) and agro based units (4927).

Figure 82: Employment in MSME, Kollam



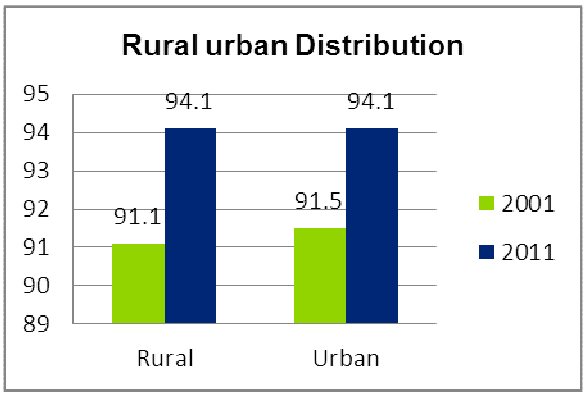
Source: Brief Industrial Profile of Kollam District 2011-12, MSME Development Institute

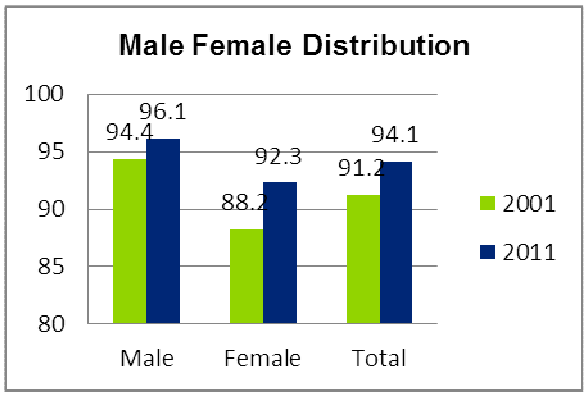
[158] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Deloitte Analysis

4.6.4 Education Infrastructure

Kollam has a literacy rate of 94.1% in line with the state average of 93.9%. In 2011, male and female literacy rates were 96.1% and 92.3% respectively with a total literacy rate of 94.1% as compared to 2001 literacy rate of 91.2%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 94.1% for both rural and urban respectively in the year 2011.

Figure 83: Literacy Rate by Gender and Residence-Kollam





Source: Govt. of Kerala, Dept. of Economics and Statistics

Kollam has 1101 schools with enrolments of 129913, 113336 and 87158 in lower primary, upper primary and high school levels respectively. The total number of schools in Kollam account for 7.2% of the total schools in the state while the enrolments in the school level (upto class X) account for 7.1% of the total state enrolments. The total number of teachers (14190) over the three sections account for 7.7% of the total teachers in the state.[159]

Table 85: School Education Profile - Kollam

School category	Kollam	Percentage of Total in State
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	549	7.0%
Upper Primary Schools (V-VII)	263	7.0%
High Schools (VIII-X)	289	7.9%
Total	**1,101**	**7.2%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	129,913	7.2%
Upper Primary Schools (V-VII)	113,336	7.4%
High Schools (VIII-X)	87158	6.5%
Total	**330,407**	**7.1%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	3,701	7.6%
Upper Primary Schools(V-VII)	3,664	6.5%
High Schools (VIII-X)	6,825	8.8%
Total	**14,190**	**7.7%**
Source: DISE and SEMIS data 2011-12		

[159] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Kolllam has 52 vocational higher secondary schools (20-Govt., 32-Aided) [160]. It has a total of 62 ITIs and ITCs[161]. Some of the trades offered in the Government ITIs and ITCs are electrician, fitter, plumber, data entry operator and surveyor whereas most of the private ITIs and ITCs offer courses on diverse trades like draughtsman (civil), electrician, computer operator and programming assistant, electronics mechanic and fitter. The ITIs of the district have a total intake of 7740 of which 1012 is in the government and 6728 in the ITCs. Further it is to be noted that while being 5 in number (8.1% of the total), the government ITIs account for 1012 seats (13.1% of total).

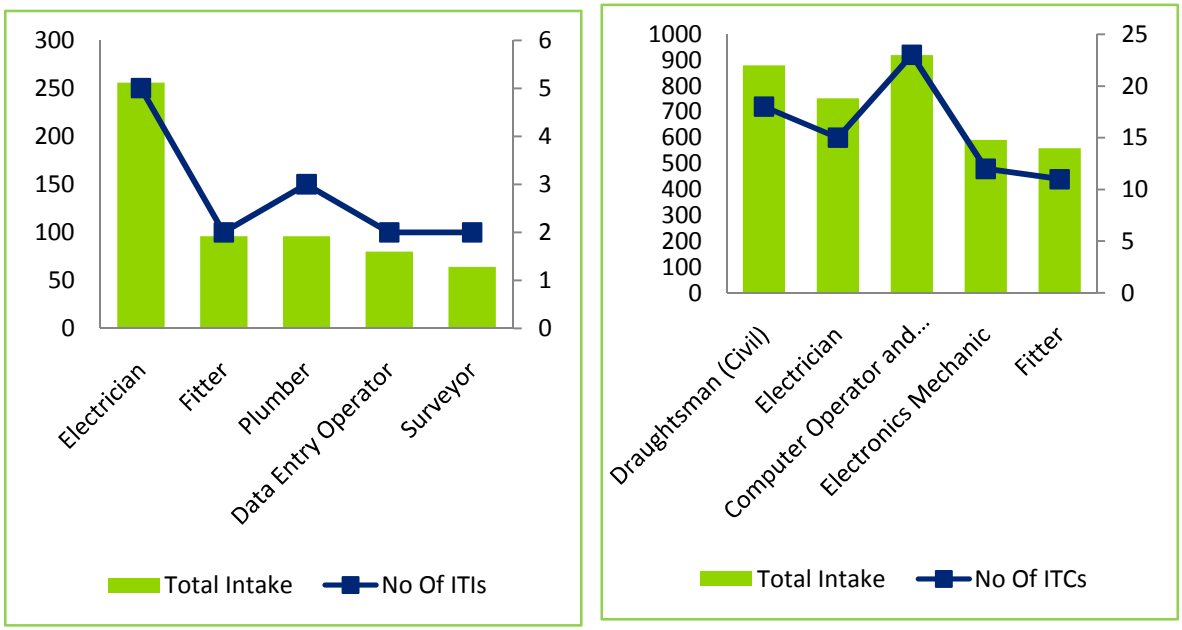
Table 86: Govt. ITIs in Kollam and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Government ITI, Chathannoor	4	4
SNCS Industrail Training Center	1	2
Government ITI for Women, Medayil ,	11	27
Govt. Basic Training Centre (BTC),, Chandana Trope	7	7

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Kollam is given in the figure below:

Figure 84:Trades with max seats in ITI and ITCs- Kollam



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Kollam has 4 Polytechnic Colleges,which includes two Government polytechnic offering Diploma programs in Computer Application and Business Management,Electronics, Computer and Mechanical Engineering with approved intake of 40 to 60 students.[162]

[160] Kerala Economic Review, 2012
[161] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[162] Department of Technical Education, GOK

Higher Education Infrastructure

As depicted in the table below, there is 15 engineering college, and 24 arts and science colleges with intake of 4470 and 6855 respectively. The district has 4 medical and 9 Nursing colleges. It has 2 law colleges as well.

The Centres of Excellence in Kollam include Indian Rare Earths Limited (Mineral Division), Kerala Minerals and Metals Ltd, Kerala State Cashew Development Corporation, TKM College of Engineering[163].

Table 87: Higher Education Profile - Kollam

Educational Infrastructure	Number of Institutes		Source
	Kollam	Intake	
Engineering/ Technology	15	4,470	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	24	6855	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	0	0	*CEE website*
Medicine (including Ayurveda, Homeopathy,	4	368	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	9	768	
Paramedical and Allied Sciences	0	0	
BPharm	3	54	
Law	2	120	*CEE website*
Management	8	720	*AICTE website*
Total	65	13235	

[163] Emerging Kerala Website

4.6.5 Youth Aspirations

The key observations about aspirations of the youth of the district have been captured below along the broad dimensions of education and employment, are highlighted in the table below:

Table 88: Youth Aspirations- Kollam

Parameters	Responses
Preferred Jobs	• Most of the respondents prefer Govt. jobs as they offer security of employment and lesser work pressure. • The average salary expectations of the youth range from Rs. 15,000 to Rs. 20,000 (per month) • There are very few opportunities in the district. Most of the alumni have relocated to other states. • Some respondents would like to go abroad as they can earn more and earn overtime income too. Besides, quality of life and working conditions would be better.
Issues with VET Infrastructure	• For students pursuing nursing and health care courses, exposure to modern technology in health care is lacking. • Quality of faculty is poor.
Suggestions by Youth	• Many hospitals do not fill vacancies to cut costs. As a result, many nursing graduates remain unemployed. Govt. should keep a check on nurse to patient ratios in hospitals. • Govt. should regulate and monitor compensation and working conditions of nurses. • Faculty exchange programmes and faculty development programmes should be arranged to improve the quality of faculty. • Hospitals and health care centres should actively give internships to B.Sc. & M. Sc. Nursing students. • A feedback and quality mechanism should be put in place for faculty.

4.6.6 Skill Gap Assessment

The estimated district employment in 2011-12 is highest in the tertiary sector (48.9%), followed by the primary sector (28.5%) and secondary sector (22.6%)[164]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (33.7%) and other services (22.4%) sectors. Within the secondary sector, the largest employer is the building and construction sector (59.4%).

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 17.3%. The secondary and tertiary sector contributions are estimated to increase to 23.8% and 59% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the agriculture and allied activities (16.8%), trade hotels and restaurants (15.2%) and building and construction (15.0%) which are also confirmed by our primary interactions with government stakeholders, institutes and industries in Kollam.

[164] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Deloitte Analysis

Table 89: Projected Employment Contribution and Growth Rate - Kollam

#	Economic Sector [165]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-2.9%	16.8%
2	Mining and Quarrying	-6.3%	0.5%
3	Manufacturing	1.7%	8.6%
4	Electricity, Gas & Water supply	-2.2%	0.3%
5	Building and Construction	3.0%	15.0%
6	Trade, Hotels and Restaurants	1.1%	15.2%
7	Railways	-3.0%	0.2%
8	Transport & Storage	0.2%	4.1%
9	Communication	6.7%	6.7%
10	Banking and Insurance	9.6%	4.6%
11	Real estate services and business services etc.	7.4%	8.8%
12	Public Administration	1.6%	4.5%
13	Other Services	5.1%	14.9%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology highlighted in section 2 the estimated incremental manpower demand in the period 2012-22 will be about 2.67 lakhs. While building and construction and communication sectors are expected to contribute a significant proportion of this demand (16.3%) based on the relatively higher anticipated growth rates, public administration and Banking, Financial Services and Insurance (BFSI) segments are also expected to contribute to the incremental demand.

Table 90: Incremental Demand – Key sectors (in '00s) - Kollam

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	30	80	90	35	93	105
Communication	30	60	60	42	83	83
Banking/ Insurance/ Finance	61	55	6	96	86	10
Other Services	78	36	6	109	50	8
Education/ Skill development	80	18	25	102	24	31
Select Informal Sector	10	35	55	13	44	70
IT / ITES Services	42	19	3	60	28	5
Manufacturing	12	34	26	13	37	28
Real estate services	7	24	17	10	35	24
Organised retail	9	28	20	9	30	21
Total Incremental demand	398	435	330	534	562	410
Overall Incremental Demand	**2669**					
Workers exiting sectors						
Mining and Quarrying	-3	-10	-19	-2	-6	-11
Agriculture and allied activities	-11	-38	-332	-9	-28	-246
Total workers exiting[166]	-15	-50	-353	-11	-36	-259

[165] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

[166] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Some of the key trends observed on the demand side include

- *A significant number of the workforce (over 66,000) is expected to exit from the agriculture sector between 2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *Building and construction (16.3%) and communication (13.4%) sectors are expected to contribute a significant proportion of the incremental demand*

Manpower Supply

The population of Kollam in 2011 was about 26.4 lakhs which is expected to increase to about 27.4 lakhs in 2017 and about 28.3 lakhs in 2022. As per the methodology highlighted in section 2 the estimated incremental manpower supply from 2012 to 2022 will be about 2.27 lakhs.

The incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district. Please refer annexure 0 for skill definitions.

Table 91: Incremental Labour-force as per Skill Levels (in '00s) - Kollam

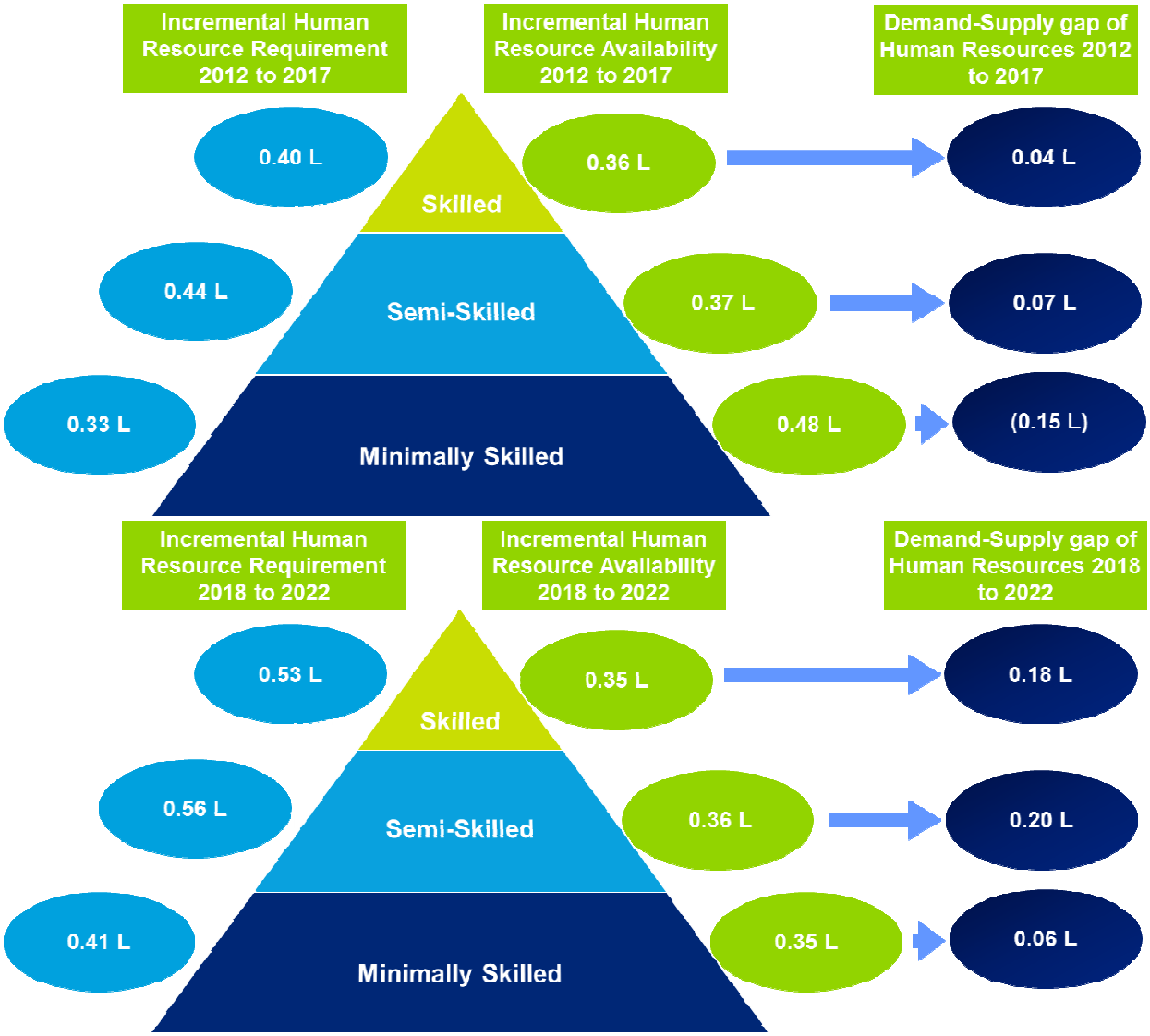
	2012-17	2017-22	Total
Skilled	358	357	714
Semi-Skilled	368	362	730
Minimally-Skilled	482	347	829
Incremental manpower supply (2012-22)	2274		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 40% in the 2012-17 period to 36% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 85: Incremental HR Demand Supply Gap- Kollam



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 39,494 with the excess demand across skilled and semi-skilled segment and excess supply in the minimally skilled segment.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources.*
  However, the excess supply in the semi-skilled segment presents a case for introducing training programs to augment the skills of this segment to cater to the demand in the key sectors of growth.
- *Even in cases of excess supply, it is pertinent to note that it does not imply industry demand for skills is being sufficiently met. Employability linked skills have emerged as a key area of concern among*

industry. The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers.

- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Indicative Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Kollam are given in the table below. These will be further augmented with gaps identified for each priority sector in the final report.

Table 92: Qualitative Skill Gaps – Food Processing and Tourism and Hospitality Sector

Sector	Level	Skill Gap
Food Processing	Plant Associates and operators	• Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	• Limited awareness on quality, health and hygiene awareness • Limited basic computer skills including barcode reading
	Sales and marketing	• Limited Communication skills, ability and willingness to understand the manufacturing process
Tourism, Hospitality and Travel	Tour Operators and Guides	• Poor English and Communication Skills • Lack of grooming and punctuality • Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels - Customer facing staff	• Poor English and Communication Skills • Poor customer service levels
	Restaurants and Hotels – Management and Proprietors	• Poor management skills • Limited accounting and business knowledge
	Restaurants and Hotels – Kitchen Staff	• Limited knowledge of variety cuisines • Lack of adherence to hygiene standards
	Drivers – Autorickshaws, Taxis	• Lack of adequate communication skills • Lack of adherence to driving rules and regulations • Inadequate knowledge of safety norms

4.6.7 Recommendations

Future Growth Opportunities in Kollam

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high incremental demand of workers, high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Kollam.

Table 93: Key Growth Sectors - Kollam

Sector	Growth Opportunities
Building & Construction	• This sector contributes the highest share to the secondary sector DDP in the district (62%) in 2011-12. • In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from building and construction (16.3%).
Food Processing	• According to the Emerging Kerala website, key processing units include cashew processing, marine products, agro products etc.
Manufacturing – Coir, Cashew	• Cashew and coir manufacturing units are key industries esp for MSME employment
Tourism and Hospitality	• Trade, Hotels & Restaurants is the highest contributor within the tertiary sector (29%). Tourism and hospitality sector which contributes significantly to the trade, hotels and restaurants segment is expected to be key sectors of employment in the future. • Kollam is also one of the key tourist destinations in Kerala. Backwaters, Palaruvi Falls, Thenmala, and Agasthyamalai Biosphere Reserve are some of the important tourist attractions
Communication	• The Communication sector grew the fastest across all sectors at 29% between 2004-05 and 2011-12.

Considering economic and skill landscape of Kollam, the proposed action plan that would be prepared at the end of the study would include the following priority areas in addition to other areas that may be identified during the course of the study. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 94: Recommendations for stakeholders - Kollam

Stakeholder	Priority Areas	
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz.	
	• Building & Construction • Food Processing • Tourism and Hospitality • Communication	• Manufacturing – Coir, Cashew
Private training providers	• Training providers to equip labs with modern technology and equipment to enable better employability. • Faculty exchange programmes and faculty development programmes should be arranged to improve the quality of faculty	
Government	• Skill up gradation training may be conducted as a regular curriculum in all technical education institutes.	

	• Counselling for students may be provided from upper primary level level. • Entrepreneurship development clubs may be promoted in schools itself.
Industry	• More industry interactions could be initiated in the Building & Construction sector, and private skill training providers for Food Processing and Tourism/Hospitality • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Food Processing and Tourism/Hospitality.

4.7 Kottayam

Located a little south to central Kerala, Kottayam district lies between latitude 9 15' and 10 21' and longitude 76 22' and 77 25'. It is bounded on the north by Ernakulam district, on the east by Kottayam district and on the south by Alappuzha and Pathanamthitta districts. The district is spread over an area of 2208 Sq. kms, which accounts for 5.7% of the total area of the state. The district is divided into 5 taluks, 74 Gram Panchayats and 95 villages. The Meenachil, the Muvattupuzha and the Manimala rivers are the important rivers of the district.

4.7.1 Demography

Kottayam has a population of 19.7 Lakhs according to the 2011 Census of which about 28.6% reside in urban areas.[167] The growth rate of population in the district is 1.1% which is much less in comparison to the state growth rate of 4.8%.The district has a sex ratio (1039) a little lower compared to the state (1084), as indicated in the table below.

Table 95: Demographic Indicators – Kottayam

Demography	Kottayam	Kerala
Population (2011)	1974551	3,34,06,061
Decadal Population Growth Rate (2001-11)	1.07%	4.8%
Population density per sq. km (2011)	895	859
Sex Ratio (2011)	1039	1084
Percentage of Urban Population (2011)	28.63%	47.7%
Percentage of SC population(2011)	7.80%	9.1%
Percentage of ST population(2011)[168]	1.11%	1.5%

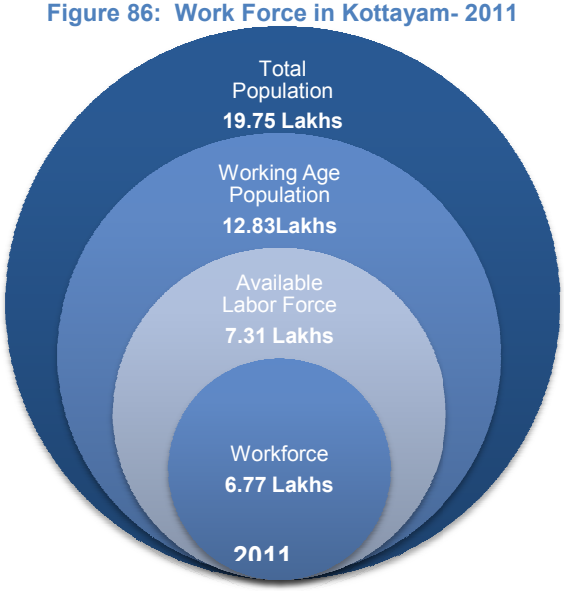
Source: Census 2011

The district ranks eighth in the state in terms of the population density[169] with a population density of 895.The population density is slightly higher than the state average.[170]

The adjoining figure depicts the estimated workforce in Kottayam in the context of the population of the district. Out of the total population of 19.7 Lakhs the working age population (between 15-59 age group) constitutes to 12.8 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 6.8 lakhs or nearly 52.8% of the working age population.

Figure 86: Work Force in Kottayam- 2011



Source: Census 2011 and Deloitte Analysis

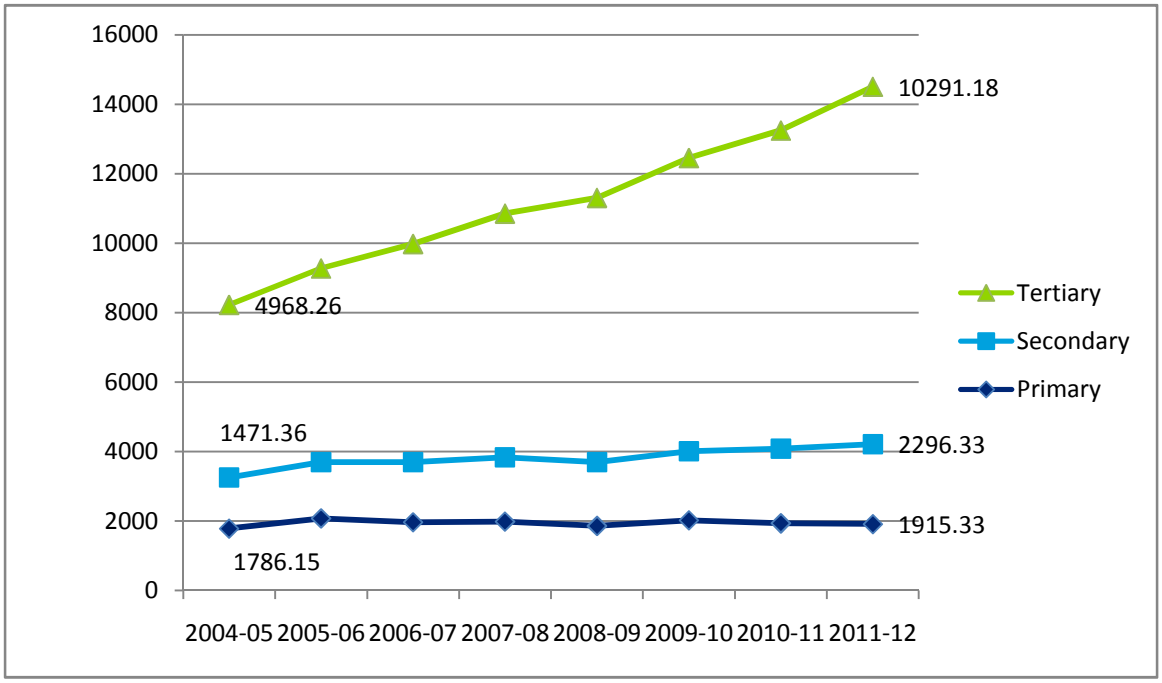
[167] Census of India, 2011
[168] Census 2011
[169] Kerala Economic Review 2012-13
[170] Kerala Human Development Report 2012

4.7.2 Economic Profile

The Gross District Domestic Product (GDDP) of Kottayam has grown at a growth rate (CAGR) of 8.4% between 2004-05 (Rs. 8226 Cr.) and 2011-12 (Rs. 14503 Cr.). In 2011-12, tertiary sector contributed about 71% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant, communication and real estate activities, followed by the secondary sector at 15.8% and the primary sector at 13.2%.

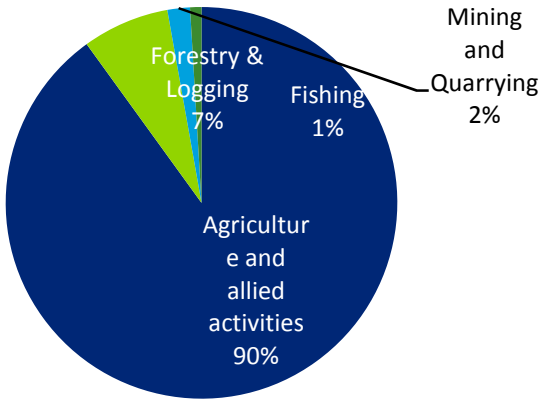
As indicated in the graph below, the contribution of primary sector has shown a slight increase from 1787.6 Cr. (2004-05) to 1915.3 Cr. (2011-12). The secondary sector and tertiary sector also registered positive growth in its share to GDDP from 1471.6 Cr. to 2296.3 Cr. and from 4968.3 Cr. to 10291.2 Cr. respectively, over this period.

Figure 87: Sector Level Contribution to GDDP, Kottayam



Primary Sector

Figure 88: Primary Sector Contribution to GDDP, 2011-12



The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 13.2% to the GDDP in 2011-12. The primary sector contribution to the GDDP has seen a decline of 8.5% between 2004-05 and 2011-12. The CAGR for primary sector is 1.0% with agriculture registering a growth of 0.8% and mining and quarrying showing a growth of 3.3%.

In the district, net sown area is 71.6% of total geographic area of 220442 hectares, which is higher than that for Kerala (52.5%). It has a

very low forest cover of 8141 Ha. The total irrigated area is 34795 Ha. The major crops cultivated in the district include paddy, papaya, lemons, plantains, pepper, nutmeg, cinnamon, tapioca, cocoa etc. In terms of area under cultivation, Kottayam occupies the first position for rubber (21% of state) and second for cocoa.[171]

Key characteristics[172] of the primary sector in Kottayam are presented below:

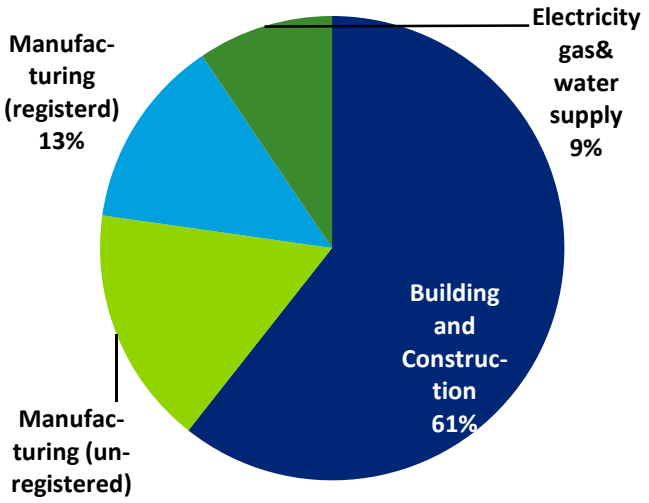
- Agriculture & Allied activities constitute about 90% of the contribution of primary sector to the GDDP.
- The district is rich in crops like include paddy, papaya, lemons, plantains, pepper, nutmeg, cinnamon, tapioca, cocoa etc.
- Kottayam district stands first in the cultivation of rubber which accounts for 21% of the total area under rubber in the state.
- Paddy and Cocoa are the other important crops of the district
- The important minerals in the district are lime shell, granite building stone, sand, clay, etc.

Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was approximately 15.8%. The sector has registered a growth of 6.6% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a growth rate of 6.18%.

According to the MSME District Profile for Kottayam, there are a total of 18088 registered industrial units with 32 medium and large units in the district. The total employment in the large and medium scale units is 2905 workers with a total turnover of Rs. 3145766 lakhs (Small scale= 167500 lakhs and medium and large scale: 147076).[173]

Figure 89: Secondary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

The key identified clusters[174] in the manufacturing sector include Ethnic Food Processing Women Cluster, Pala, and Rubber Cluster, Changanacherry.

Key characteristics[175] of the secondary sector in Kottayam are presented below:

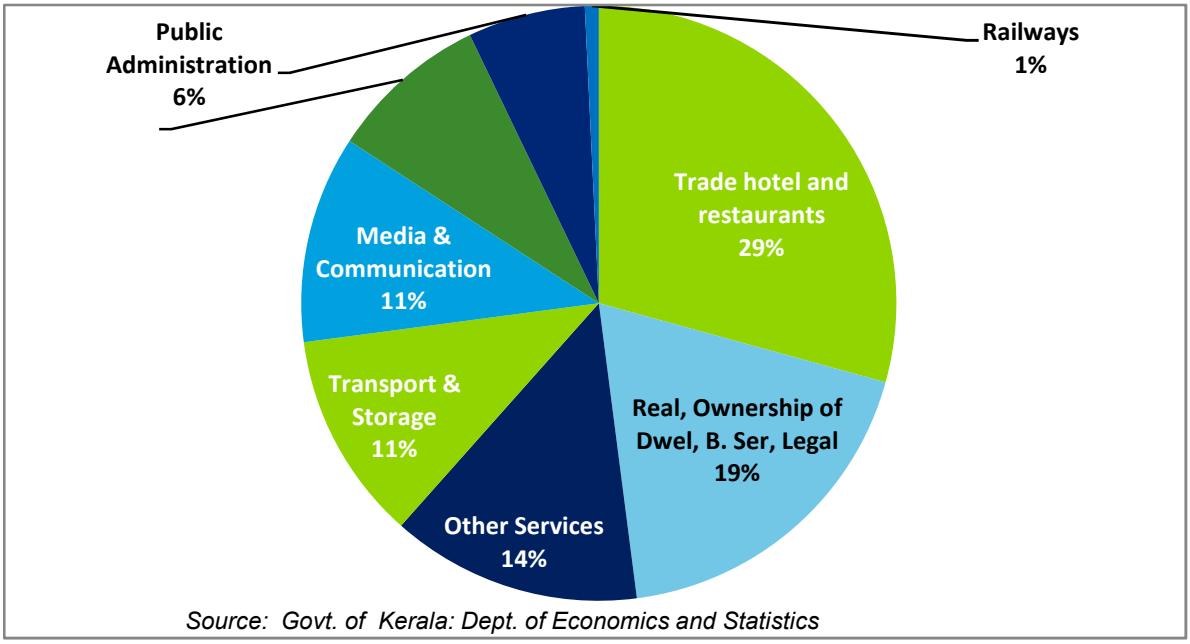
- Building and Construction (61%) contributes the highest followed by Manufacturing (30%).
- Powerloom cooperative society is located in Kottayam.
- Hindustan News Print Velloor, Travancore Cements, Nattakom, Cochin Cements, Mevelloor, MRF Limited, Vadavathoor are some of the large scale industries in the district.
- Readymade garments and embroidery, engineering units, rubber products and food processing are the key areas in the secondary sector.
- The major minerals are granite, sand, lime shell, brick clay, etc.

[171] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[172] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[173] District wise MSME Report
[174] Brief Industrial Profile of Kottayam District 2011-12, MSME Development Institute
[175] Emerging Kerala website, District MSME Report and Kerala Economic Review

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 60.4% to 71.0% to GDDP between 2004-05 and 2011-12. The sector grew by 11.0% during the same period, in real terms. In terms of growth rate, communication was the fastest growing sector (CAGR=29.1%) followed by Banking and Finance CAGR=14.5%). Key contributors in the sector include trade, hotels and restaurants, real estate services and other services.

Figure 90: Tertiary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics[176] of the tertiary sector in Kottayam are presented below:

- The tertiary sector (services) contributes a significant share of 71.0% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate, and Other Services sub-sectors.
- Kottayam is one of the significant tourist destinations in Kerala with its backwaters.

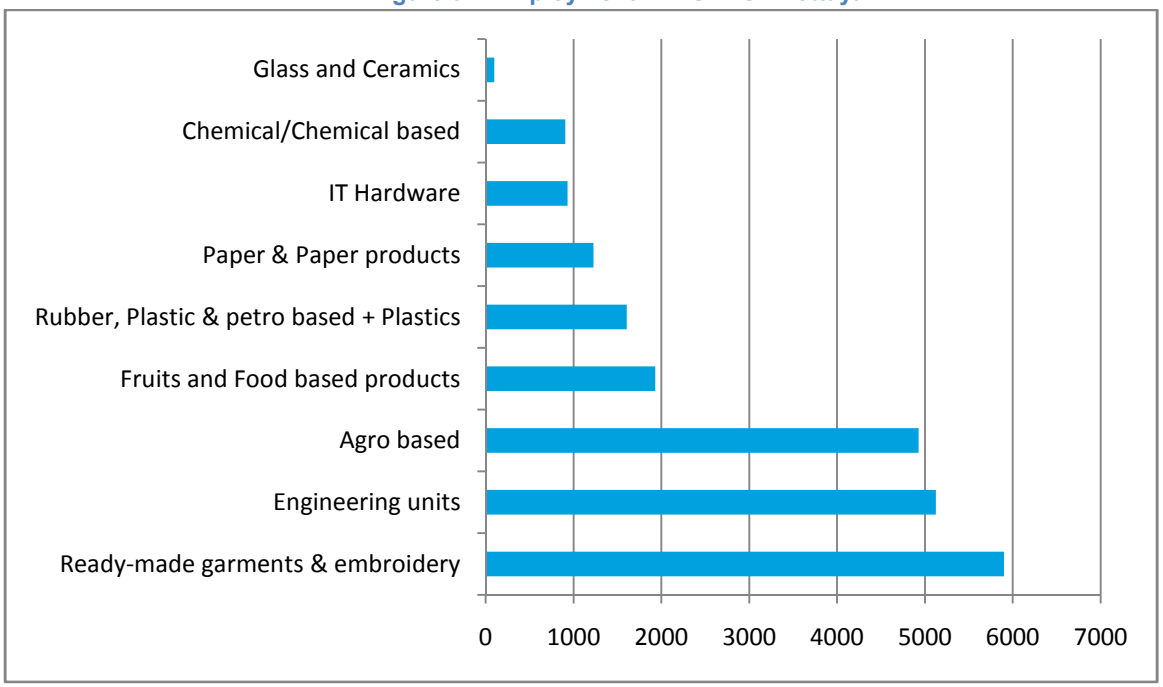
[176] Emerging Kerala Website

4.7.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (47.5%), and followed by the primary sector (31.0%) and secondary sector (21.6%)[177]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (33.5%) and other services (21.1%) sectors. Within the secondary sector, the largest employer is the building and construction sector (57.0%) and manufacturing (41.0%).

The figure below indicates the employment in MSMEs in the district.

Figure 91: Employment in MSMEs - Kottayam



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, readymade garments and embroidery units employ the largest share of workers (5899), followed by engineering units (5125) and agro based industries (4927).

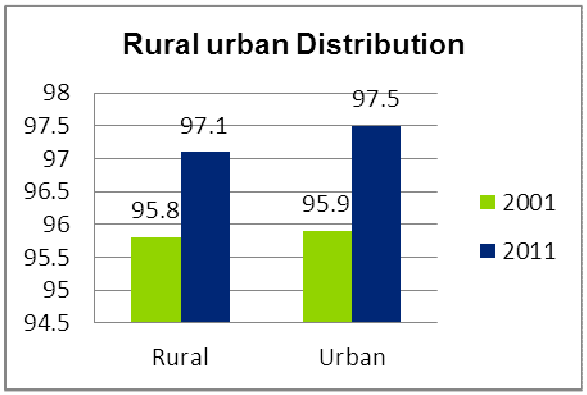
[177] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.7.4 Education Infrastructure

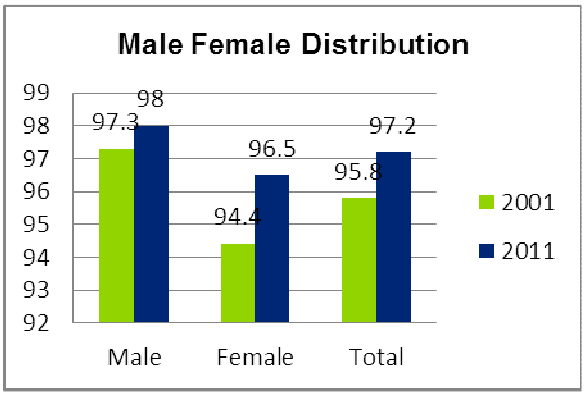
Kottayam has a higher literacy rate of 97.2% in comparison to the state average of 93.9%. It has the highest literacy rate among all the districts in the state. In 2011, male and female literacy rates were 98.0% and 96.5% respectively with a total literacy rate of 97.2% as compared to 2001 literacy rate of 95.8%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 97.1% and 97.5% for rural and urban respectively in the year 2011.

Figure 92: Literacy Rate by Residence and Gender - Kottayam

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Kottayam has 1091 schools with enrolments of 102653, 85425 and 81723 in lower primary, upper primary and high school levels respectively. The total number of schools in Kottayam account for 7.1% of the total schools in the state while the enrolments in the school level (up to class X) account for 5.8% of the total state enrolments. The total teachers (12330) over the three sections account for 6.7% of the total teachers in the state.[178]

Table 96: School Education Profile - Kottayam

School category	Kottayam	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	500	6.35%
Upper Primary Schools (V-VII)	250	6.65%
High Schools (VIII-X)	341	9.34%
Total	**1,091**	**7.14%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	102,653	5.72%
Upper Primary Schools (V-VII)	85,425	5.61%
High Schools (VIII-X)	81723	6.05%
Total	**269,801**	**5.78%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	2,942	6.04%
Upper Primary Schools(V-VII)	2,919	5.14%
High Schools (VIII-X)	6,469	8.32%
Total	**12,330**	**6.73%**
Source: DISE and SEMIS data 2011-12		

Vocational Education

[178] DISE data 2011-12 and SEMIS data 2011-12

In terms of vocational training infrastructure, Kottayam has 31 vocational higher secondary schools (21-Govt., 10-Aided) [179]. It has a total of 40 ITIs and ITCs[180]. Some of the trades offered in the Government ITIs and ITCs are mechanic (motor vehicle), draughtsman (civil), driver cum mechanic (light motor vehicle), mechanic (refrigeration and air conditioning) and architectural assistant whereas most of the private ITIs and ITCs offer courses on diverse trades like electrician, draughtsman (civil), electronics mechanic, fitter and mechanic (motor vehicle). The ITIs of the district have a total intake of 5044 of which 748 is in the government and 4296 in the ITCs. Further it is to be noted that while being 5 in number (12.5% of the total), the government ITIs account for 748 seats (14.8% of total).

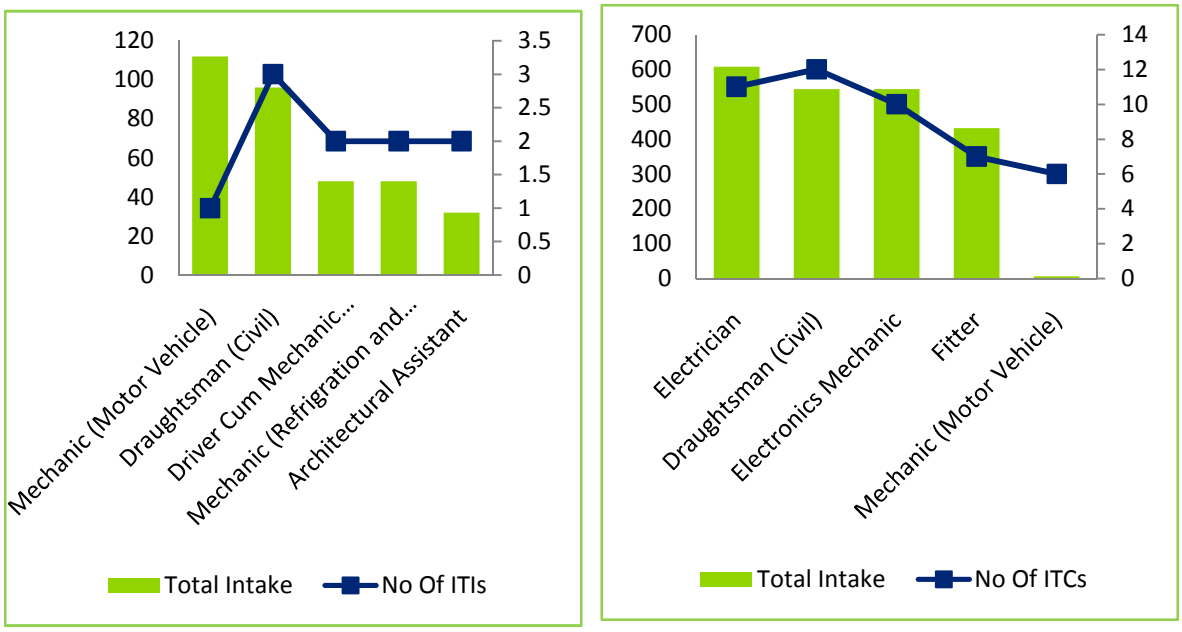
Table 97: Govt. ITIs in Kottayam and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
P T Chacko Memorial Government ITI, Palickathode	17	38
Government ITI, Ettumanoor	3	3
Government ITC (SCDD), Nedumkavuvaya	1	2
Government ITC (SCDD), Erumeli	1	2
Government ITC (SCDD), Madhuraveli	1	1

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Kottayam is given in the figure below:

Figure 93:Trades with max seats in ITI and ITCs- Kottayam



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Kottayam has 5 Polytechnic Colleges, which includes three Government polytechnics offering Diploma programs in polymer technology, civil, mechanical, electrical & electronics, & computer science engineering with approved intake ranging from 40 to 60 seats.[181]

Higher Education Infrastructure

[179] Kerala Economic Review, 2012
[180] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[181] Department of Technical Education, GOK

As depicted in the table below, there are 9 engineering college, and 36 arts and science colleges in the district. The district has 3 medical and 11 Nursing colleges. It has 10 Management colleges and 1 Law College as well.

The Centres of Excellence in Kottayam include Rubber Research Institute of India, Tropical Institute of Ecological Sciences (TIES), Government Medical College, Kottayam, Centre for Rural Management[182].

Table 98: Higher Education Profile – Kottayam

Educational Infrastructure	Number of Institutes		Source
	Kottayam	Intake	
Engineering/ Technology	9	**3,490**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	36	**9089**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	0	**0**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	3	**427**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	11	**601**	
BPharm	1	**60**	
Paramedical and Applied Sciences	1	**50**	
Law	1	**60**	*CEE website*
Management	10	**1110**	*AICTE website*
Total	72	**14827**	

[182] Emerging Kerala Website

4.7.5 Youth Aspirations

The key observations about aspirations of the youth in Kottayam have been captured below along the broad dimensions of education and employment:

Table 99: Youth Aspirations- Kottayam

Parameters	Responses
Preferred Jobs	• Almost all respondents are open to taking up Govt. or private jobs. The deciding factor is the salary. • The average salary expectations of the youth are Rs. 10,000 (per month) for freshers. • Most of the respondents for nursing courses want to relocate to a new country due to limited opportunities for nurses in the district and state.
Issues with VET Infrastructure	• Students and faculty need training in basic computer applications. • Nurses must be given regular trainings (in-service education) on new technologies in medical sciences. • Quality of nursing faculty needs improvement. They need to abreast with changes in the industry.
Suggestions by Youth	• Soft skills training, including English language skills, should be given to students. • Hospitals in the state should offer better salaries to Nurses. • Nurse to patient ratio in hospitals is very low, thereby putting a lot of pressure on nurses. This is a major reason for migration of nurses. • Government needs to monitor working conditions of nurses.

4.7.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a significant role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Within the secondary sector, the expected growth sectors include agro food processing sector, rubber, building and construction and engineering units. In the tertiary sector, the sectors expected to show growth include tourism, other services and real estate services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 19.9%. The secondary and tertiary sector contributions are estimated to increase to 22.3% and 57.7% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the agriculture (19.5%), trade, hotels and restaurants (14.7 %) and other services (14.3%).

Table 100: Projected Employment Contribution and Growth Rate - Kottayam

#	Economic Sector [183]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-2.7%	19.5%
2	Mining and Quarrying	-0.5%	0.5%
3	Manufacturing	1.9%	9.0%
4	Electricity, Gas & Water supply	0.2%	0.4%
5	Building and Construction	2.2%	13.0%
6	Trade, Hotels and Restaurants	0.9%	14.7%
7	Railways	-2.3%	0.2%

[183] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

8	Transport & Storage	0.1%	4.4%
9	Communication	6.3%	8.0%
10	Banking and Insurance	9.0%	5.8%
11	Real estate services and business services etc.	6.5%	6.3%
12	Public Administration	1.3%	4.0%
13	Other Services	5.4%	14.3%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology, the estimated incremental manpower demand in the period 2012-22 will be about 2.29 lakhs. Communication sector is expected to contribute a significant proportion of this demand (16.8%) based on the relatively higher anticipated growth rates, along with Banking and Finance and Building and Construction segments.

Table 101: Incremental Demand – Key sectors (in '00s)- Kottayam

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Communication	33	66	66	44	89	89
Banking/ Insurance/ Finance	70	63	7	108	97	11
Building & construction	19	51	58	21	57	64
Education/ Skill development services	75	17	23	97	22	30
Select Informal Sector	9	32	51	12	42	66
Other Services	54	25	4	72	33	6
Manufacturing	12	36	28	13	40	31
IT / ITES Services	26	12	2	36	17	3
Organized retail	7	22	15	7	23	16
Real estate services	5	15	11	6	21	14
Total +ve demand	340	378	282	454	486	350
Overall Incremental Demand	**2291**					
Workers exiting sectors						
Agriculture and allied activities	-11	-38	-332	-8	-28	-246
Total workers exiting[184]	-12	-39	-333	-9	-29	-247

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 67,000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *Communication sector is expected to contribute a significant proportion of this demand (16.8%) based on the relatively higher anticipated growth rates, along with Banking and Finance (15.6%) and Building and Construction (11.8%).*

[184] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Manpower Supply

The population of Kottayam in 2011 was about 19.7 lakhs which is expected to increase to about 20.5 lakhs in 2017 and about 21.2 lakhs in 2022. As per the methodology highlighted in section 2 the estimated incremental manpower supply from 2012 to 2022 will be about 2.27 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 102: Incremental Labour-force as per Skill Levels (in '00s) - Kottayam

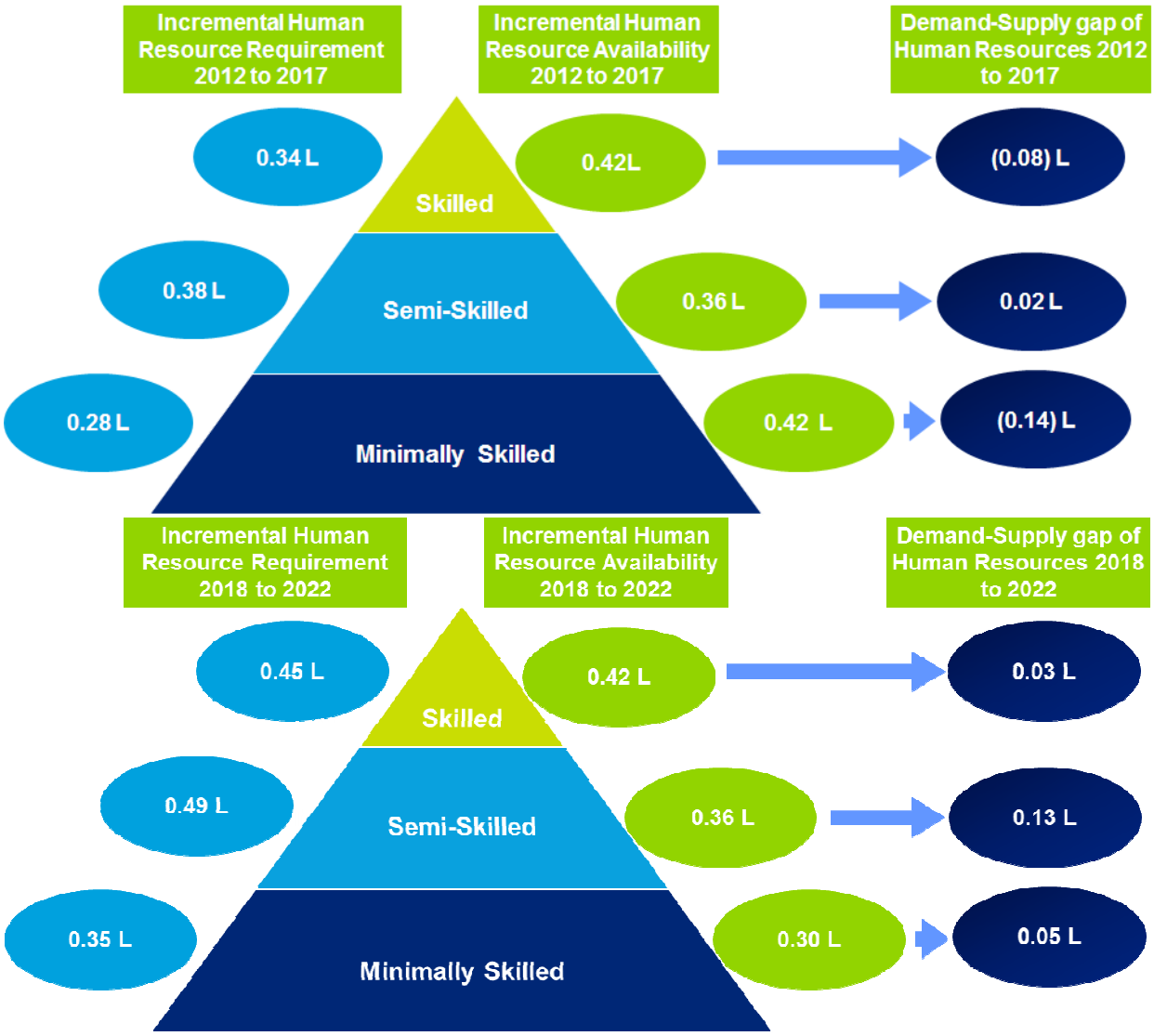
	2012-17	2017-22	Total
Skilled	419	421	840
Semi-Skilled	360	358	719
Minimally-Skilled	419	302	721
Incremental manpower supply (2012-22)	2280		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 35% in the 2012-17 period to 28% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market. Nearly 78% of this additional labour force is expected in the minimally skilled segment.*

Incremental Demand Supply Gap

Figure 94: Incremental HR Demand Supply Gap- Kottayam



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 1079 with the excess demand across semi-skilled segment while there is an excess supply over the other segments

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *In line with the rural urban distribution and dominance of agriculture in employment, the major contributor to skill gap is the minimally skilled segment which is in excess in the district and requires skilling and training programs to shift to the semi-skilled and skilled segments.*
- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Kottayam are given in the table below.

Table 103: Qualitative Skill Gaps – Agro-Based Industries and Tourism, Hospitality and Travel

Sector	Level	Skill Gap
Food Processing	Plant Associates and operators	Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	Limited awareness on quality, health and hygiene awareness Limited basic computer skills including barcode reading
	Sales and marketing-	Limited Communication skills, ability and willingness to understand the manufacturing process
Tourism, Hospitality and Travel	Tour Operators and Guides	Lack of English and Communication Skills Lack of grooming and punctuality Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels/Resorts -Customer facing staff	Lack of English and Communication Skills Low Customer service levels
	Restaurants and Hotels/Resorts – Management and Proprietors	Limited Management skills Limited Accounting and business knowledge
	Restaurants and Hotels/Resorts – Kitchen Staff	Limited Knowledge of variety cuisines Lack of Adherence to hygiene standards
	Drivers – Auto rickshaws, Taxis	Inadequate communication skills Limited Adherence to driving rules and regulations Inadequate Knowledge of safety norms

4.7.7 Recommendations

Future Growth Opportunities in Kottayam

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Kottayam.

Table 104: Key Growth Sectors - Kottayam

Sector	Growth Opportunities
Food Processing	• Food Processing is a key growth sector in the secondary sector in the district • Agriculture-based activities are expected to contribute the highest share to incremental demand (19.5%) in 2021-22.
Textiles & Garments	• Textiles and Garments are the highest employer within the MSME sector in the district
Manufacturing - Rubber	• The main activities of the district are in processing of rubber and manufacturing of rubber based products, contributing most of India's natural rubber production.[185]
Tourism & Hospitality	• This sector is expected to contribute the highest share to the tertiary sector anticipated incremental demand (14.7%) in 2021-22. • Hotels and Hospitality, Ayurveda, Backwater tourism are expected to continue to be key drivers in this sector.

Considering economic and skill landscape of Kottayam, the table below indicates the priority areas of focus for key stakeholders involved. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 105: Key Recommendations for stakeholders - Kottayam

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Food Processing • Textiles & Garments • Manufacturing of rubber • Tourism & Hospitality
Private training providers	• There is demand for more courses in tourism and hospitality and courses in Agro-based Manufacturing, Rubber Manufacturing, Textiles and Garments etc. Students and faculty need training in basic computer applications.
Government	• Youth interactions indicated the need for Government supervision and monitoring of the nurses in hospitals. • Soft skills training, including English language skills, should be given to students. • Nurses must be given regular trainings (in-service education) on new technologies in medical sciences. • Quality of nursing faculty needs improvement. They need to abreast with changes in the industry
Industry	• More industry interactions could be initiated in the Food Processing sector, Rubber Manufacturing, Tourism/Hospitality etc. • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Tourism/Hospitality, Food Processing etc.

[185] Emerging Kerala Website

4.8 Kozhikode

Kozhikode, formerly also known as Calicut, is located on the Malabar Coast. The district is bounded on the north by Kannur district, on the east by Wayanad district, on the south by Malappuram district and on the west by Lakshadweep Sea. The district is spread over 2344 Sq. Kms[186], which accounts for 6% of the total area of the state. The district consists of 1revenue division, 3 Taluks, 12 Blocks, 77 Grama Panchayats and 117 Villages.

[186] Kozhikode District Profile, Sept 2011

4.8.1 Demography

Kozhikode district has a population of 31 Lakhs as of 2011 of which about 67.1% reside in urban areas.[187] According to Kerala Economic Review 2012-13, Kozhikode ranks 5th in the state in terms of population with a growth rate of 7.3% with a population density of 1318 persons per Km^2.The urban population of Kozhikode is higher in comparison to the state average and the district has a higher sex ratio than the state, as indicated in the table below.

Table 106: Demographic Indicators – Kozhikode

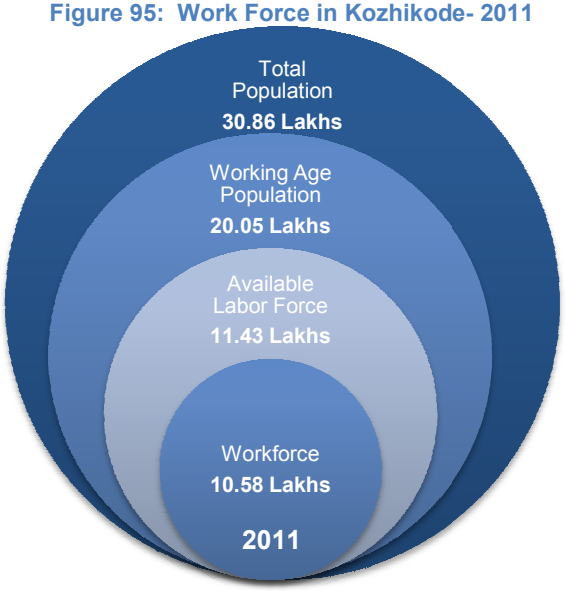
Demography	Kozhikode	Kerala
Population (2011)	30,86,293	33,406,061
Decadal Population Growth Rate (2001-11)	7.3%	4.8%
Population density per sq. km (2011)	1318	859
Sex Ratio (2011)	1097	1084
Percentage of Urban Population (2011)	67.1%	47.7%
Percentage of SC population(2011)	6.5%	9.1%
Percentage of ST population(2011)[188]	0.5%	1.5%

Source: Census 2011

The adjoining figure depicts the estimated workforce in Kozhikode in the context of the population of the district. Out of the total population of 30.9 Lakhs the working age population (between 15-59 age group) constitutes to 20.1 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 10.6 lakhs or nearly 52.6% of the working age population.

Figure 95: Work Force in Kozhikode- 2011



Source: Census 2011 and Deloitte Analysis

[187] Census of India, 2011
[188] Census 2011

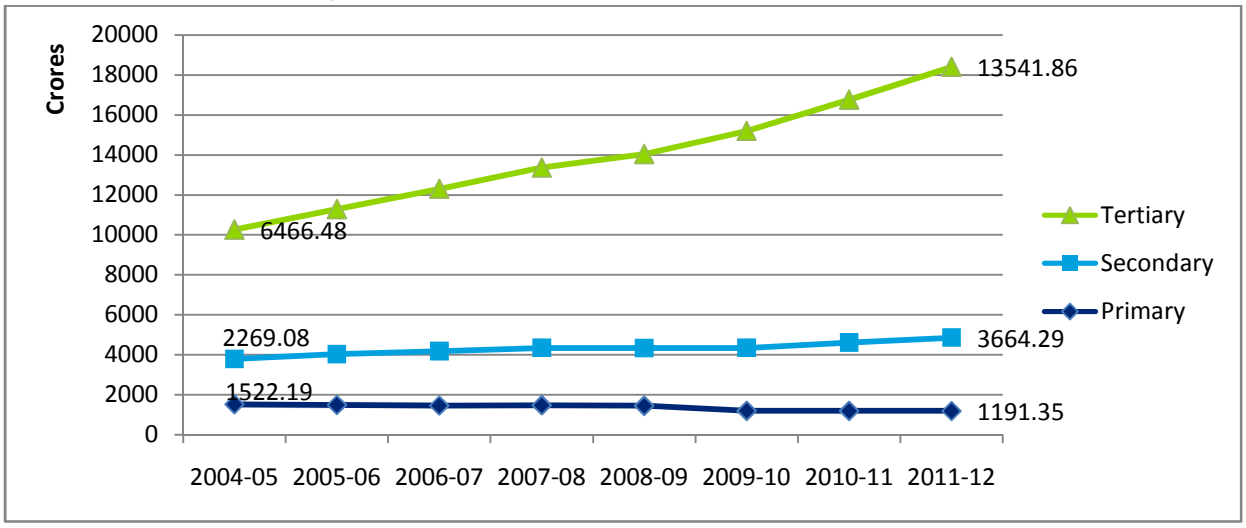
4.8.2 Economic Profile

The Gross District Domestic Product (GDDP) of Kozhikode has grown at a growth rate (CAGR) of 8.7% between 2004-05 (Rs. 10257 Cr.) and 2009-10 (Rs. 18397 Cr.). In 2011-12, tertiary sector contributed about 73.6% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant activities, followed by the secondary sector at 19.9% and primary sector at 6.5%.

The share of primary sector has been steadily declining from 14.8% (2004-05) to 6.5% (2011-12) and the share of secondary sector also declined from 22.1% to 19.9% during the same period. On the other hand, the tertiary sector has registered positive growth in its share to GDDP from 63% to 73.6% over this period.

The sector-wise GDDP growth and distribution from 2004-05 to 2011-12 is given in the figures below

Figure 96: Sector Level Contribution to GDDP-Kozhikode



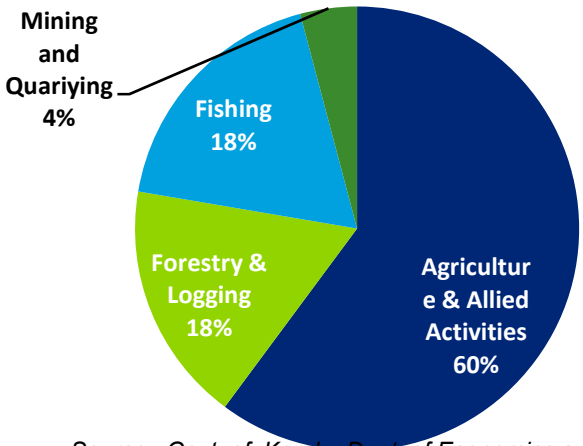
Source: Govt. of Kerala: Department of Economics and Statistics

Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 6.48% to the GDDP in 2011-12. In real terms, the sector declined by 3.4% during the same period.

In the district, net cultivated area is 65.4% of total geographic area of 2,34,641 hectares, higher than that for Kerala (52.5%). The major crops cultivated in the district include Paddy, Pepper, Arecanut, Plantain, Coconut, Rubber etc. Kozhikode stands 1st in position for Papaya cultivation and 2nd in position for 11% area under Jackfruit and Mango cultivation. It is also a major producer of Banana.[189]

Figure 97: Primary Sector Contribution, 2011-12– Kozhikode



Source: Govt. of Kerala: Dept. of Economics and Statistics

[189] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012

Key characteristics[190] of the primary sector in Kozhikode are presented below:

- Agriculture & Allied activities constitute about 60% of the contribution of primary sector to the GDDP. The district is rich in crops like Coconut, Arecanut.
- Kozhikode district stands 1st in the cultivation of coconut with an area of 1,27,699 Ha and it represents 16% of the total area.
- Forestry and Logging and Fishing contribute approximately 18% each to the sector.
- The major minerals in the district are Quartz, Iron ore, Granite Building stone Laterite Building stone, Brick clay, Ordinary sand River sand.

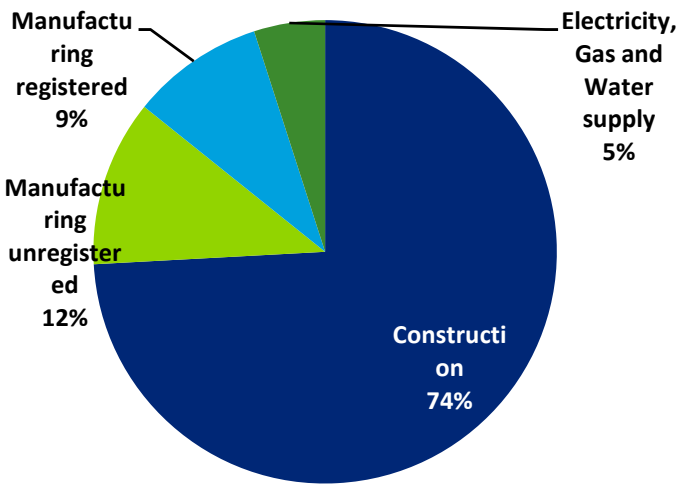
Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was about 19.9%. The sector has registered a growth of 7% between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 8%, followed by manufacturing at 6% and electricity, gas and water supply at 2%. The sector grew by 7.1% between 2004-05 and 2011-12, in real terms.

According to the MSME District Profile for Kozhikode, there are a total of 1078 industrial units in the district. The key large scale industrial units include the Steel Complex in Cheruvannur.

The key identified clusters[191] in the manufacturing sector have been highlighted below:

Figure 98: Secondary Sector Contribution, 2011-12: Kozhikode



Source: Govt. of Kerala: Dept. of Economics and Statistics

- **Ezarmorins Furniture Consortium**: Wooden furniture is manufactured in this cluster with around 1200 functional units with a turnover of Rs. 480 Cr.. The focus areas for this cluster include reducing cost of procurement and increasing profitability of cluster firms by at least 50%.
- **North Kerala Footwear Consortium**: This cluster is focused on manufacture of footwear. The total number of functional units is 25 with a project cost of 350 lakhs.
- **Ferrosimst Engg. Consortium**: This is a fabrication and general engineering cluster with 20 functional units in the cluster.

Key characteristics[192] of the secondary sector in Kozhikode are presented below:

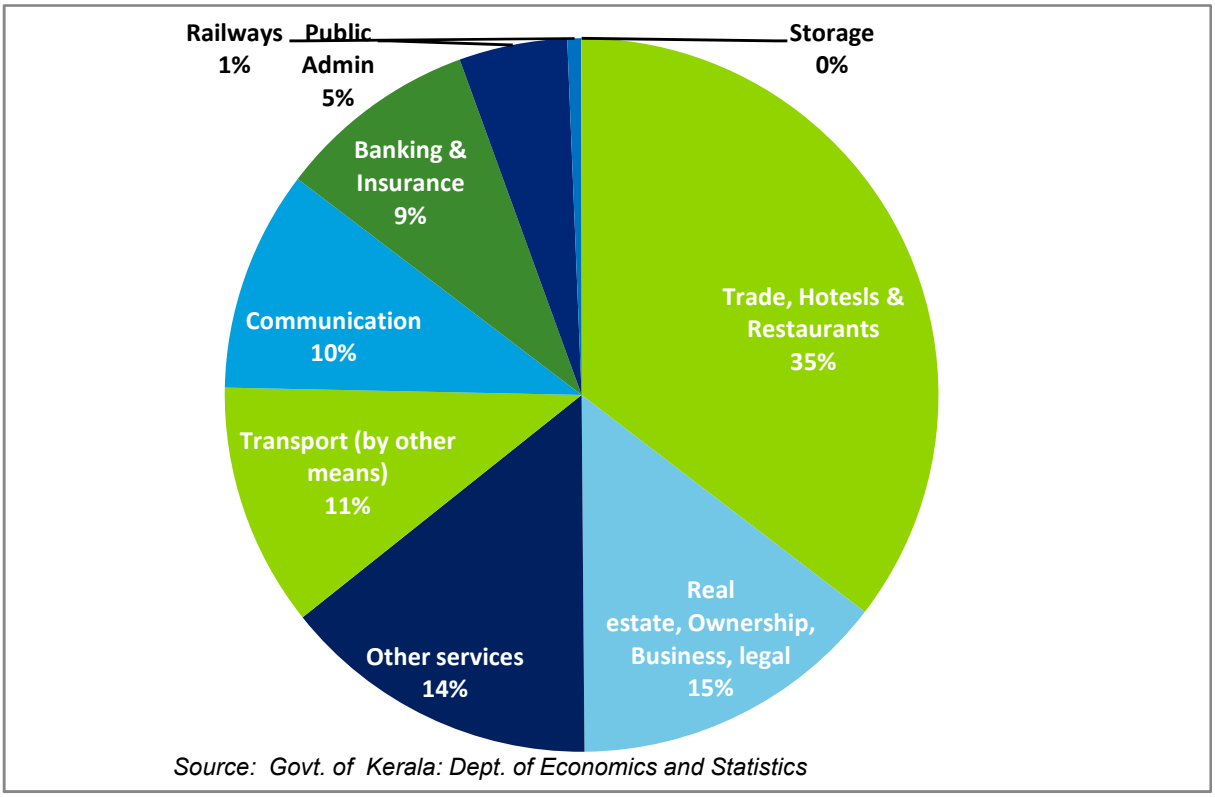
- Building and Construction is the highest contributor to the secondary sector in Kozhikode.
- The district has an industrial growth centre in Kinalur with a footwear and sports good park and a Footwear Design and Development Institute planned for training needs.
- New initiatives also include a Food Processing Park and Coconut Industrial Park and a General Purpose Industrial Park to promote the local industry such as furniture, dhow, carton adhesive, tiles.

[190] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[191] Brief Industrial Profile of Kozhikode District 2011-12, MSME Development Institute
[192] KSIDC Website

Tertiary Sector

The contribution of the tertiary sector to GDDP was about 73.6% in 2011-12. The sector has registered a CAGR of 11% between 2004-05 and 2011-12. Communication grew the highest (29%), followed by banking and insurance (15%) and transport and storage (13%). Trade, hotels and restaurants, real estate, ownership of business dwellings and other services grew at 9% each while railways and public administration grew the least at 8% each.

Figure 99: Tertiary Sector Contribution to GDDP– Kozhikode



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics[193] of the tertiary sector in Kozhikode are presented below:

- The tertiary sector (services) contributes the most to the district's economy and is expected to contribute the highest share in the future as well.
- Trade, Hotels & Restaurants is the highest contributor to the Tertiary sector in Kozhikode. Health Tourism is also expected to grow in the district with hospitals in Kozhikode attracting international patients as well.
- IT/ITES sector is a key sector in the district with a designated Cyberpark. According to the Vision 2025 for the state, Kozhikode will be an investment hub for IT/ITeS SEZs and parks.

4.8.3 Employment

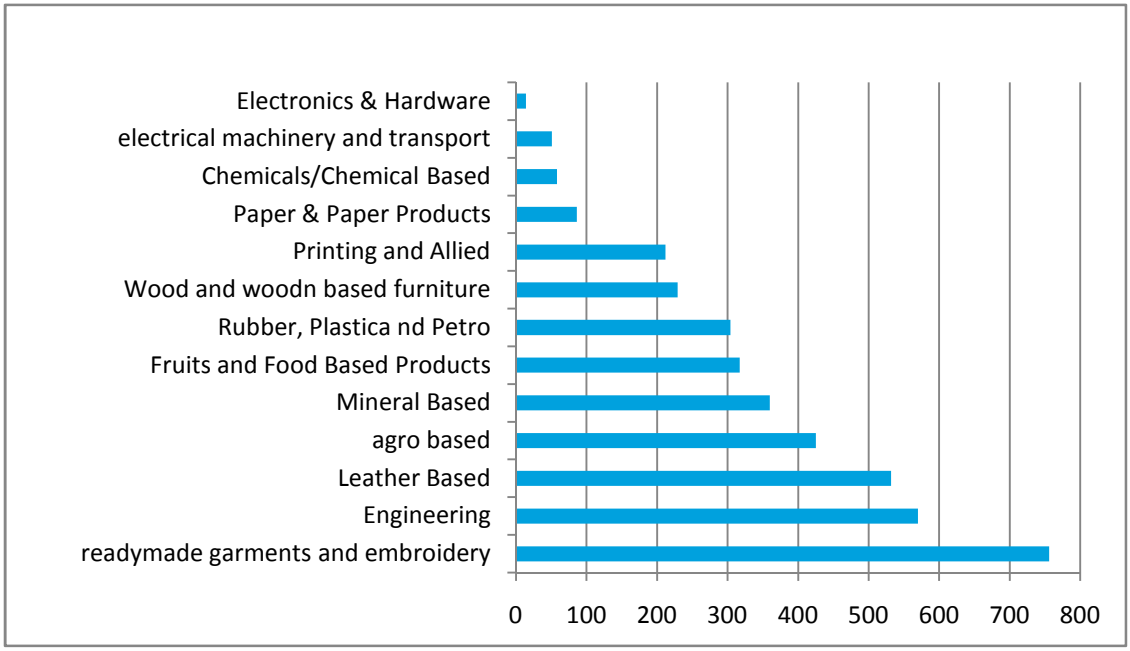
In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (53.9%), and followed by the secondary sector (29.4%) and the primary sector

[193] Emerging Kerala Website

(16.7.8%)[194]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (40%) and other services (23.1%) sectors. Within the secondary sector, the largest employer is the building and construction sector (70.5%).

The graph below indicates the employment in micro and small enterprises including artisan units in the district. The sectors which employ the highest numbers include readymade garments and embroidery, engineering units and leather based, and agro based food processing units. In terms of investments, the highest investments have been in the printing and allied units, rubber and plastics units and mineral based units.

Figure 100: Employment in MSME, Kozhikode



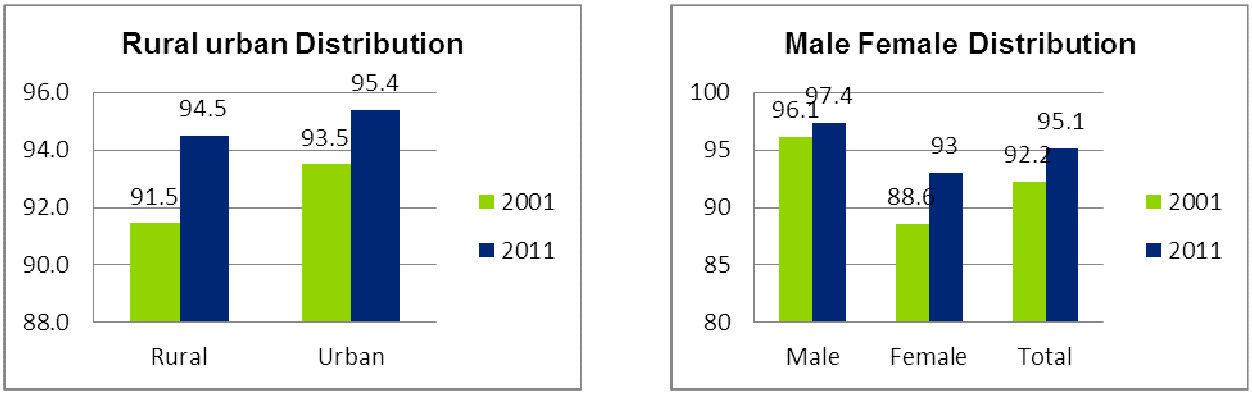
Source: Brief Industrial Profile of Kozhikode District 2011-12, MSME Development Institute

[194] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.8.4 Education Infrastructure

Kozhikode has a higher literacy rate of 95.1% in comparison to state average of 93.9%. In 2011, male and female literacy rates were 97.4% and 93% respectively with a total literacy rate of 95.1% as compared to 2001 literacy rate of 92.2%.

Figure 101: Literacy Rate by Residence and Gender, Kozhikode



Source: Census 2011

Kozhikode ranks third among the districts in terms of the total number of schools as well as the total enrolments The district has 1412 schools with enrolments of 158089, 138169 and 138963 in lower primary, upper primary and high school levels respectively The total number of schools in Kozhikode account for 9.2% of the total schools in the state while the enrolments in the school level (up to class X) account for 9.3% of the total state enrolments. The total teachers (16917) over the three sections account for 9.2% of the total teachers in the state.[195]

Table 107: School Education Profile - Kozhikode

School category	Kozhikode	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	803	10.2%
Upper Primary Schools (V-VII)	379	10.1%
High Schools (VIII-X)	230	6.3%
Total	**1,412**	**9.2%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	158,089	8.8%
Upper Primary Schools (V-VII)	138,169	9.1%
High Schools (VIII-X)	138963	10.3%
Total	**435,221**	**9.3%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	4,929	10.1%
Upper Primary Schools(V-VII)	6,740	11.9%
High Schools (VIII-X)	5,248	6.7%
Total	**16,917**	**9.2%**
Source: DISE and SEMIS data 2011-12		

[195] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Kozhikode has 28 vocational higher secondary schools (20-Govt., 8-Aided) [196]. It has a total of 44 ITIs and ITCs[197]. Some of the trades offered in the Government ITIs and ITCs are fitter, electrician, draughtsman, computer operator, wiremen and machinist whereas most of the private ITIs and ITCs offer courses on diverse trades like radiology technician to data entry operator. Government ITI in Kozhikode offers 16 courses under State Council for Vocational Training (SCVT) [198]. The ITIs of the district have a total intake of 5112 of which 1200 is in the government and 3912 in the ITCs. Further it is to be noted that while being 4 in number (9.1% of the total), the government ITIs account for 1200 seats (23.5% of total).

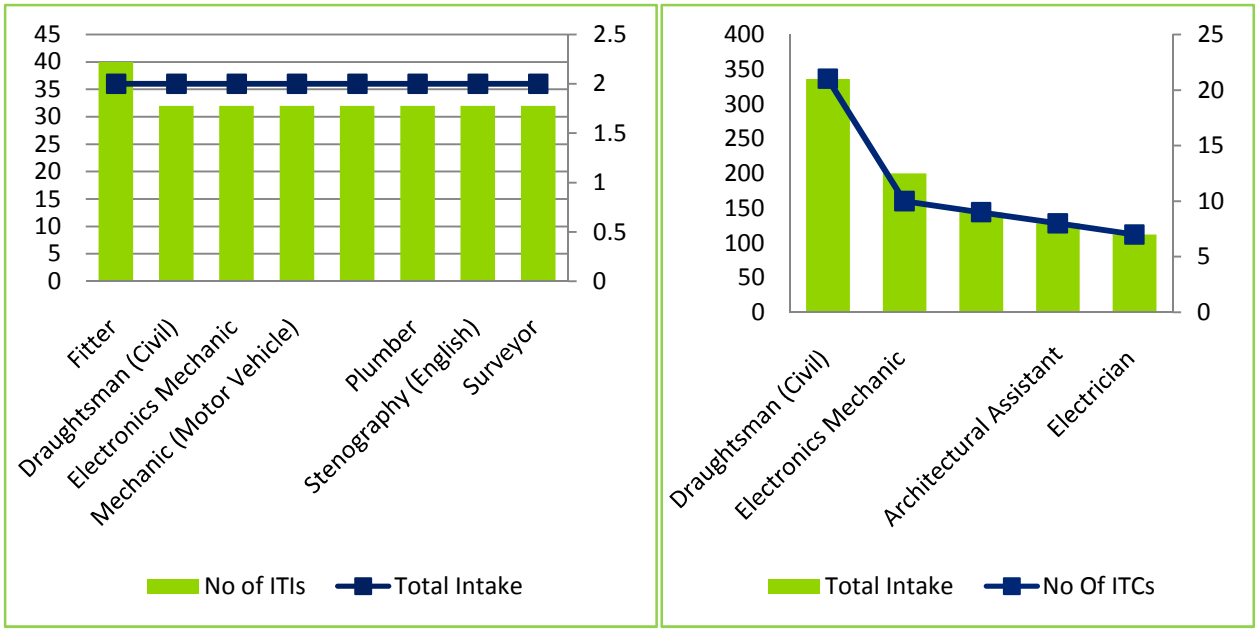
Table 108: Govt. ITIs in Kozhikode and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated	Total Capacity
Government ITI, Karuvissery	16	42	640
Government ITI for Women, Nadakavu	14	26	432
Government ITC, Quilandy	2	4	64
Government ITC (SCDD), Kuruvaugad	2	2	32

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Kozhikode is given in the figure below:

Figure 102:Trades with max seats in ITI and ITCs- Kozhikode



Source: DGET website; Deloitte Analysis

In addition to the ITI/ITCs, Kozhikode has 22 Vocational Training Providers of which 4 are government (18.2%) and the rest (81.8%) are private. All the government ITIs have Vocational Training facilities in addition to the ITI courses. The duration of courses differ depending on the type of trade being taught. It is 2 years for trades like Mechanic(motor Vehicle), Diesel Mechanic, Draughtsman(Civil),

[196] Kerala Economic Review, 2012
[197] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[198] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm

Mechanic(Refrigeration and A/C), Electronic Mechanic, Computer hardware, etc. and 1 year in case of trades like Health Sanitary inspector, Architectural Assistant, Interior Designing and Decoration, Welder, etc.

In addition to ITIs/ITCs, Kozhikode has 6 Polytechnic Colleges, one Government polytechnic and one Government Women's polytechnic offering Diploma programs in Electronics Engineering and Commercial Practice with approved intake of 60 and 50 students respectively. The Government polytechnic offers diploma programme in civil, mechanical, electrical & electronics, chemical & computer science engineering with approved intake ranging from 40 to 60 seats.[199]

Higher Education

As depicted in the table below, there are 6 engineering colleges, 3 medical colleges and 49 arts and science colleges. There are also 15 management and 1 law colleges.

The Centres of Excellence in Kozhikode include Cyberpark, IIM Kozhikode, National Institute of Technology (formerly known as REC), Indian Institute of Spices Research, Centre for Water Resources Development & Management (CWRDM), Western Ghats Field Research Station (Zoological Survey of India), Regional Filaria Training and Research Centre (under the National Institute of Communicable Diseases)[200].

Table 109: Higher Education Profile – Kozhikode

Educational Infrastructure	Number of Institutes		Source
	Kozhikode	Intake	
Engineering/ Technology	6	2085	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	49	10519	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Medicine (including Ayurveda, Homeopathy,	7	1023	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing and Paramedical	10	600	
BPharm	3	252	
Paramedical and Allied Sciences	4	225	
Law	1	195	*CEE website*
Management	15	1620	*AICTE website*
Total	95	16519	

The Scheduled Caste Development Department runs Pre-Examination Training Centres at Kozhikode along with 3 other districts to provide special coaching to SC/ST candidates for selection to various jobs in Government, banks and other public sector undertakings. The selection is made through an entrance test and interview. The Department also sponsored and funded an autonomous institution called CREST (Centre for Research and Education for Social Transformation) at Kozhikode[201].Composite Regional Centres (CRCs) are a part of overall strategy to reach out to the disabled people for awareness generation, training of rehabilitation professionals, service delivery and so on. At present there are 7 CRCs functioning in India. In Kerala, one such institution has been set up at Kozhikode on 17th February 2012[202].

[199] Department of Technical Education, GOK
[200] Emerging Kerala Website
[201] Human Development report 2012
[202] Kerala Economic Review 2012-13

4.8.5 Youth Aspirations

The key observations about aspirations of the youth of the district have been captured below along the broad dimensions of education and employment, are highlighted in the table below:

Table 110: Youth Aspirations- Kozhikode

Parameters	Responses
Preferred Jobs	• Most of the participants aspire to get Govt. jobs since they offer employment security unlike private sector jobs and moreover the work-pressure is comparatively lesser. • The job timings are fixed in the Government sector and one is not required to do overtime, which is common in private sector jobs. • As far as employment is concerned, the prospects are much better in Cochin and Trivandrum or outside the state even. • Most students are willing to relocate, although girls were of the opinion that parents would not encourage them to leave the district. • The average monthly salary expectation of the youth ranges between Rs. 10,000 - Rs. 25,000 (per month).
Issues with VET Infrastructure	• Improve Infrastructure at institutions: need more computers in lab • Teacher training is to be improved • Reputation of the institution, infrastructure and quality of training were the major factors influencing the selection of educational/training institution.
Suggestions by Youth	• Provide job-based trainings and internships • Introduce career guidance cell at high school level • Impart more practical knowledge; arrange for visits to companies • Regularly modify syllabus to keep it abreast with developments in industry. • Introduce skill development and job- oriented trainings (in line with needs of industry) at high school level. • Improve access to educational loans. • A web portal could be designed so that students could to apply to all higher education institutions that they choose simultaneously instead of submitting application forms physically to each institutions of their choice.

4.8.6 Skill Gap Assessment

Based on our analysis and primary interaction, the primary sector is expected to continue to decline and will experience people moving out of this sector in terms of employment. The expected growth sectors include banking/insurance/finance, real estate services, communication and other services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment would decline to 7.9%. The secondary and tertiary sector contributions are estimated to increase to 29.9% and 62.1% respectively, as indicated in the table below.

In 2021-22, the estimated bulk of employment is expected to arise from the building and construction (21.9%), trade, hotels and restaurants (19.5%) and other services[203] (15.8%).

Table 111: Projected Employment Contribution and Growth Rate - Kozhikode

#	Economic Sector [204]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-5.6%	7.3%
2	Mining and Quarrying	-1.2%	0.6%
3	Manufacturing	1.2%	7.7%
4	Electricity, Gas & Water supply	1.0%	0.3%
5	Building and Construction	2.5%	21.9%
6	Trade, Hotels and Restaurants	1.0%	19.5%
7	Railways	-3.2%	0.2%
8	Transport & Storage	0.2%	4.0%
9	Communication	6.7%	6.4%
10	Banking and Insurance	10.2%	5.6%
11	Real estate services and business services etc.	6.9%	7.0%
12	Public Administration	1.6%	3.7%
13	Other Services	4.4%	15.8%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology the estimated incremental manpower demand will be about 2.97 lakhs. While building and construction and real estate are expected to contribute a significant proportion of this demand (20.7%) based on the relatively higher anticipated growth rates, BFSI and Communication are also expected to contribute 14.7% and 12.9% to the incremental demand respectively.

Table 112: Incremental Demand – Key sectors (in '00s) - Kozhikode

	2012-17			2018-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	43	115	130	49	131	147
Banking/ Insurance/ Finance	83	75	8	135	122	14
Communication	32	65	65	45	89	89
Education/ Skill development services	87	20	27	108	25	33
Other Services	71	33	5	96	44	7
Select Informal Sector	11	38	60	13	47	74

[203] Other Services includes education, health care services, and select informal sectors such as drivers, security guards, maids etc

[204] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

Key Sectors	2012-17			2018-2022		
	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Organized retail	11	37	26	12	39	27
IT / ITES Services	36	17	3	50	23	4
Manufacturing	8	24	18	9	26	20
Real estate services	6	22	15	9	29	20
Total Incremental demand	430	496	382	573	634	465
Overall Incremental Demand	**2,978**					
Workers exiting sectors						
Agriculture and allied activities	-13	-43	-375	-9	-30	-260
Total workers exiting[205]	-13	-45	-378	-9	-31	-262

Some of the key trends observed on the demand side include

- *The incremental demand for semi-skilled manpower in the building and construction sector is expected to contribute to nearly 22% of the total incremental demand for semi-skilled manpower.*
- *Communication and BFSI sectors are expected to contribute to nearly 27% of the incremental demand collectively resulting in about 82,000 new jobs across the various skill levels.*
- *Other sectors of significance, based on the economic contribution and primary interactions, which may not project high incremental demand include manufacturing esp. footwear, food processing and general engineering. From a skilling perspective, there may exist opportunities of up skilling and reskilling of current workforce to adapt to the changing demand of the industry.*
- *In addition, a significant number of the workforce is expected to exit from the agriculture sector between 2012-22 and added to the supply of workers. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*

Manpower Supply

The population of Kozhikode in 2011 was about 30 lakhs which is expected to increase to about 32 lakhs in 2017 and about 33 lakhs in 2022. As per the methodology highlighted in section 2 the estimated incremental manpower supply from 2012 to 2022 will be about 2.77 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 113: Incremental Labour-force as per Skill Levels – Kozhikode

	2012-17	2018-22	Total
Skilled	299	299	598
Semi-Skilled	572	572	1144
Minimally- skilled	580	450	1030
Incremental manpower supply (2012-22)	2772		

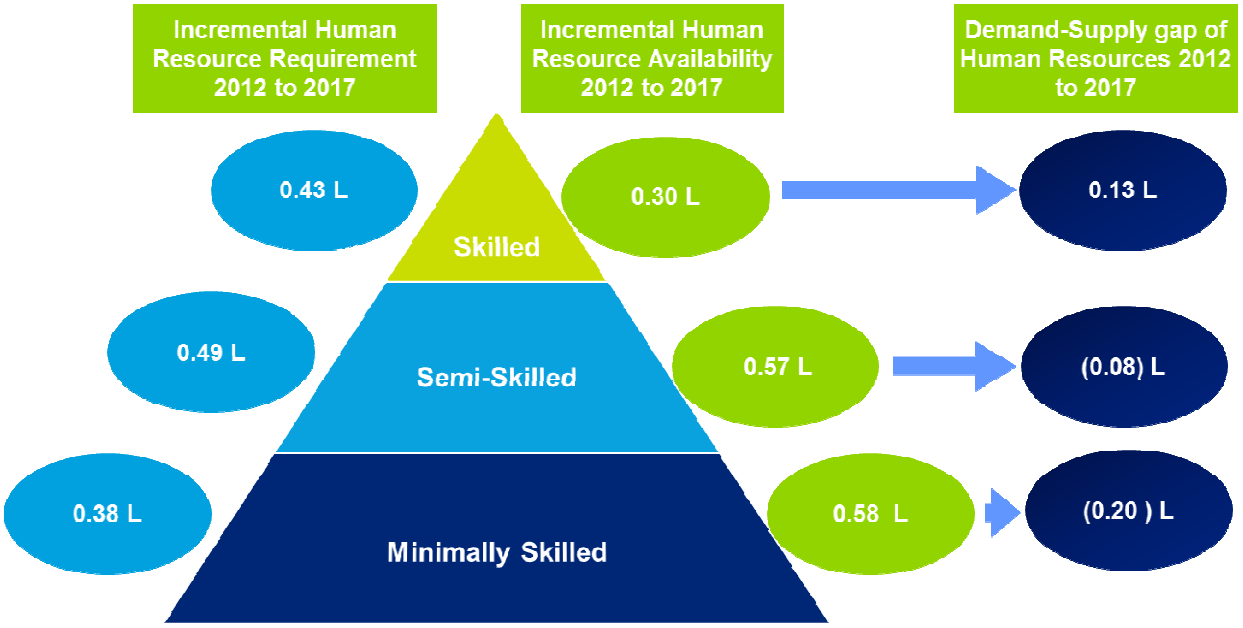
Some of the key trends observed on the supply side include

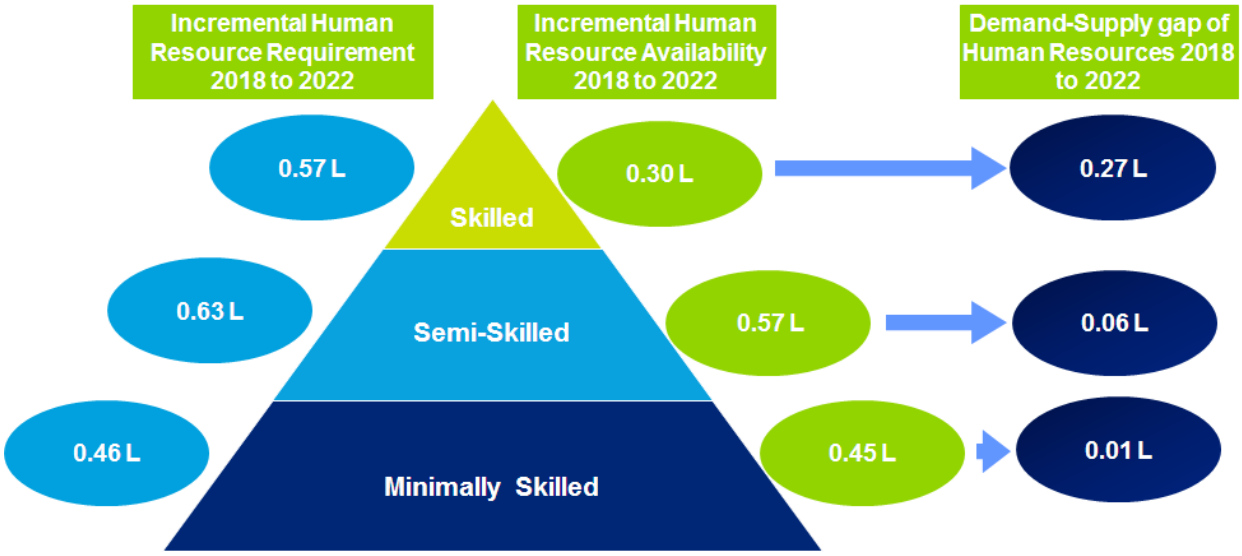
- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 40% in the 2012-17 period to 34% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors especially in the minimally skilled segment.*

[205] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Incremental Demand Supply Gap

Figure 103: Incremental HR Demand Supply Gap- Kozhikode





During the period 2012-22 the demand supply gap of the district (across all sectors mentioned above) is expected to be about 20,679 with excess demand in skilled segments across the entire time period.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *There is an excess in the demand of skilled manpower based on our estimations. This presents an opportunity to introduce skilling initiatives addressed towards the industry demands.*
  Since the supply for semiskilled resources is expected to be high, this target group can be provided skills to up skill them address the excess demand in the skilled segment.

- *The trend of excess supply in minimally skilled and semi-skilled segments in the first period is reversed in the second period, indicative of the impact of the anticipated education/skill development initiatives in the district.*

Indicative Qualitative Skill Gaps

The qualitative skill gaps that were highlighted through our primary interactions with industry and institutes at Kozhikode are given in the table below.

Table 114: Qualitative Skill Gaps – Footwear Manufacturing and Construction Sector

Sector	Level	Skill Gap
Footwear Manufacturing	Designer	• Need for knowledge of modern design
	Workers/Tailors	• Inadequate training in neat/accurate tailoring and stitching • Inability to interpret design into fabric without supervision
Building and Construction	Engineers	• Lack of exposure to latest technology • Inadequate understanding of practical application of theory • Lack of awareness on safety standards
	Supervisors	• Inadequate understanding of theoretical concepts • Inadequate communication skills
	Construction Labourers	• Limited Communication skills in local language • Limited ability to understand drawings • Lack of hygiene • Poor awareness of safety standards

4.8.7 Recommendations

Future Growth Opportunities in Kozhikode

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high incremental demand of workers, high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Kozhikode.

Table 115: Key Growth Sectors- Kozhikode

Sector/ Industry	Growth Opportunities
Building & Construction	• This sector contributes the highest share to the secondary sector in the district. Proposed investments in the district include housing construction and commercial complex projects. • In 2021-22, the estimated bulk of employment is expected to arise from the building and construction • The incremental demand for semi-skilled manpower in the building and construction sector is expected to contribute to 22% of the total incremental demand for semi-skilled manpower.
Communication	• This sector grew at a high rate of 29% (between 2004-05 and 2011-12) . • Communication sector is expected to contribute to nearly 13% of the incremental demand collectively resulting in nearly 40,000 new jobs across the various skill levels between 2012-2022.
Banking, Financial Services and Insurance (BFSI)	• The sector grew at 15% between 2004-05 and 2011-12. • BFSI sector is expected to contribute to nearly 15% of the incremental demand collectively, especially in the skilled segment, between 2012-2022.

Manufacturing – Footwear and Sports goods, Food Processing, General Engineering	• Primary interactions with industry, industry associations indicated that Kozhikode is a footwear manufacturing hub in Kerala and will continue to be a growth centre for this sector and North Kerala Footwear Consortium cluster has been identified in the district. Also, a Footwear Design and Development Institute planned for training needs. • The State government aims to make Kerala a favoured destination for agro processing, in line with which a food processing park and Coconut based Industrial Park is being set up in Kozhikode. Kozhikode district stands 1st in the cultivation of coconut and represents 16% of the total area. The proposed project for setting up a Marine Park for marine processing units in the district also indicates the future growth potential of this sector. • General engineering units employ a large share of workers in the MSME units in the district and the district has a dedicated Fabrication and General Engineering Cluster, which is expected to continue to generate growth potential for the district • These sectors may not project high incremental demand but may present opportunities of up-skilling and reskilling of current workforce to adapt to the changing demand of the industry.

Considering economic and skill landscape of Kozhikode, the table below provides a list of suggested recommendations for various stakeholders. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government representatives in the district, students, training institutes and government officials at the state and district level.

Table 116: Initial recommendations for Stakeholders - Kozhikode

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the previous section, viz. • Building & Construction • Communication • BFSI • Manufacturing – Footwear, Food Processing, General Engineering • Retail • Education/Skill Development
Private training providers	• Industry apprenticeships can be incorporated as a course component across all practical trades • Soft Skills and Communication training with focus on English language should also be delivered as part of the training curriculum • Career guidance support through industry interactions and counselling should also be provided. • Recruit teachers who have significant and relevant industry experience • Inculcate work ethic and motivate students to take pride in trade-related employment
Government	• Primary interactions also suggested that the number training institutes may be increased. • Footwear industry representatives recommended that the Government could speed up the establishment of the Footwear Design and Development Institute at Kinaloor.
Industry	• Provide increased opportunities industry apprenticeships to trainees/students enrolled in skill development institutes in the district • Industry leaders/business professionals can offer grooming lessons on soft skills and communication methods to students

4.9 Malappuram

Located in the north central portion of Kerala, the District lies between 11° - 1’ and 48” - North latitudes and between 76 º-3’ and 0”- East longitudes. On the North, it is bound by Kozhikode and Wayanad Districts of Kerala, on the East by Nilgiri Hills of Tamil Nadu State while on the West by Arabian Sea and on the south it is the Palakkad and Thrissur Districts. The district is spread over an area of 3550 Sq. kms, which accounts for 9.1% of the total area of the state. The district is divided into 6 taluks, 102 Gram Panchayats and 135 villages. The Chaliyar, the Kadalundi and the Bharathappuzha are the three great rivers flowing through Malappuram.

.

4.9.1 Demography

Malappuram has a population of 41.1 Lakhs according to the 2011 Census of which about 44.2% reside in urban areas.[206] The growth rate of population in the district is 13.4% which is almost three times the state growth rate of 4.8%. The district has a sex ratio (1098), almost equal to the state (1084), as indicated in the table below.

Table 117: Demographic Indicators – Malappuram

Demography	Malappuram	Kerala
Population (2011)	4112920	3,34,06,061
Decadal Population Growth Rate (2001-11)	13.45%	+4.8
Population density per sq. km (2011)	1157	859
Sex Ratio (2011)	1098	1084
Percentage of Urban Population (2011)	44.18%	47.7%
Percentage of SC population(2011)	7.50%	9.1%
Percentage of ST population(2011)[207]	0.56%	1.5%

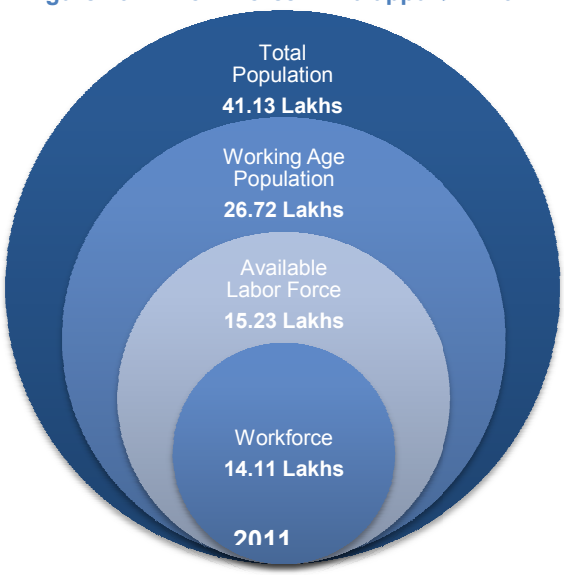
Source: Census 2011

The district ranks fifth in the state in terms of the population density. It is the most populated district in the state.[208]

The adjoining figure depicts the estimated workforce in Malappuram in the context of the population of the district. Out of the total population of 41.1 Lakhs the working age population (between 15-59 age group) constitutes to 26.7 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 14.1 lakhs or nearly 52.8% of the working age population.

Figure 104: Work Force in Malappuram- 2011



Source: Census 2011 and Deloitte Analysis

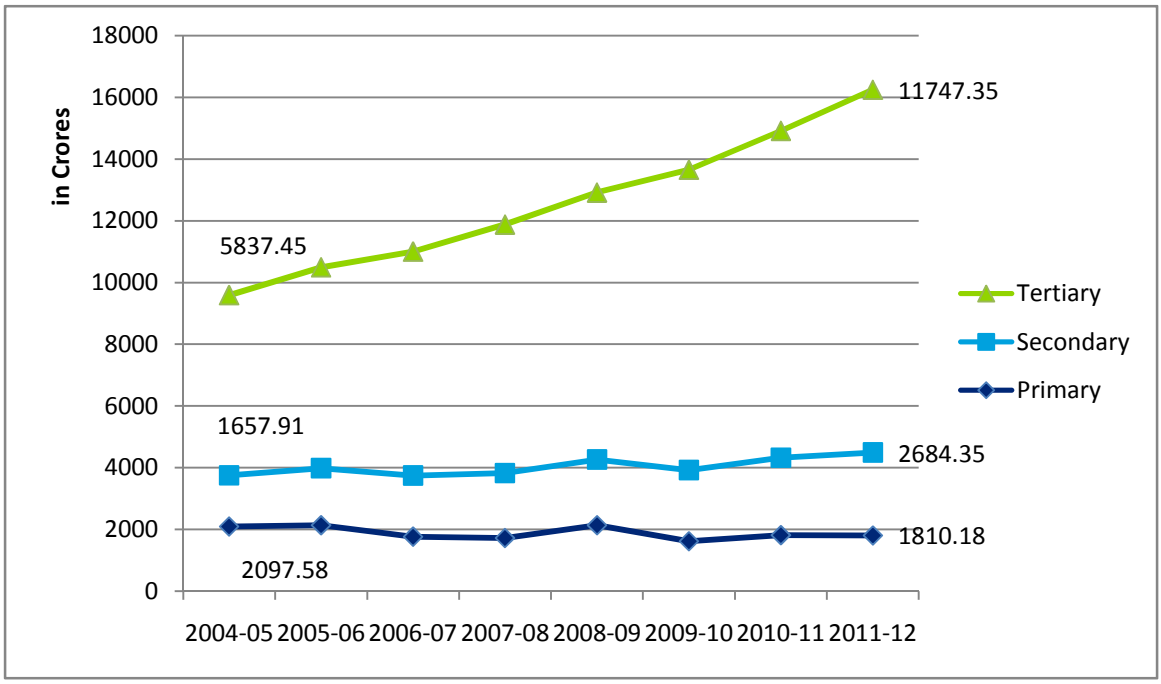
[206] Census of India, 2011
[207] Census 2011
[208] Kerala Economic Review 2012-13

4.9.2 Economic Profile

The Gross District Domestic Product (GDDP) of Malappuram has grown at a growth rate (CAGR) of 7.8% between 2004-05 (Rs. 9593 Cr.) and 2011-12 (Rs. 16242 Cr.). In 2011-12, tertiary sector contributed about 72.3% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the secondary sector at 16.5% and the primary sector at 11.1%.

As indicated in the graph below, the contribution of primary sector has shown a decline from 2097.6 Cr. (2004-05) to 1810.2 Cr. (2011-12). The secondary sector and tertiary sector also registered positive growth in its share to GDDP from 1657.9 Cr. to 2684.4 Cr. and from 5837.4 Cr. to 11747.4 Cr. respectively, over this period.

Figure 105: Sector Level Contribution to GDDP, Malappuram

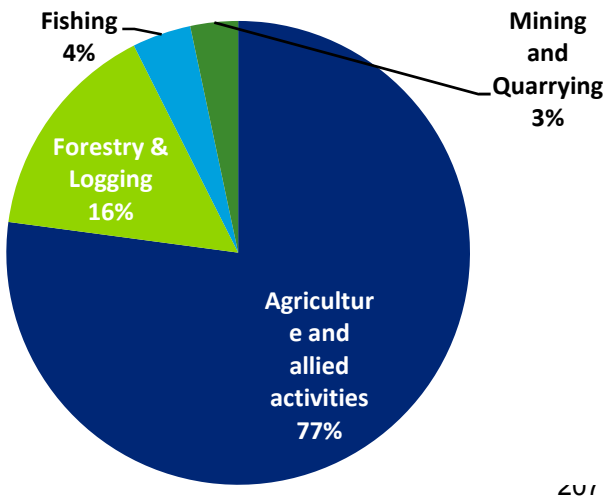


Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 11% to the GDDP in 2011-12. The primary sector contribution to the GDDP has seen a decline of 10.7% between 2004-05 and 2011-12. The CAGR for primary sector is -2.1% with agriculture registering a growth of -3.2% , while mining and quarrying showing a growth of 7.4%, and forestry showed a growth of 3.0%.

In the district, net sown area is 50.0% of total geographic area of 355446 hectares, which is

Figure 106: Primary Sector Contribution to GDDP, 2011-12



lower than that for Kerala (52.5%). The total irrigated area is 32435 Ha. The major crops cultivated in the district include coconut, sesamum, arecanut, vegetables, fruits, jack, banana, betel leaves etc. In terms of area under cultivation, Malappuram occupies the first position for sesamum, arecanut and betel leaves, second in the cultivation of coconut and fruits and third in the production of jack, banana.[209]

Key characteristics[210] of the primary sector in Malappuram are presented below:

- Agriculture & Allied activities constitute about 77% of the contribution of primary sector to the GDDP.
- It has the fourth highest contribution to primary output in the state.
- The district is rich in crops like coconut, sesamum, arecanut, vegetables, fruits, jack, banana, betel leaves etc.
- Malappuram district stands first in the cultivation of sesamum and arecanut which accounts for 51% and 19% of the total in the state.

Secondary Sector

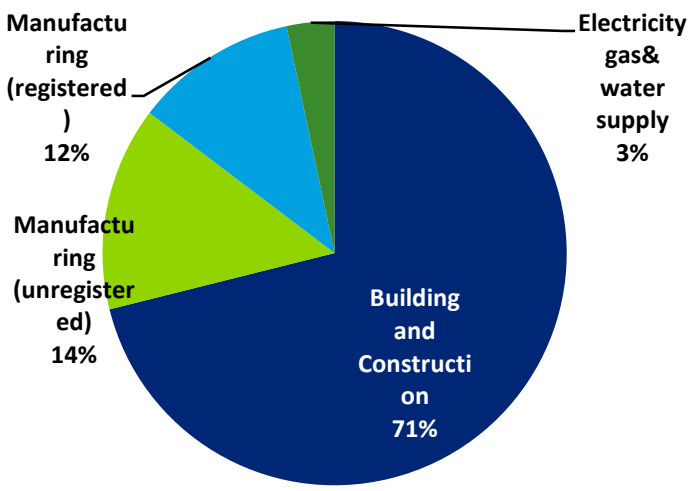
The contribution of secondary sector to district GDP in 2011-12 was approximately 16.5%. The sector has registered a growth of 7.1% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a growth rate of 6.18%.

According to the MSME District Profile for Malappuram, there are a total of 11728 industrial units.[211]

The key identified clusters[212] in the manufacturing sector include **Malappuram Metals & Engineering Consortium and the Malappuram Wood Cluster.**

Key characteristics[213] of the secondary sector in Malappuram are presented below:

Figure 107: Secondary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

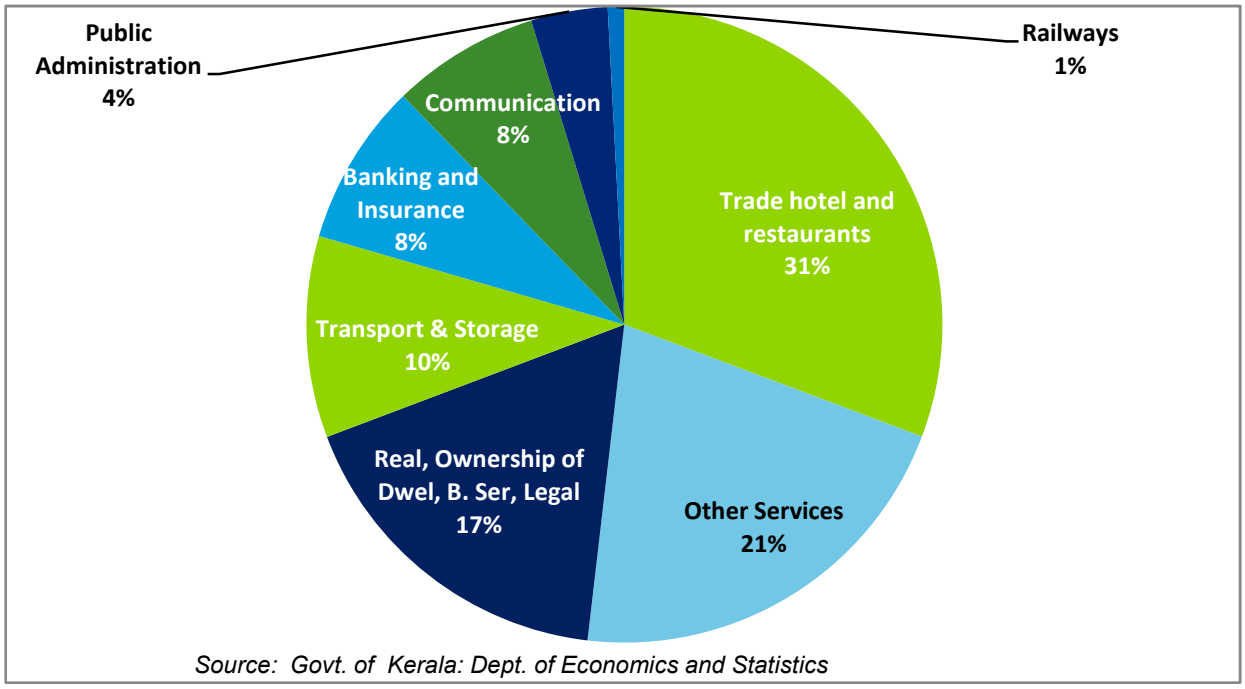
- Building and Construction (71%) contributes the highest followed by Manufacturing (26%).
- There is an industrial growth centre of KSIDC in Malappuram for the purpose of growth and development of industries.
- Ernakulam and Malappuram have the highest number of units of food processing industries.
- Keltron Electro Ceramics Ltd, Kuttipuram, Keltron Tool Room, Kuttipuram , KSRTC Body workshop, Eddappal , Malappuram Cooperative Spinning Mill, Paranakkad are some of the important medium and large scale industries in the district.
- One of the five key integrated power loom co-operative societies is located in Malappuram.

[209] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[210] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[211] District wise MSME Report
[212] Brief Industrial Profile of Malappuram District 2011-12, MSME Development Institute
[213] Emerging Kerala website, District MSME Report and Kerala Economic Review

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 60.8% to 72.3% to GDDP between 2004-05 and 2011-12. The sector grew by 10.5% during the same period, in real terms. In terms of growth rate, communication was the fastest growing sector (CAGR=29.1%) followed by Banking and Finance CAGR=14.5%) .Key contributors in the sector include trade, hotels and restaurants, real estate services and other services.

Figure 108: Tertiary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics214 of the tertiary sector in Malappuram are presented below:

- The tertiary sector (services) contributes a significant share of 72.3% to the district's economy
- The district is the 5th highest contributor of tertiary sector in the state (8%)
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Other Services and Real estate sub-sectors.
- It houses the KINFRA Neo Space which focuses on Electronics/ software industry/ IT enabled services /biotechnology.

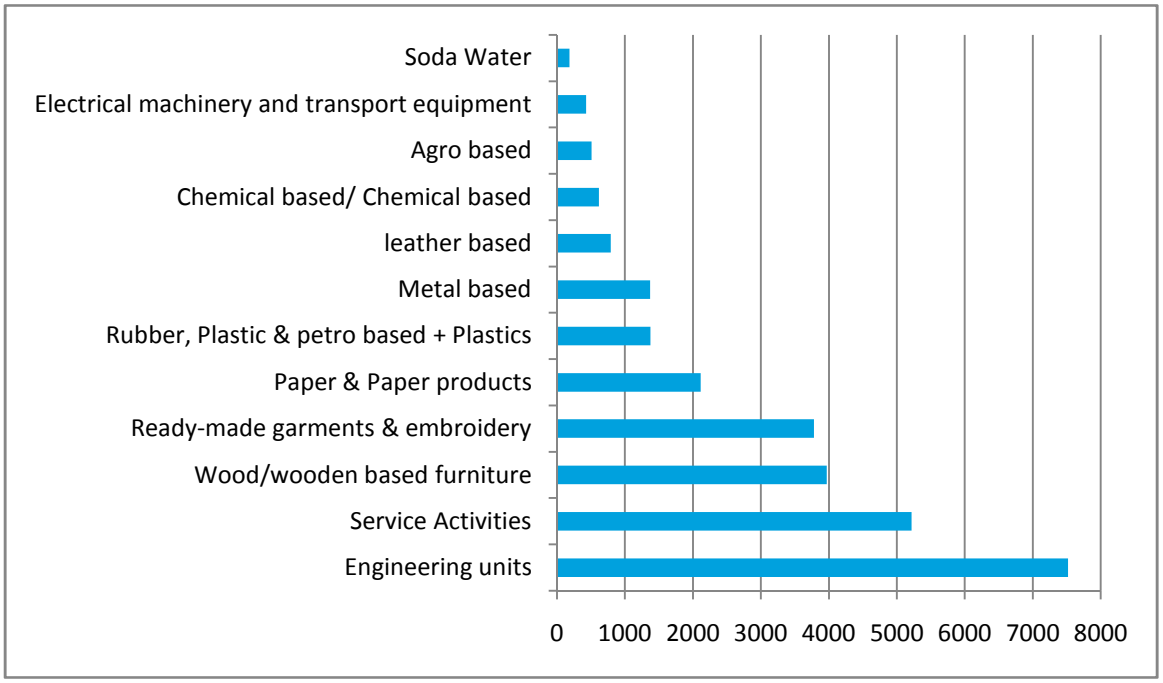
214 Emerging Kerala Website

4.9.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (50.7%), and followed by the primary (26.2%) and secondary sector (23.1%)[215]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (33%) and other services (32.6%) sectors. Within the secondary sector, the largest employer is the building and construction sector (65.6%) and manufacturing (33.6%).

The figure below indicates the employment in MSMEs in the district.

Figure 109: Employment in MSMEs - Malappuram



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, engineering units employ the largest share of workers (7518), followed by service activities (5215) and wood/ wood based furniture (3971).

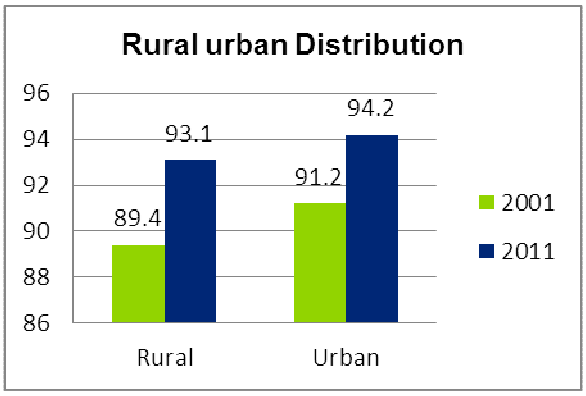
[215] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.9.4 Education Infrastructure

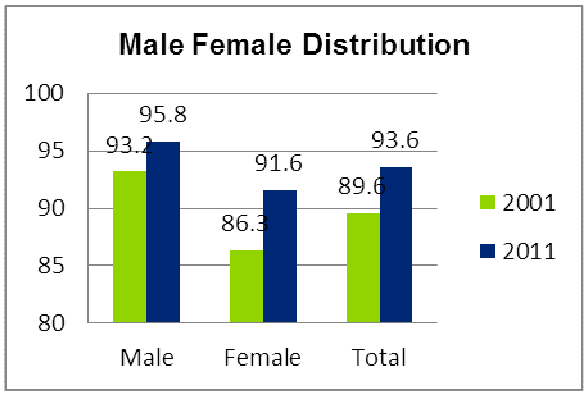
Malappuram has a lower literacy rate of 93.6% in comparison to the state average of 93.9%. In 2011, male and female literacy rates were 95.8% and 91.6% respectively with a total literacy rate of 93.6% as compared to 2001 literacy rate of 89.6%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 93.1% and 94.2% for rural and urban respectively in the year 2011.

Figure 110: Literacy Rate by Residence and Gender - Malappuram

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Malappuram ranks first in the state in terms of the number of schools, total enrolments as well as the total enrolments in the state. The district has 1596 schools with enrolments of 273318, 229594 and 173694 in lower primary, upper primary and high school levels respectively. The total number of schools in Malappuram account for 10.4% of the total schools in the state while the enrolments in the school level (up to class X) account for 14.5% of the total state enrolments. The total number of teachers (21821) over the three sections account for 11.9% of the total teachers in the state.[216]

Table 118: School Education Profile - Malappuram

School category	Malappuram	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	928	11.8%
Upper Primary Schools (V-VII)	386	10.3%
High Schools (VIII-X)	282	7.7%
Total	**1,596**	**10.4%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	273,318	15.2%
Upper Primary Schools (V-VII)	229,594	15.1%
High Schools (VIII-X)	173694	12.9%
Total	**676,606**	**14.5%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	6,923	14.2%
Upper Primary Schools(V-VII)	8,526	15.0%
High Schools (VIII-X)	6,372	8.2%
Total	**21,821**	**11.9%**

[216] DISE data 2011-12 and SEMIS data 2011-12

Source: DISE and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Malappuram has 27 vocational higher secondary schools (24-Govt., 3-Aided) [217]. It has a total of 65 ITIs and ITCs[218]. Some of the trades offered in the Government ITIs and ITCs are draughtsman (civil), electronics mechanic, fitter, mechanic (motor vehicle) and computer operator and programming assistant whereas most of the private ITIs and ITCs offer courses on diverse trades like draughtsman (civil), electrician, architectural assistant, health sanitary inspector and interior decoration & designing. The ITIs of the district have a total intake of 5924 of which 488 is in the government and 5436 in the ITCs

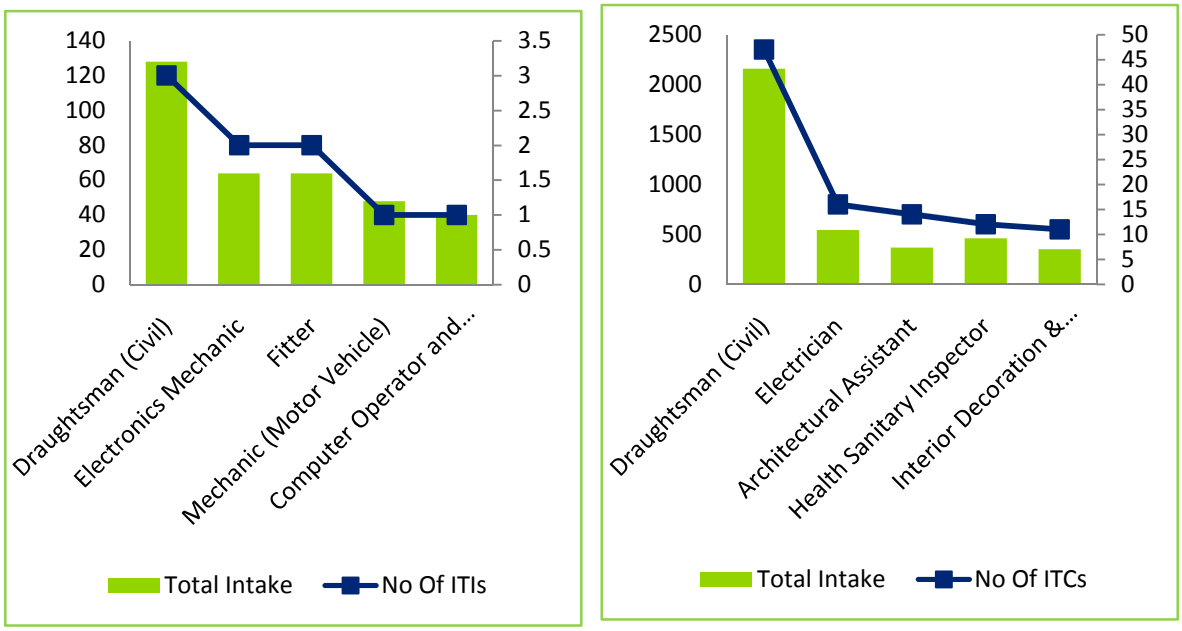
Table 119: Govt. ITIs in Malappuram and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Valvannur Bafukhy Yetheem Khana	12	24
Government ITI, Puzhakkattir	1	2
Government ITC, Nilambur	2	4
Government ITC (SCDD), Keraladheeswarapuram	1	1
Government ITC (SCDD), Pandikkad	1	2
Government ITC (SCDD), Pathaikkara	1	1

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Malappuram is given in the figure below:

Figure 111:Trades with max seats in ITI and ITCs- Malappuram



Source: DGET website; Deloitte Analysis

[217] Kerala Economic Review, 2012
[218] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm

In addition to ITIs/ITCs, Malappuram has 4 Polytechnic Colleges, which includes two Government polytechnic and one Government Women's polytechnic offering Diploma programs in Electronics, Electronics and Instrumentation, Electronics and Communication Engineering and Computer Application and Business Management with approved intake of 40 to 60 students respectively. The Government polytechnic offers diploma programme in civil, mechanical, electrical & electronics, electronics & computer engineering with approved intake ranging from 40 to 60 seats.[219]

Higher Education Infrastructure

As depicted in the table below, there are 8 engineering college, and 43 arts and science colleges in the district. The district has 5 medical and 6 Nursing colleges. It has 3 Management colleges as well. .

The Centres of Excellence in Malappuram include Central Coir Research Institute[220].

Table 120: Higher Education Profile – Malappuram

Educational Infrastructure	Number of Institutes		Source
	Malappuram	Intake	
Engineering/ Technology	8	**2,146**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	43	**9769**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	0		*CEE website*
Medicine (including Ayurveda, Homeopathy,	5	**390**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	6	**445**	
BPharm	3	**352**	
Paramedical and Applied Sciences	5	**180**	
Law			*CEE website*
Management	3	**360**	*AICTE website*
Total			

[219] Department of Technical Education, GOK
[220] Emerging Kerala Website

4.9.5 Youth Aspirations

The key observations about aspirations of the youth in Malappuram have been captured below along the broad dimensions of education and employment:

Table 121: Youth Aspirations- Malappuram

Parameters	Responses
Preferred Jobs	• 20% of the respondents prefer Govt. jobs as they offer security of employment and good benefits. • The average salary expectations of the youth range from Rs. 20,000 to Rs. 30,000 (per month) • Almost all respondents would prefer to stay in their home district. However, due to saturating market respondents are willing to relocate to another district, state or even to a new country for opportunities.
Issues with VET Infrastructure	• Lab facilities need improvement. • Classrooms need projectors/Students should be allowed to access the Wi-Fi.
Suggestions by Youth	• Soft skills training, including English language, should be given compulsorily to Malayalam medium students. • Currently dentists are only appointed in District hospitals and medical colleges. Respondents suggest that government appoint dentists in every PHC. • Conferences and lectures must be organized for the students to give exposure and update them on the latest practices

4.9.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a significant role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Within the secondary sector, the expected growth sectors include building and construction and manufacturing sectors. In the tertiary sector, the sectors expected to show growth include banking and insurance, real estate services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 14.4%. The secondary and tertiary sector contributions are estimated to increase to 24.3% and 61.3% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the other services (22.6%), building and construction (16.8%), and trade, hotels and restaurants (15.8 %).

Table 122: Projected Employment Contribution and Growth Rate - Malappuram

#	Economic Sector [221]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-4.2%	13.6%

[221] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

#	Economic Sector [221]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
2	Mining and Quarrying	-1.6%	0.7%
3	Manufacturing	1.3%	7.4%
4	Electricity, Gas & Water supply	0.6%	0.1%
5	Building and Construction	2.9%	16.8%
6	Trade, Hotels and Restaurants	0.9%	15.2%
7	Railways	-3.7%	0.2%
8	Transport & Storage	0.2%	4.2%
9	Communication	6.7%	4.3%
10	Banking and Insurance	10.2%	4.6%
11	Real estate services and business services etc.	6.9%	7.6%
12	Public Administration	1.6%	2.7%
13	Other Services	5.1%	22.6%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology the estimated incremental manpower demand in the period 2012-22 will be about 2.92 lakhs. Building and Construction sector is expected to contribute a significant proportion of this demand (17.1%) based on the relatively higher anticipated growth rates, along with Education and select informal sector segments.

Table 123: Incremental Demand – Key sectors (in '00s)- Malappuram

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	35	92	104	40	106	120
Education/ Skill development services	130	30	40	166	38	51
Select Informal Sector	16	56	89	21	72	113
Banking/ Insurance/ Finance	66	59	7	106	96	11
Other Services	81	37	6	111	51	9
Communication	21	42	42	29	58	58
IT / ITES Services	38	17	3	53	24	4
Healthcare services	16	27	11	21	34	14
Manufacturing	9	30	15	10	32	16
Real estate services	7	22	15	9	30	21
Total +ve demand	447	463	361	598	597	448
Overall Incremental Demand	**2915**					
Workers exiting sectors						
Agriculture and allied activities	-15	-51	-448	-11	-37	-325

	2012-17			2017-2022		
Total workers exiting[222]	-16	-54	-454	-12	-40	-330

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 89000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *In terms of anticipated incremental demand between 2011-12 and 2021-22, Building and Construction (17.1%) and Education/Skill Development (15.5%) are expected to be the top contributors.*

[222] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Manpower Supply

The population of Malappuram in 2011 was about 41.1 lakhs which is expected to increase to about 42.7 lakhs in 2017 and about 44.1 lakhs in 2022. As per the methodology the estimated incremental manpower supply from 2012 to 2022 will be about 4.65 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district. Please refer annexure 0 for skill definitions.

Table 124: Incremental Labour-force as per Skill Levels- Malappuram

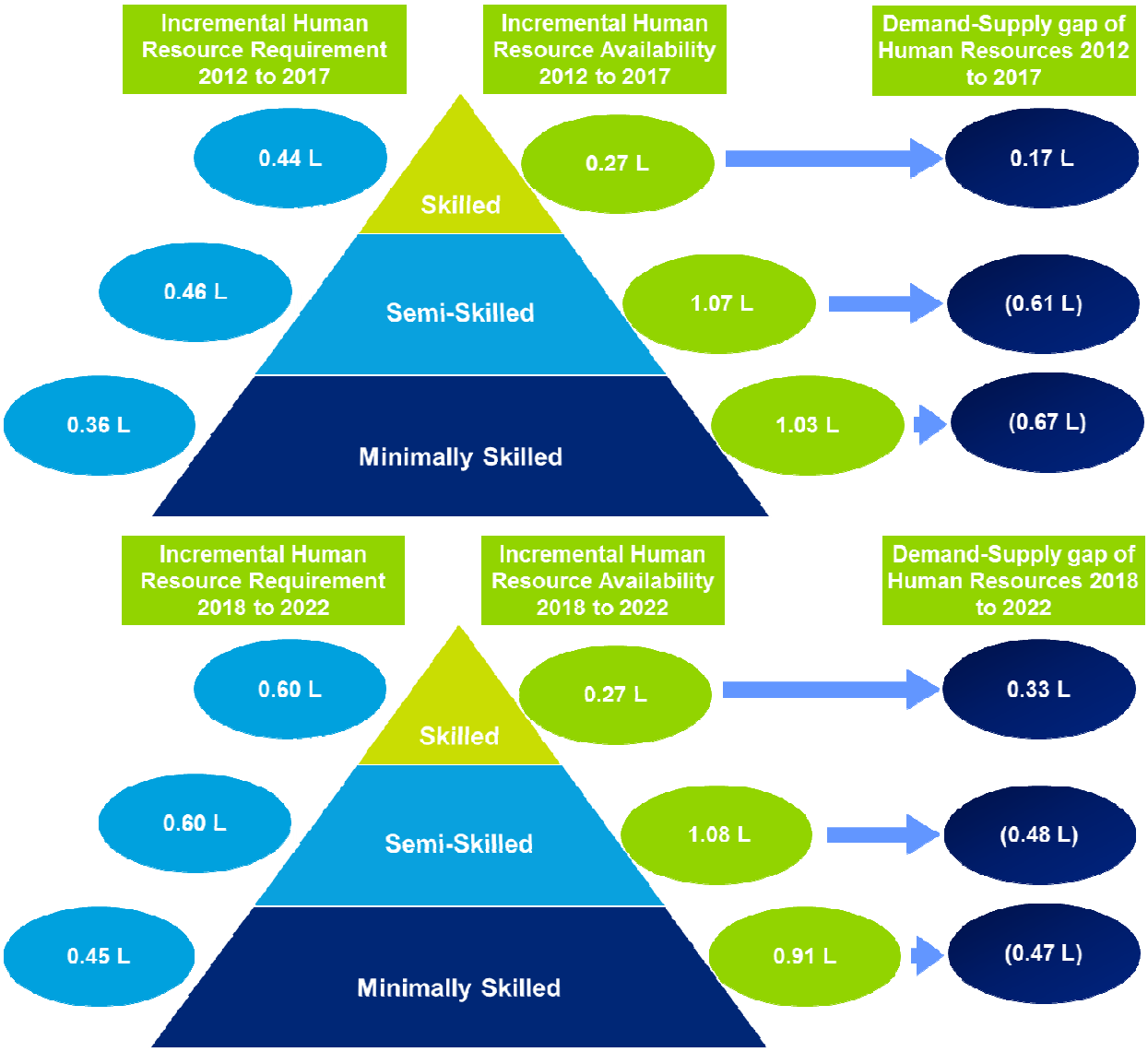
	2012-17	2017-22	Total
Skilled	274	272	546
Semi-Skilled	1071	1081	2151
Minimally-Skilled	1030	914	1944
Incremental manpower supply (2012-22)	**4641**		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 43% in the 2012-17 period to 40% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 112: Incremental HR Demand Supply Gap- Malappuram



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about -172597 with the excess demand across skilled segment while excess supply in semi-skilled and minimally skilled segments over the period.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources. There is also an increase in the gap of skilled labour over the years while there is excess supply in the other 2 segments which requires a shift in the distribution of supply which in turn presents a case for introducing training programs to augment the skills of this segment to cater to the demand in the key sectors of growth.*

- *As indicated in the figures above, the excess supply of semi-skilled and minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Malappuram are given in the table below.

Table 125: Qualitative Skill Gaps – Agro-Based Industries and Building and Construction

Sector	Level	Skill Gap
Agro-based Industries	Plant Associates and operators	• Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	• Limited awareness on quality, health and hygiene awareness • Limited basic computer skills including barcode reading
	Sales and marketing-	• Limited Communication skills, ability and willingness to understand the manufacturing process
Building & Construction	Engineers	• Knowledge of design and tools such as AutoCAD etc. • Knowledge of green/eco-building design • Project Management and People Management Skills
	Supervisors: plumbing, electrical, carpentry, masonry, panting, drilling	• Skills in civil- operations of ready mix m/c, earth movers, etc. • Basic repair and maintenance • Attitude towards safety and quality
	Workmen: plumbing, electrical works, carpentry, masonry, panting, drilling	• Basic skills related to relevant category • Attitude towards safety

4.9.7 Recommendations

Future Growth Opportunities in Malappuram

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Malappuram.

Table 126: Key Growth Sectors - Malappuram

Sector	Growth Opportunities
Building & Construction	• Building and Construction is a key growth sector and is expected to contribute 17.1% of the total anticipated incremental demand between 2011-12 and 2021-22.
Education & Skill Development	• Education and Skill development is expected to be the second highest contributor to anticipated incremental demand between 2011-12 and 2021-22, with the highest contribution share of the anticipated skilled demand.
Manufacturing – Food Processing, Textiles & Garments, Engineering Units	• The district houses a large number of food processing units • According to the MSME DI profile for the district, the highest employers among MSMEs are engineering units. • According to the Emerging Kerala website, apparel and garment manufacturing holds significant investment potential in the district.
Health care	• According to the Emerging Kerala website, there is significant investment potential in healthcare including Ayurveda.

Considering economic and skill landscape of Malappuram, the table below indicates the priority areas of focus for key stakeholders involved. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 127: Key Recommendations for stakeholders - Malappuram

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Building and Construction • Education and Skill Development • Manufacturing – Food Processing, Textiles & Garments, Engineering Units • Health Care
Private training providers	• There is demand for more courses in healthcare, Education, manufacturing – food processing, engineering, construction etc. • Career guidance and counselling services need to be improved
Government	• Infrastructure facilities in labs need to be improved in govt. training institutes • Soft skills training, including English language, should be given compulsorily to Malayalam medium students.
Industry	• More industry interactions could be initiated in the Building & Construction sector, Education & Skill Development etc. • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Construction, Health Care etc.

4.10 Palakkad

Located in the Central part of Kerala, Palakkad district is situated between 10° - 21' and 11° - 14' North latitudes and between 76 º-02' and 76º-54' East longitudes. The district is bounded in the north by Malappuram district, in the east by Coimbatore district of Tamilnadu , in the west by Thrissur & Malappuram district, and in the South by Thrissur district. The district is spread over an area of 4480 Sq. kms, which accounts for 11.5% of the total area of the state. It is divided into 5 taluks, 90 Gram Panchayats, and 163 villages.

4.10.1 Demography

Palakkad has a population of 28.1 Lakhs according to the 2011 Census of which about 24.1% reside in urban areas.[223] The growth rate of population in the district is 7.4% which is much higher in comparison to the state growth rate of 4.8%. The district has a sex ratio (1067), a little lower compared to the state (1084), as indicated in the table below.

Table 128: Demographic Indicators – Palakkad

Demography	Palakkad	Kerala
Population (2011)	28,09,934	3,34,06,061
Decadal Population Growth Rate (2001-11)	7.35%	4.8%
Population density per sq. km (2011)	627	859
Sex Ratio (2011)	1067	1084
Percentage of Urban Population (2011)	24.09%	47.7%
Percentage of SC population(2011)	14.37%	9.1%
Percentage of ST population(2011)[224]	1.74%	1.5%

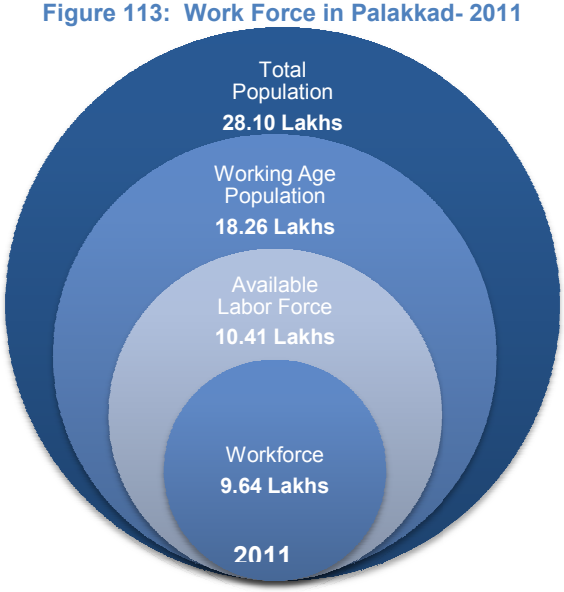
Source: Census 2011

The district ranks eleventh in the state in terms of the population density. Among Scheduled Castes, the highest proportion has been recorded in Palakkad (14.4%).[225]

The adjoining figure depicts the estimated workforce in Palakkad in the context of the population of the district. Out of the total population of 28.1 Lakhs the working age population (between 15-59 age group) constitutes to 18.3 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 9.6 lakhs or nearly 52.5% of the working age population.

Figure 113: Work Force in Palakkad- 2011



Source: Census 2011 and Deloitte Analysis

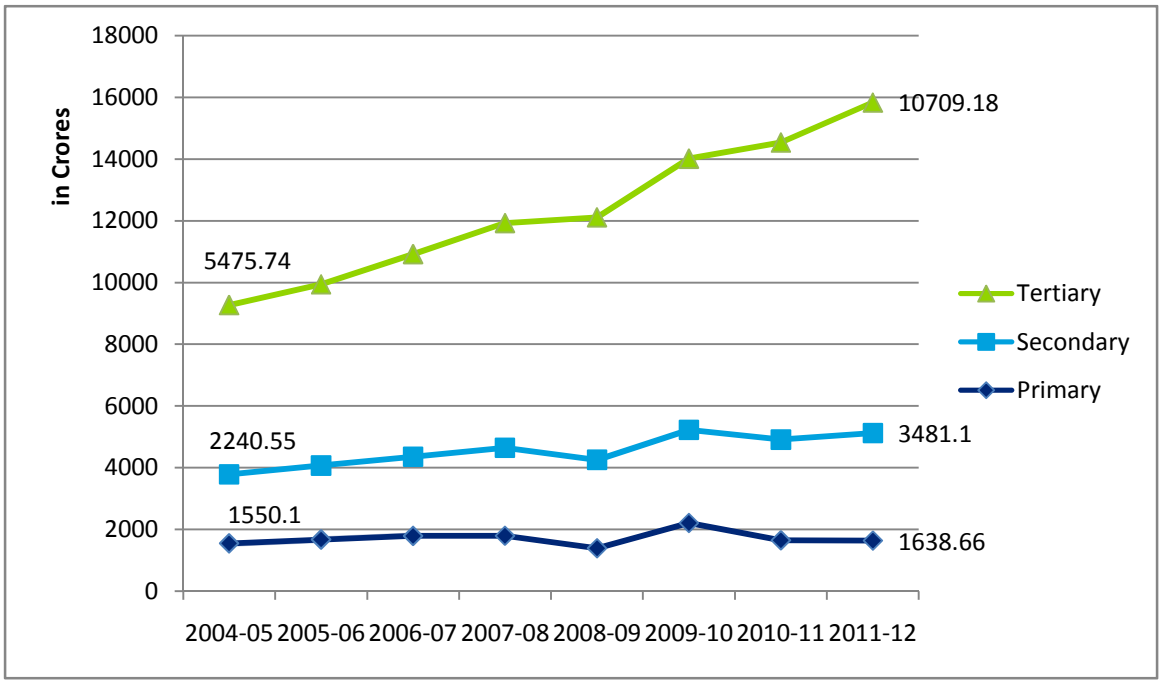
[223] Census of India, 2011
[224] Census 2011
[225] Kerala Economic Review 2012-13

4.10.2 Economic Profile

The Gross District Domestic Product (GDDP) of Palakkad has grown at a growth rate (CAGR) of 7.9% between 2004-05 (Rs. 9267 Cr.) and 2011-12 (Rs. 15829 Cr.). In 2011-12, tertiary sector contributed about 67.7% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the secondary sector at 22.0% and the primary sector at 10.4%.

As indicated in the graph below, the contribution of primary sector has shown a slight increase from 1550.1 Cr. (2004-05) to 1638.6 Cr. (2011-12). The secondary sector and tertiary sector also registered positive growth in its share to GDDP from 2240.6 Cr. to 3481.1 Cr. and from 4575.7 Cr. to 10709.2 Cr. respectively, over this period.

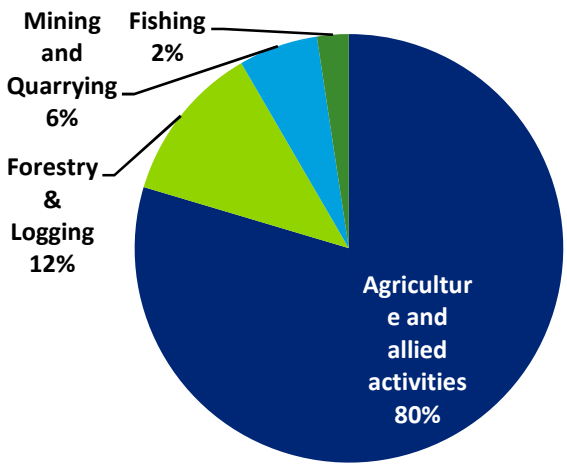
Figure 114: Sector Level Contribution to GDDP, Palakkad



Primary Sector

Figure 115: Primary Sector Contribution to GDDP, 2011-12

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 10.4% to the GDDP in 2011-12. The primary sector contribution to the GDDP has seen a decline of 6.4% between 2004-05 and 2011-12. The CAGR for primary sector is 0.80% with forestry and logging registering a growth of 1.5% and mining and quarrying showing a growth of 13.0%, while agriculture showed a negative growth of 0.03%.



In the district, net sown area is 44.2% of total

geographic area of 447584 hectares, which is lower than that for Kerala (52.5%). The total irrigated area is 90304 Ha. The major crops cultivated in the district include rice, groundnut, tamarind, turmeric, palmyrah, sugarcane, tubers, sweet potato, pulses, fresh fruits, mango, banana, plantain, cotton etc. In terms of area under cultivation, Palakkad occupies the first position for paddy, groundnut, tamarind, turmeric, palmyrah, sweet potato, pulses, mango, banana, plantain and 2nd position for sugarcane.[226]

It is important to note that forests cover approximately 30% of the total geographical area. The forests are an important source of hard wood (teak, sandalwood, etc.), softwood (eucalyptus, rubber), medicinal plants, etc.[227]

Key characteristics[228] of the primary sector in Palakkad are presented below:

- Agriculture & Allied activities constitute about 80% of the contribution of primary sector to the GDDP.
- It ranks sixth in the contribution to the state primary output (8.2%).
- It is key source of forest products along with Wayanad and Pathanamthitta.
- The district is rich in crops like rice, groundnut, tamarind, turmeric, palmyrah, sugarcane, tubers, sweet potato, pulses, fresh fruits, mango, banana, plantain, cotton etc.
- Palakkad district stands 1st in the cultivation of paddy (40%), tamarind (34%), palmyrah (53%).
- It ranks first in the production of pulses and fruits which account for 47% and 14% of state total respectively.

Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was approximately 22.0%. The sector has registered a growth of 6.5% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a growth rate of 6.18%.

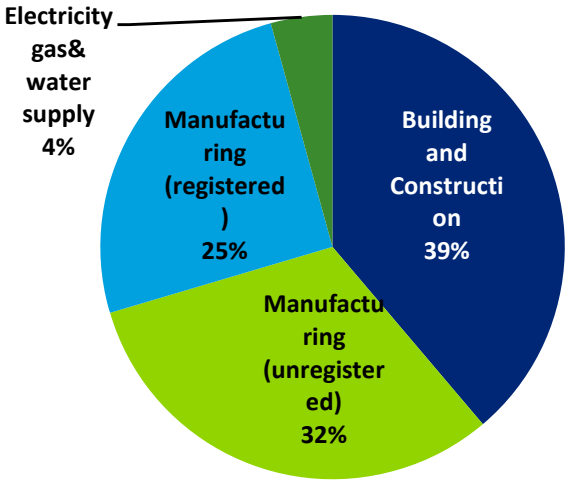
According to the MSME District Profile for Palakkad, there are a total of 21679 registered industrial units with 63 medium and large units in the district.[229]

The key identified clusters[230] include the

Agriculture Implements Cluster, Palakkad.

Key characteristics[231] of the secondary sector in Palakkad are presented below:

Figure 116: Secondary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

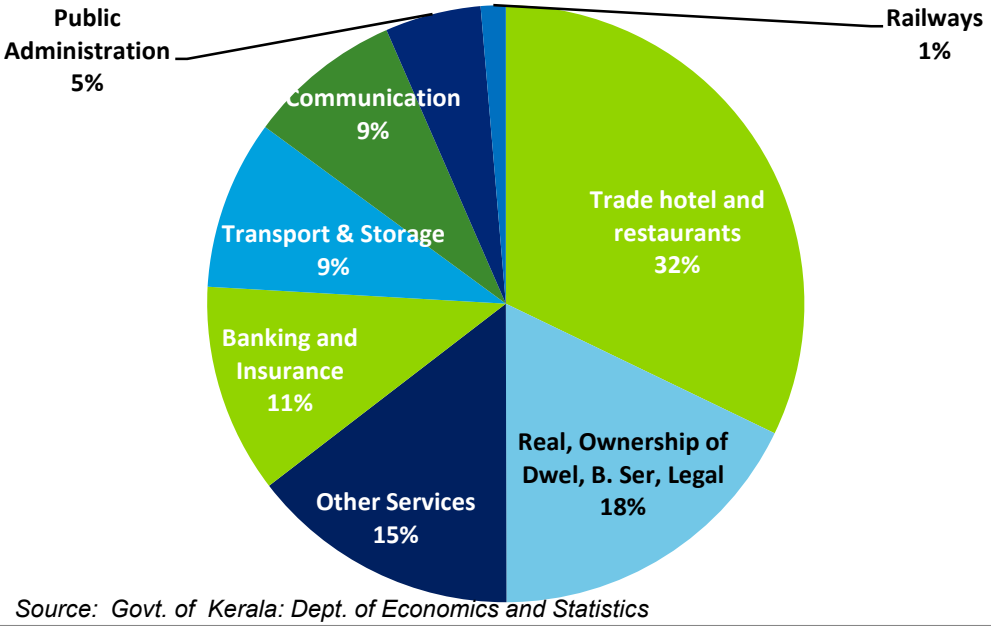
[226] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[227] Kerala economic review 2012-13
[228] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[229] District wise MSME Report
[230] Brief Industrial Profile of Palakkad District 2011-12, MSME Development Institute
[231] Emerging Kerala website, District MSME Report and Kerala Economic Review

- Manufacturing (57%) contributes the highest followed by Building and Construction (39%).
- Food Processing, Textiles/Garments, Chemicals and Pharmaceuticals, engineering units, sericulture and Building and Construction are key areas of the district.
- The district is developing a Light Engineering Industrial Park which focuses on the manufacture of Light Engineering Units
- Western India KINFRA Ltd. focuses on the manufacture of Rubber/plastic products, textile and garments, coir products, chemicals, engineering products, food/agro products/ beverages, pharmaceuticals/ herbal medicine, ceramic products, leather products
- Palakkad NIMZ (National Investment Manufacturing Zone) has been proposed in the district.

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 59% to 67.7% to GDDP between 2004-05 and 2011-12. The sector grew by 10.1% during the same period, in real terms. In terms of growth rate, communication was the fastest growing sector (CAGR=29.1%) followed by Banking and Finance CAGR=14.5%). Key contributors in the sector include trade, hotels and restaurants, real estate services and other services.

Figure 117: Tertiary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala: Dept. of Economics and Statistics

Key characteristics[232] of the tertiary sector in Palakkad are presented below:

- The tertiary sector (services) contributes a significant share of 67.7% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate, and Other Services sub-sectors.
- Parambikulam wildlife reserve is an important tourist attractions.

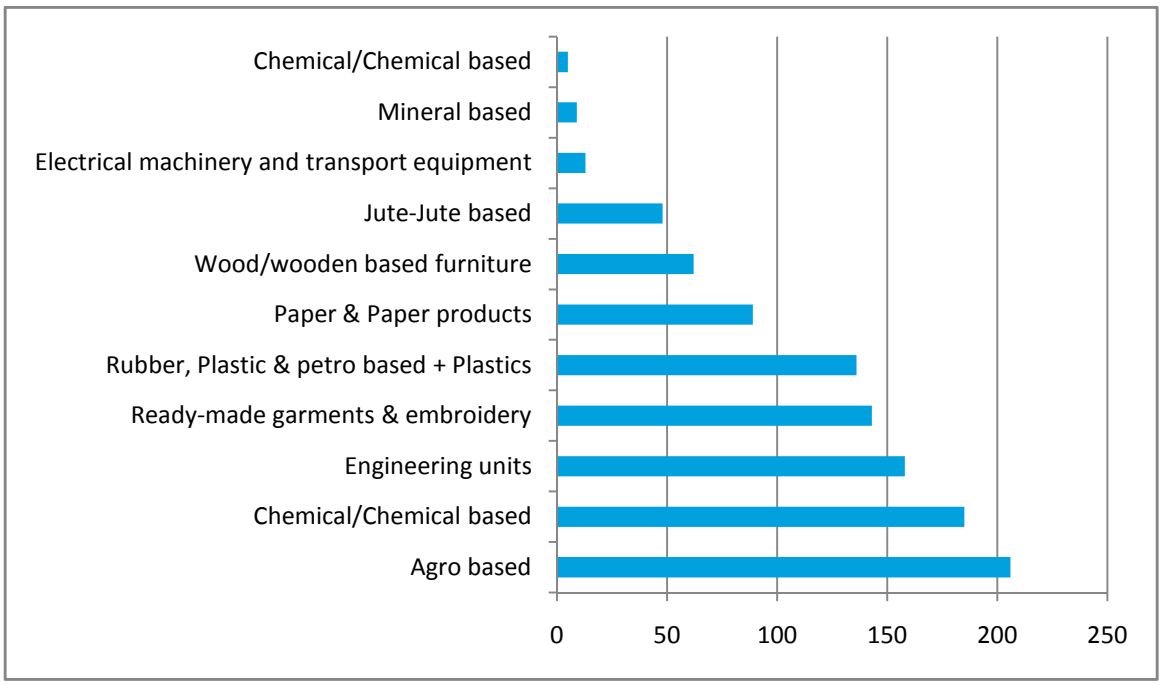
[232] Emerging Kerala Website

4.10.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (43.4%), and followed by the secondary sector (33.1%) and the primary sector (23.5%)[233]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (36.5%) and other services (23.5%) sectors. Within the secondary sector, the largest employer is the manufacturing (67%) and building and construction sector (32.0%)

The figure below indicates the employment in MSMEs in the district.

Figure 118: Employment in MSMEs - Palakkad



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, the largest employers are agro based industries units (206) and chemical based units (185).

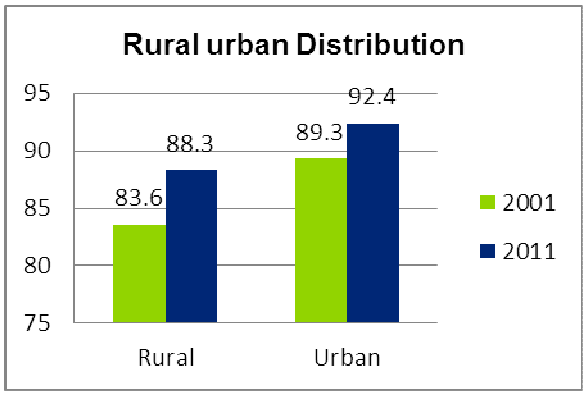
[233] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.10.4 Education Infrastructure

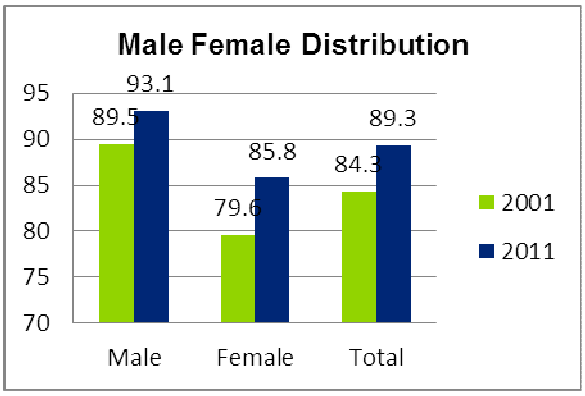
Palakkad has a lower literacy rate of 89.3% in comparison to the state average of 93.9%. In 2011, male and female literacy rates were 93.1% and 85.8% respectively with a total literacy rate of 89.3% as compared to 2001 literacy rate of 84.3%. In terms of the rural urban distribution, the literacy rates are comparable throughout the period with 88.3% and 92.4% for rural and urban respectively in the year 2011.

Figure 119: Literacy Rate by Residence and Gender - Palakkad

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Palakkad has 1140 schools with enrolments of 153036, 133040 and 114580 in lower primary, upper primary and high school levels respectively. The total number of schools in Palakkad account for 7.5% of the total schools in the state while the enrolments in the school level (up to class X) account for 8.6% of the total state enrolments. The total number of teachers (13510) over the three sections account for 7.4% of the total teachers in the state.[234]

Table 129: School Education Profile - Palakkad

School category	Palakkad	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	632	8.0%
Upper Primary Schools (V-VII)	283	7.5%
High Schools (VIII-X)	225	6.2%
Total	**1,140**	**7.5%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	153,036	8.5%
Upper Primary Schools (V-VII)	133,040	8.7%
High Schools (VIII-X)	114580	8.5%
Total	**400,656**	**8.6%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	3,813	7.8%
Upper Primary Schools(V-VII)	4,870	8.6%
High Schools (VIII-X)	4,827	6.2%
Total	**13,510**	**7.4%**
Source: DISE and SEMIS data 2011-12		

[234] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Palakkad has 25 vocational higher secondary schools (18-Govt., 7-Aided) [235]. It has a total of 43 ITIs and ITCs[236]. Some of the trades offered in the Government ITIs and ITCs are electrician, fitter, electronics mechanic, mechanic radio and television and turner whereas most of the private ITIs and ITCs offer courses on diverse trades like draughtsman (civil), electrician, mechanic (motor vehicle), electronics mechanic and health sanitary inspector . The ITIs of the district have a total intake of 3832 of which 1068 is in the government and 2764 in the ITCs. Further it is to be noted that while being 7 in number (16.3% of the total), the government ITIs account for 1068 seats (27.9% of total).

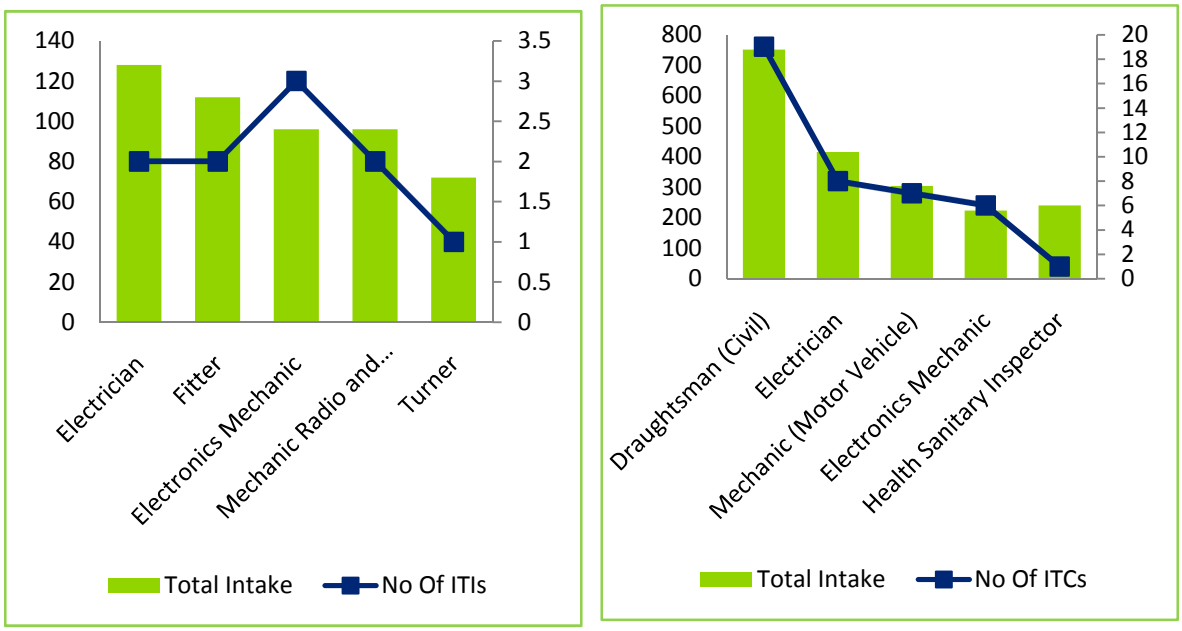
Table 130: Govt. ITIs in Palakkad and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Government ITI, Malampuzha	17	49
Government ITI, Attappady	2	4
Government ITI , Vaniyamkulam	1	2
Government ITI, Kuzhalmannam	3	5
Government ITI for Women, Malampuzha	4	7
Government ITC (SCDD), Palappuram	1	1
Government ITC (SCDD), Chittroor	1	2

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Palakkad is given in the figure below:

Figure 120:Trades with max seats in ITI and ITCs- Palakkad



Source: DGET website; Deloitte Analysis

[235] Kerala Economic Review, 2012
[236] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm

In addition to ITIs/ITCs, Palakkad has 2 Government polytechnic Colleges offering diploma programme in civil, mechanical, electronics, printing technology & computer science engineering with approved intake ranging from 50 to 70 seats.[237]

Higher Education Infrastructure

As depicted in the table below, there is 11 engineering college, and 22 arts and science colleges in the district. The district has 6 medical and 6 Nursing colleges.

The Centres of Excellence in Palakkad include Fluid Control Research Institute (FCRI), Malabar Cements Ltd, BEML Ltd (Palakkad Unit)[238].

Table 131: Higher Education Profile – Palakkad

Educational Infrastructure	Number of Institutes		Source
	Palakkad	**Intake**	
Engineering/ Technology	11	**3,228**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	22	**5209**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	0	**0**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	6	**372**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	6	**270**	
BPharm	3	**250**	
Paramedical and Applied Sciences	1	**40**	
Management	5	**540**	*AICTE website*
Total	49	**9909**	

[237] Department of Technical Education, GOK
[238] Emerging Kerala Website

4.10.5 Youth Aspirations

The key observations about aspirations of the youth in Palakkad have been captured below along the broad dimensions of education and employment:

Table 132: Youth Aspirations- Palakkad

Parameters	Responses
Preferred Jobs	• Most of the respondents prefer Govt. jobs even if the salary is low. However, they are open to private sector jobs. • The average salary expectations of the youth range from Rs. 10,000 to Rs. 20,000 (per month) • There are opportunities available in banks and in the government. • Few students are interested in setting up their own ventures. E.g.: printing press, internet café with computer training centre. • Most respondents would prefer to be employed in the district. Only 5% are willing to relocate to metros like Bangalore, Hyderabad and Tamil Nadu.
Preferred Course	• Computer Operator and Programming Assistant (COPA) is in demand.
Issues with VET Infrastructure	• Quality of teaching needs improvement and syllabus needs to be revisited keeping in mind industry needs and requirements. • More frequent industry visits and practical training. Institutes must also proactively work towards building industry linkages. • Lab facilities and equipment need improvement
Suggestions by Youth	• Respondents suggested faculty exchange programmes to enhance quality of coaching. • University should introduce semester system for some streams. • Industry should increase the stipend provided to students during industrial training.

4.10.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a significant role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Within the secondary sector, the expected growth sectors include agro food processing sector, building and construction and engineering units. In the tertiary sector, the sectors expected to show growth include BFSI, Communication etc.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 15.4%. The secondary sector contribution is also expected to decline to 32.8%. Tertiary sector contributions are estimated to increase to 51.8%. In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the manufacturing (21.3%), trade, hotels and restaurants (14.6 %) etc.

Table 133: Projected Employment Contribution and Growth Rate - Palakkad

#	Economic Sector [239]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-2.3%	14.5%
2	Mining and Quarrying	-3.4%	0.9%
3	Manufacturing	1.3%	21.3%
4	Electricity, Gas & Water supply	-2.3%	0.2%
5	Building and Construction	2.5%	11.4%
6	Trade, Hotels and Restaurants	1.0%	14.6%
7	Railways	-3.2%	0.3%
8	Transport & Storage	0.2%	3.3%
9	Communication	6.7%	4.4%
10	Banking and Insurance	10.2%	5.7%
11	Real estate services and business services etc.	6.9%	7.1%
12	Public Administration	1.6%	3.2%
13	Other Services	1.3%	13.2%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology the estimated incremental manpower demand in the period 2012-22 will be about 2.54 lakhs. Banking and finance sector is expected to contribute a significant proportion of this demand (17.1%) based on the relatively higher anticipated growth rates, along with Manufacturing and Building and Construction segments.

Table 134: Incremental Demand – Key sectors (in '00s) - Palakkad

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Banking/ Insurance/ Finance	82	74	8	133	120	13
Manufacturing	27	73	54	29	78	58
Building & construction	22	57	65	24	65	73

[239] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

	2012-17			2017-2022		
Communication	21	43	43	29	59	59
Education/ Skill development services	70	16	21	87	20	27
Other Services	66	30	5	90	42	7
Select Informal Sector	9	30	48	11	38	59
IT / ITES Services	35	16	3	49	23	4
Organized retail	8	27	19	8	28	19
Real estate services	6	20	14	8	28	20
Total +ve demand	378	426	298	509	556	367
Overall Incremental Demand	**2535**					
Workers exiting sectors						
Mining and Quarrying	-3	-8	-15	-2	-6	-13
Agriculture and allied activities	-8	-27	-237	-6	-20	-174
Total workers exiting[240]	-15	-48	-264	-9	-28	-189

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 47000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *In terms of projected incremental demand, BFSI (17%), Manufacturing (12.7%) and Construction (12.2%) sectors emerge as key contributors between 2011-12 to 2021-22*

[240] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Manpower Supply

The population of Palakkad in 2011 was about 28.1 lakhs which is expected to increase to about 29.1 lakhs in 2017 and about 30.1 lakhs in 2022. As per the methodology the estimated incremental manpower supply from 2012 to 2022 will be about 2.33 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 135: Incremental Labour-force as per Skill Levels (in '00s) - Palakkad

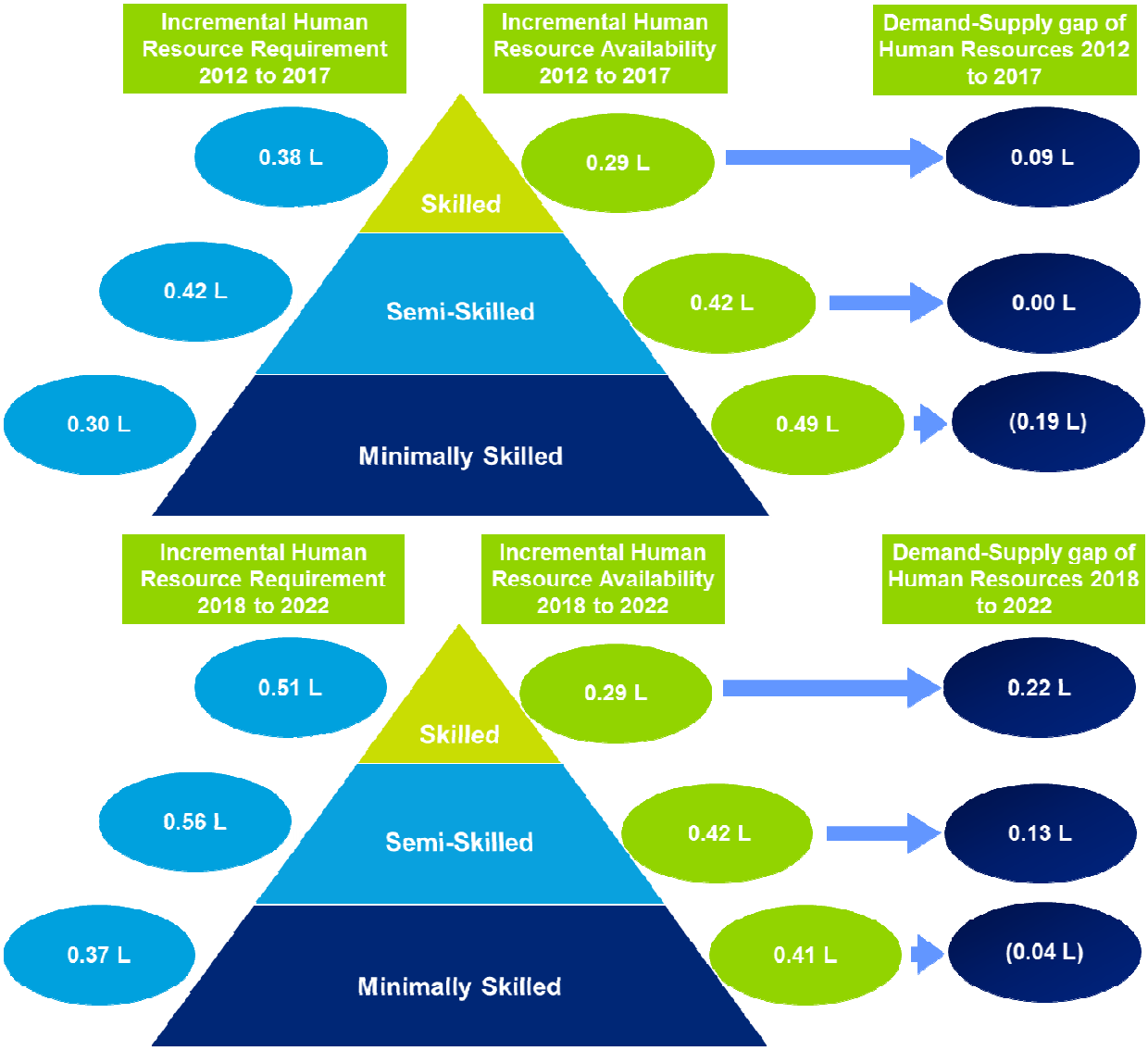
	2012-17	2017-22	Total
Skilled	290	287	576
Semi-Skilled	421	425	846
Minimally-Skilled	492	413	904
Incremental manpower supply (2012-22)	2327		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 41% in the 2012-17 period to 37% in the 2018-22 periods.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market. Nearly 78% of this additional labour force is expected in the minimally skilled segment.*

Incremental Demand Supply Gap

Figure 121: Incremental HR Demand Supply Gap- Palakkad



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 20813 with the excess demand across skilled and semi-skilled segment and excess supply of minimally skilled over the period.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources. There is also an increase in the gap of skilled labour over the years*
- *Even in cases of excess supply, it is pertinent to note that it does not imply industry demand for skills is being sufficiently met. Employability linked skills have emerged as a key area of concern among*

industry. The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers.

- *In line with the rural urban distribution and dominance of agriculture in employment, the major contributor to skill gap is the minimally skilled segment which is in excess in the district and requires skilling and training programs to shift to the semi-skilled and skilled segments.*
- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Palakkad are given in the table below.

Table 136: Qualitative Skill Gaps – Agro-Based Industries and Textiles, Garments

Sector	Level	Skill Gap
Food Processing	Plant Associates and operators	• Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	• Limited awareness on quality, health and hygiene awareness • Limited basic computer skills including barcode reading
	Sales and marketing-	• Limited Communication skills, ability and willingness to understand the manufacturing process
Textiles & Garments	Machine Operator	• Limited knowledge/capacity restricted to one or few machines • Limited quality compliance • Lack of multi-tasking and planning
	Sales Executive	• Inadequate negotiation skills • Limited communication and PR skills

4.10.7 Recommendations

Future Growth Opportunities in Palakkad

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Palakkad.

Table 137: Key Growth Sectors - Palakkad

Sector	Growth Opportunities
Food Processing	• In terms of anticipated incremental demand between 2012-22, food processing is expected to contribute the highest share within manufacturing.
Engineering Units	• The proposed Light Engineering Park by KSIDC will focus exclusively on engineering units. • Some of the key products with manufacturing potential in the district include Control Valves, Telecom Products, Powerline, Electronics and Home Automation products, Communication Equipments, Fuse, Panel Board, HT&LT Cables, Auto Injection Moulding, Patient Monitoring Systems, Electro Cardiograms[241]
Textiles & Garments	• The district is expected to show investment potential for Knitted Hosiery, Fabrication, Garments, Cotton Yarn, Printing Yarn, Bleaching, Dyeing Clothes, Blended Yarn.[242]
Rubber & Plastics	• The district is expected to show investment potential for rubber products, surgical gloves, plastic components, PET bottles etc.[243]
Chemicals & Pharmaceuticals	• The district is expected to show investment potential in Potassium, Refractories, Cements, Aluminium Oxide, Silico Manganese, Pharmaceutical items.[244]

Considering economic and skill landscape of Palakkad, the table below indicates the priority areas of focus for key stakeholders involved. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 138: Key Recommendations for stakeholders - Palakkad

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Food Processing • Engineering Units • Textiles & Garments • Rubber & Plastics • Chemicals & Pharmaceuticals
Private training providers	• Engage students in more industry visits and practical training • There is potential for more manufacturing-based courses given the manufacturing potential in the district.
Government	• Quality of teaching in ITIs needs improvement and syllabus needs to be

[241] Emerging Kerala Website
[242] Emerging Kerala Website
[243] Emerging Kerala Website
[244] Emerging Kerala Website

	revisited keeping in mind industry needs and requirements. • More frequent industry visits and practical training should be emphasized upon. • Lab facilities and equipment in ITIs need improvement
Industry	• Industry players should encourage training apprenticeships for trainees from institutes with reasonable stipend • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Rubber sector, Food Processing, Textile & Handlooms etc.

4.11 Pathanamthitta

Located in the south of Kerala, Pathanamthitta lies between the north latitudes 9 05' and 9 28' and east longitudes 76 30' and 77 17'. It is bounded on the North by the Kottayam and Idukki districts, on the east by Tamilnadu, on the west by Alappuzha and on the south by the Kollam district of Kerala. The district is spread over an area of 2637 Sq. kms, which accounts for 6.8 % of the total area of the state. The district is divided into 5 taluks, 53 Gram Panchayats and 68 villages. Pamba, Achankovil and Manimala rivers are the important rivers in the district.

4.11.1 Demography

Pathanamthitta has a population of 11.97 Lakhs as of 2011 of which about 11% reside in urban areas.[245] The percentage of urban population in the district is much lower than the state average of 47.7% The population of Pathanamthitta is concentrated in the rural areas which account for 89% of the district population. The district has a higher sex ratio (1132) than the state (1084), as indicated in the table below.

Table 139: Demographic Indicators – Pathanamthitta

Demography	Pathanamthitta	Kerala
Population (2011)	1197412	3,34,06,061
Decadal Population Growth Rate (2001-11)	-3.0%	+4.8
Population density per sq. km (2011)	453	859
Sex Ratio (2011)	1132	1084
Percentage of Urban Population (2011)	11.0%	47.7%
Percentage of SC population(2011)	13.7%	9.1%
Percentage of ST population(2011)[246]	0.7%	1.5%

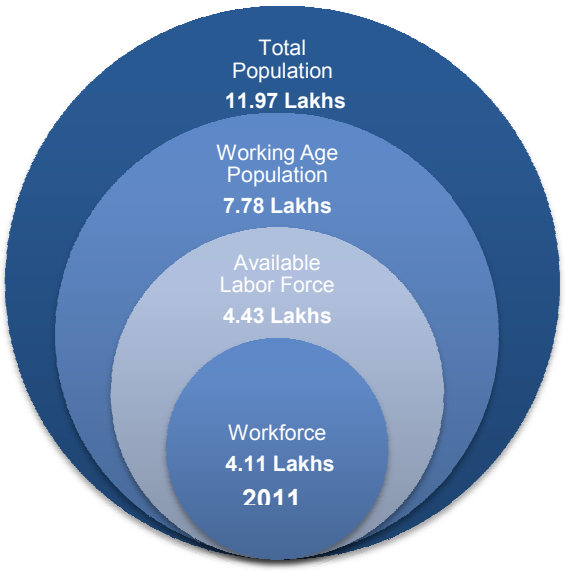
Source: Census 2011

The district ranks twelfth in the state in terms of the population density[247]. It has the lowest population among all districts in the state. It has negative population growth rate of 3 percent. Pathanamthitta and Idukki are the only 2 districts with negative growth rates.[248]

The adjoining figure depicts the estimated workforce in Pathanamthitta in the context of the population of the district. Out of the total population of 11.97 Lakhs the working age population (between 15-59 age group) constitutes to 7.78 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 4.1 lakhs or nearly 52.8% of the working age population.

Figure 122: Work Force in Pathanamthitta- 2011



Source: Census 2011 and Deloitte Analysis

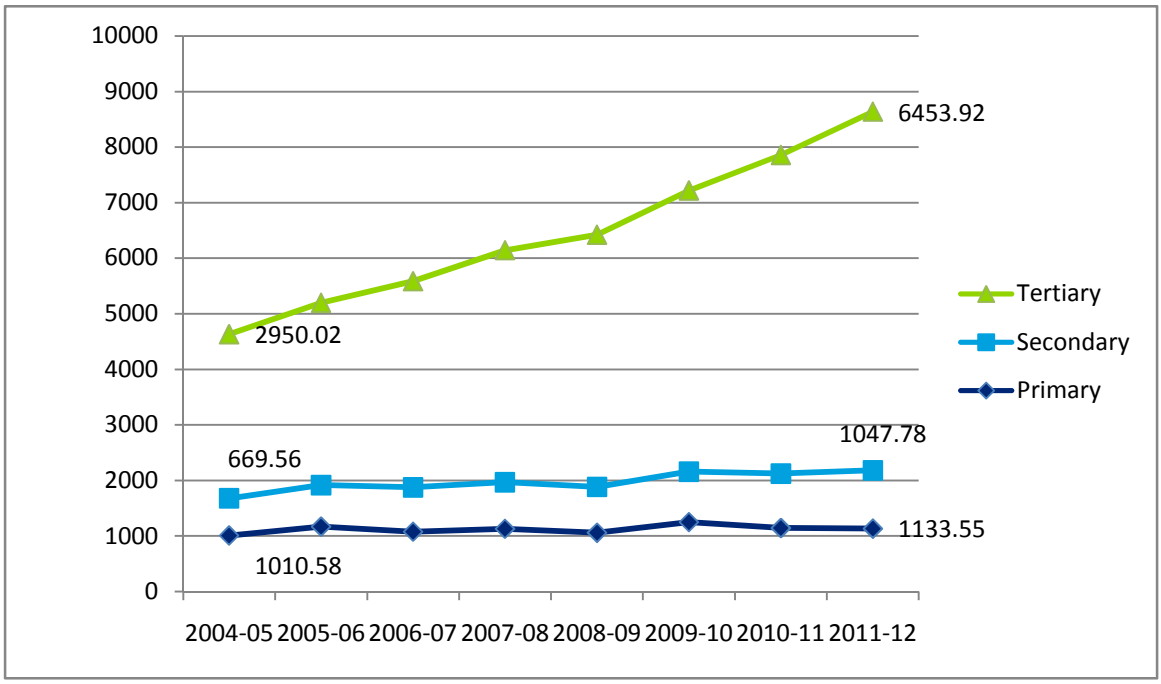
[245] Census of India, 2011
[246] Census 2011
[247] Kerala Economic Review 2012-13
[248] Kerala Human Development Report 2012

4.11.2 Economic Profile

The Gross District Domestic Product (GDDP) of Pathanamthitta has grown at a growth rate (CAGR) of 9.3% between 2004-05 (Rs. 4630 Cr.) and 2011-12 (Rs. 8635 Cr.). In 2011-12, tertiary sector contributed about 74.7% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the primary sector at 13.1% and the secondary sector at 12.1%. This is in contrast to most of the districts of the state where the secondary sector contributes more than the primary sector.

As indicated in the graph below, the contribution of primary sector has shown a slight increase from 1010.6 Cr. (2004-05) to 1133.6 Cr. (2011-12). The secondary sector and tertiary sector also registered positive growth in its share to GDDP from 669.6 Cr. to 1047.8 Cr. and from 2950 Cr. to 6453.9 Cr. respectively, over this period.

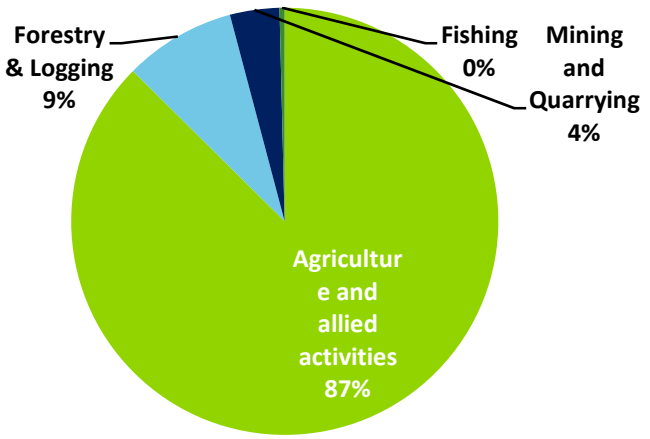
Figure 123: Sector Level Contribution to GDDP, Pathanamthitta



Primary Sector

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 13.1% to the GDDP in 2011-12. In spite of being a predominantly rural district, the primary sector contribution to the GDDP has seen a decline of 8.7% between 2004-05 and 2011-12. The CAGR for primary sector is 1.65% with agriculture registering a growth of 1.5% and mining and quarrying showing a growth of 16.3%, while forestry and logging showed a negative growth of 0.3%.

Figure 124: Primary Sector Contribution to GDDP, 2011-12



In the district, net sown area is 30.6% of total geographic area of 2, 65,277 hectares, which is lower than that for Kerala (52.5%). The total irrigated area is 4980 Ha. The major crops cultivated in the district include paddy, rubber, tubers, tapioca, yam, etc. In terms of area under cultivation, Pathanamthitta stands second in the state for tubers cultivation and third for rubber.[249]

It is important to note that forests cover approximately 58.5% of the total geographical area. Further, the percentage of area under forests in Pathanamthitta is third highest among all the districts. The forests are an important source of hard wood (teak, sandalwood, etc.), softwood (eucalyptus, rubber), medicinal plants, etc.[250]

Key characteristics[251] of the primary sector in Pathanamthitta are presented below:

- Agriculture & Allied activities constitute about 87% of the contribution of primary sector to the GDDP.
- The district is rich in crops like tubers (yam, elephant foot yam, etc.), tapioca, paddy, cardamom, jack, plantains, etc.
- Pathanamthitta district stands 3rd in the cultivation of rubber which accounts for 9% of the total area in the state
- It is an important district in the state for mining. The important minerals in the district are granite, laterite building stone and brick clay.

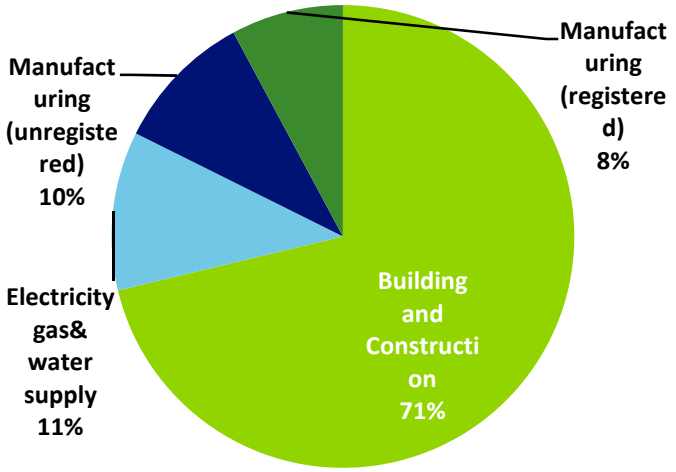
Secondary Sector

The contribution of secondary sector to district GDP in 2011-12 was approximately 11.1%. The sector has registered a growth of 6.6% (CAGR) between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, while manufacturing sector showed a growth rate of 6.18%.

According to the MSME District Profile for Pathanamthitta, there are a total of 11385 registered industrial units with 21medium and large units in the district. The total employment in the large scale units is 68 workers with a total turnover of Rs. 3500 lakhs.[252]

The key identified clusters[253] in the manufacturing sector have been highlighted below:

Figure 125: Secondary Sector Contribution to GDDP, 2011-12



Source: Govt of Kerala, Directorate of Economics and Statistics

[249] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[250] Kerala economic review 2012-13
[251] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[252] District wise MSME Report
[253] Brief Industrial Profile of Pathanamthitta District 2011-12, MSME Development Institute

- **Food Processing Cluster, Pathanamthitta**: With 23 functional units, the focus area for this cluster is the manufacture and marketing of the products. It is managed by Pathanamthitta Agro Food Consortium (P) Ltd.
- **Light engineering Cluster, Pathanamthitta**: With 26 functional units, the focus area for this cluster is the manufacture of Gate, Grill Gen Engg. Items. It is managed by Adoor General Engineering Consortium

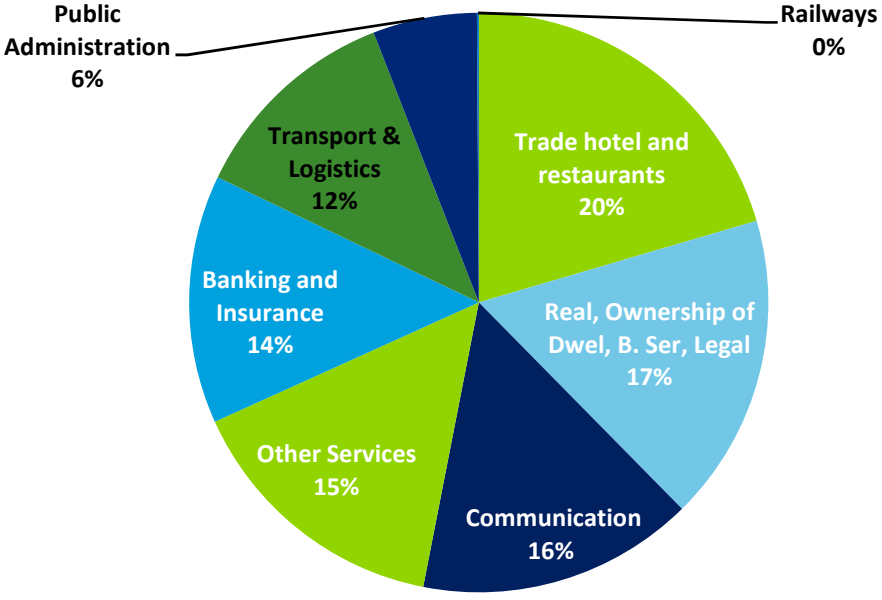
Key characteristics[254] of the secondary sector in Pathanamthitta are presented below:

- Building and Construction (71%) contributes the highest followed by Manufacturing (30%).
- KINFRA Industrial Park and KINFRA Food processing park focuses on general industries and food processing respectively.
- Traco Cables, Kizhakken Muthoor, Thiruvalla is the large scale industry in the district , while Akay flavours & Aromatics Ltd., and Nallanikkunnu. Tierra Foods, Kinfra Industrial Park, Elamannoor are the medium scale industries in the district.
- Engineering unit sand food processing are the key areas in the secondary sector.

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 63.7% to 74.7% to GDDP between 2004-05 and 2011-12. The sector grew by 11.8% during the same period, in real terms. In terms of growth rate, communication was the fastest growing sector (CAGR=29.1%) followed by Banking and Finance CAGR=14.5%).Key contributors in the sector include trade, hotels and restaurants, real estate services, transport and storage and communication.

Figure 126: Secondary Sector Contribution to GDDP, 2011-12



Source: Govt. of Kerala, Directorate of Economics and Statistics

Key characteristics[255] of the tertiary sector in Pathanamthitta are presented below:

[254] Emerging Kerala website, District MSME Report and Kerala Economic Review

- The tertiary sector (services) contributes a significant share of 74.7% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate, Communication and Other Services sub-sectors.
- Pathanamthitta is one of the significant tourist destinations in Kerala. It is known as a pilgrimage centre and is also known for its forests which house a wide variety of flora and fauna.

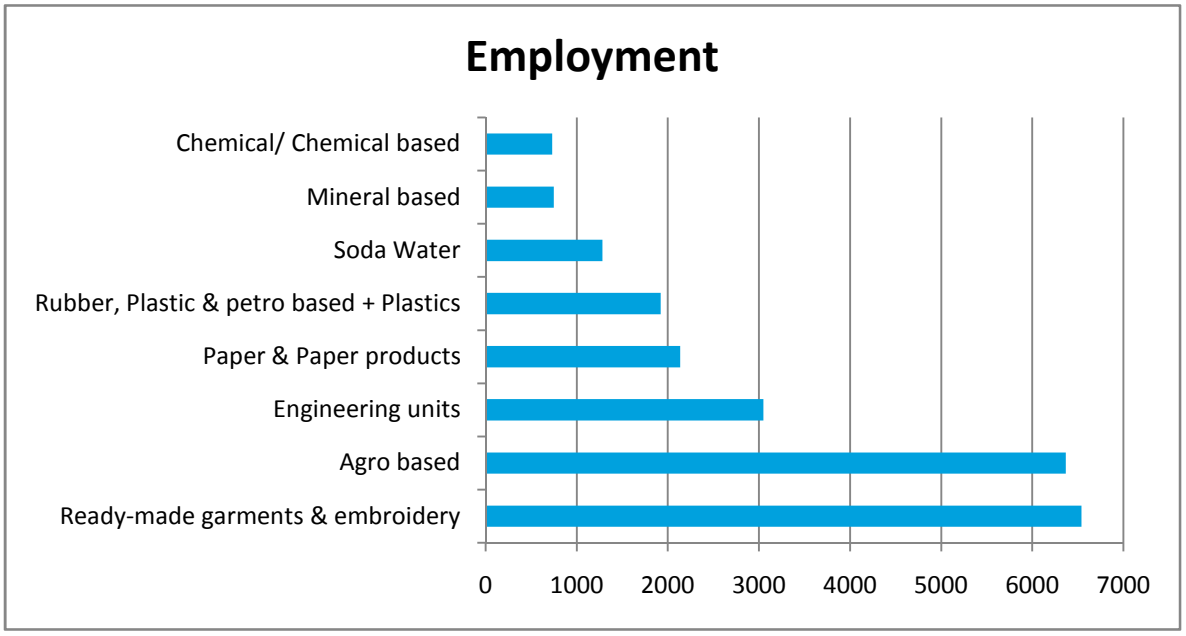
[255] Emerging Kerala Website

4.11.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (50.2%), and followed by the primary sector (33.1%) and the secondary sector (16.7%)[256]. Within the tertiary sector, the largest employers are the other services (26.0%) and trade, hotels and restaurants (24.8%) sectors. Within the secondary sector, the largest employer is the building and construction sector (71.9%) and manufacturing (25.6%).

The figure below indicates the employment in MSMEs in the district.

Figure 127: Employment in MSMEs - Pathanamthitta



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, readymade garments and embroidery employ the most workers (6539) followed by agro based industries (6367) and engineering units (3048).

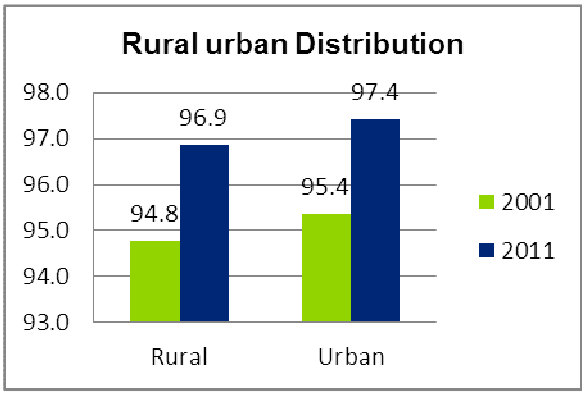
[256] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.11.4 Education Infrastructure

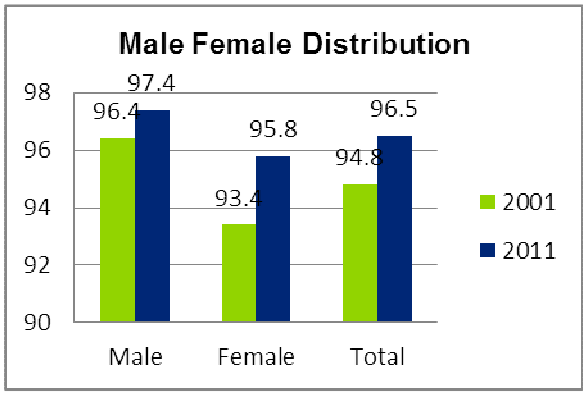
Pathanamthitta has a higher literacy rate of 96.5% in comparison to the state average of 93.9%. It has the second highest literacy rate in the state after Kottayam. In 2011, male and female literacy rates were 97.4% and 95.8% respectively with a total literacy rate of 96.5% as compared to 2001 literacy rate of 94.8%. In terms of the rural urban distribution, the literacy rates are 96.9% and 97.4% for rural and urban respectively in the year 2011.

Figure 128: Literacy Rate by Residence and Gender - Pathanamthitta

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Pathanamthitta has 914 schools with enrolments of 54186, 46709 and 49847 in lower primary, upper primary and high school levels respectively. The total number of schools in Pathanamthitta account for 6.0% of the total schools in the state while the enrolments in the school level (up to class X) account for 3.2% of the total state enrolments. The total number of teachers (8159) over the three sections account for 4.5% of the total teachers in the state.[257]

Table 140: School Education Profile - Pathanamthitta

School category	Pathanamthitta	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	538	6.8%
Upper Primary Schools (V-VII)	304	8.1%
High Schools (VIII-X)	449	12.3%
Total	**1,291**	**8.4%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	164,911	9.2%
Upper Primary Schools (V-VII)	141,434	9.3%
High Schools (VIII-X)	125282	9.3%
Total	**431,627**	**9.2%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	3,352	6.9%
Upper Primary Schools(V-VII)	3,427	6.0%
High Schools (VIII-X)	8,645	11.1%
Total	**15,424**	**8.4%**
Source: DISE and SEMIS data 2011-12		

[257] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Pathanamthitta has 27 vocational higher secondary schools (10-Govt., 17-Aided)[258]. It has a total of 38 ITIs and ITCs[259]. Some of the trades offered in the Government ITIs and ITCs are draughtsman (civil), stenography (English), architectural assistant, electrician and electronics mechanic whereas most of the private ITIs and ITCs offer courses on diverse trades like electrician, draughtsman (civil), computer operator and programming assistant, fitter and electronics mechanic The ITIs of the district have a total intake of 3184 of which 336 is in the government and 2848 in the ITCs.

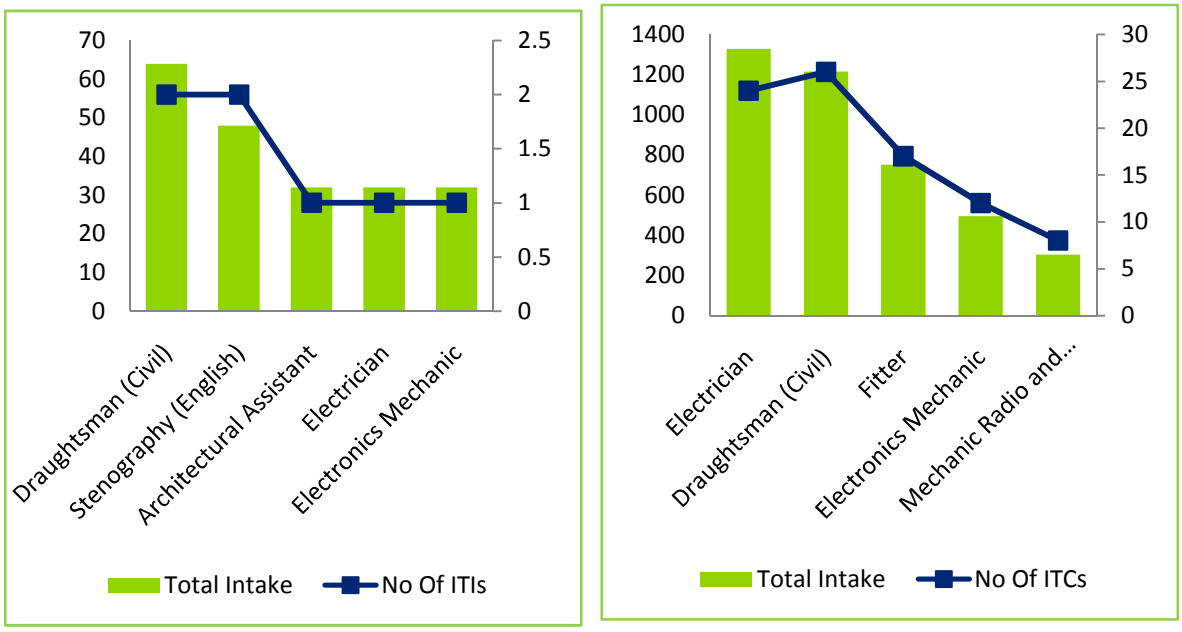
Table 141: Govt. ITIs in Pathanamthitta and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Government ITI, Karuvissery	16	42
Government ITI for Women, Nadakavu	14	26
Government ITC, Quilandy	2	4
Government ITC (SCDD), Kuruvaugad	2	2

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Pathanamthitta is given in the figure below:

Figure 129:Trades with max seats in ITI and ITCs- Pathanamthitta



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Pathanamthitta has 4 Polytechnic Colleges, which includes three Government polytechnics offering Diploma programs in in civil, automobile, architecture, mechanical, electronics, polymer technology & computer science engineering with approved intake ranging from 40 to 60 seats.[260]

[258] Kerala Economic Review, 2012
[259] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[260] Department of Technical Education, GOK

Higher Education Infrastructure

As depicted in the table below, there is 8 engineering college, and 23 arts and science colleges in the district. The district has 3 medical and 10 Nursing colleges. It has 4 Management and 1 law colleges as well. .

The Centres of Excellence in Pathanamthitta include Pushpagiri Medical College, Muthoot Hospitals, NSS College, Pandalam Plantation Corporation Rubber Estate at Kodumon, Chandanappally and Thannithode[261].

Table 142: Higher Education Profile – Pathanamthitta

Educational Infrastructure	Number of Institutes		Source
	Pathanamthitta	**Intake**	
Engineering/ Technology	8	**2,250**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	23	**5651**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	0	**0**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	3	**238**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	10	**571**	
BPharm	2	**262**	
Paramedical and Applied Sciences	1	**30**	
Law	1	**60**	*CEE website*
Management	4	**300**	*AICTE website*
Total	52	**9302**	

[261] Emerging Kerala Website

4.11.5 Youth Aspirations

The key observations about aspirations of the youth in Pathanamthitta have been captured below along the broad dimensions of education and employment:

Table 143: Youth Aspirations- Pathanamthitta

Parameters	Responses
Preferred Jobs	• Respondents are open to employment in both govt. and private sector. • The average salary expectations of the youth is Rs. 8,000 (per month) • Almost all students are willing to relocate to a different country or state for good opportunities. • Most students are not aware of opportunities available to them in the district.
Preferred Course	• Quality of teachers and careers of alumni motivate students to take up courses in certain institutes.
Suggestions by Youth	• Govt. could provide financial loans to entrepreneurs with viable plans. • Institutes can conduct inter collegiate competitions to motivate and give exposure to the students. • Institutes should create linkages with the industry for visits, internships and placements for students. • Practical exposure should be a mandatory portion of the curriculum.

4.11.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a major role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Being a predominantly rural district, agriculture and allied activities contribute the highest to employment (22.5%) among the sectors in the year 2021-22. Within the secondary sector, the expected growth sectors include agro food processing sector, construction and engineering units. In the tertiary sector, the sectors expected to show growth include tourism, other services and real estate services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 23.3%. The secondary and tertiary sector contributions are estimated to increase to 17.3% and 59.4% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the agriculture and allied activities (22.5%), other services (16.3 %) and building and construction (12.9%)

Table 144: Projected Employment Contribution and Growth Rate - Pathanamthitta

#	Economic Sector [262]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-1.6%	22.5%
2	Mining and Quarrying	-2.3%	0.8%
3	Manufacturing	1.4%	4.1%

[262] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

4	Electricity, Gas & Water supply	0.1%	0.4%
5	Building and Construction	2.5%	12.9%
6	Trade, Hotels and Restaurants	0.9%	11.3%
7	Railways	-2.3%	0.0%
8	Transport & Storage	0.2%	4.4%
9	Communication	5.4%	8.7%
10	Banking and Insurance	7.8%	6.6%
11	Real estate services and business services etc.	6.0%	7.6%
12	Public Administration	1.7%	4.5%
13	Other Services	4.1%	16.3%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology highlighted in section 2, the estimated incremental manpower demand in the period 2012-22 will be about 1.24 lakhs. Communication sector is expected to contribute a significant proportion of this demand (17.0%) based on the relatively higher anticipated growth rates, along with Building and Construction and Banking and Finance segments.

Table 145: Incremental Demand – Key sectors- Pathanamthitta

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Communication	18	37	37	24	48	48
Banking/ Insurance/ Finance	42	38	4	61	55	6
Building & construction	12	32	36	13	36	40
Education/ Skill development services	40	9	12	49	11	15
Other Services	33	15	3	44	20	3
IT / ITES Services	17	8	1	23	10	2
Real estate services	3	10	7	4	13	9
Public Administration	12	5	3	13	5	3
Healthcare services	5	8	3	6	10	4
Organized retail	3	9	6	3	9	7
Total +ve demand	196	203	150	252	256	182
Overall Incremental Demand	**1,240**					
Workers exiting sectors						
Agriculture and allied activities	-4	-15	-126	-3	-10	-89
Total workers exiting[263]	-5	-16	-130	-4	-12	-93

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 25,000) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling*

[263] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.

- *The Communication (17%) and BFSI (16.7%) sectors are key contributors to the anticipated incremental demand between 2012-22.*

Manpower Supply

The population of Pathanamthitta in 2011 was about 12.0 lakhs which is expected to increase to about 12.4 lakhs in 2017 and about 12.8 lakhs in 2022. As per the methodology highlighted in the estimated incremental manpower supply from 2012 to 2022 will be about 1.1 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 146: Incremental Labour-force as per Skill Levels- Pathanamthitta

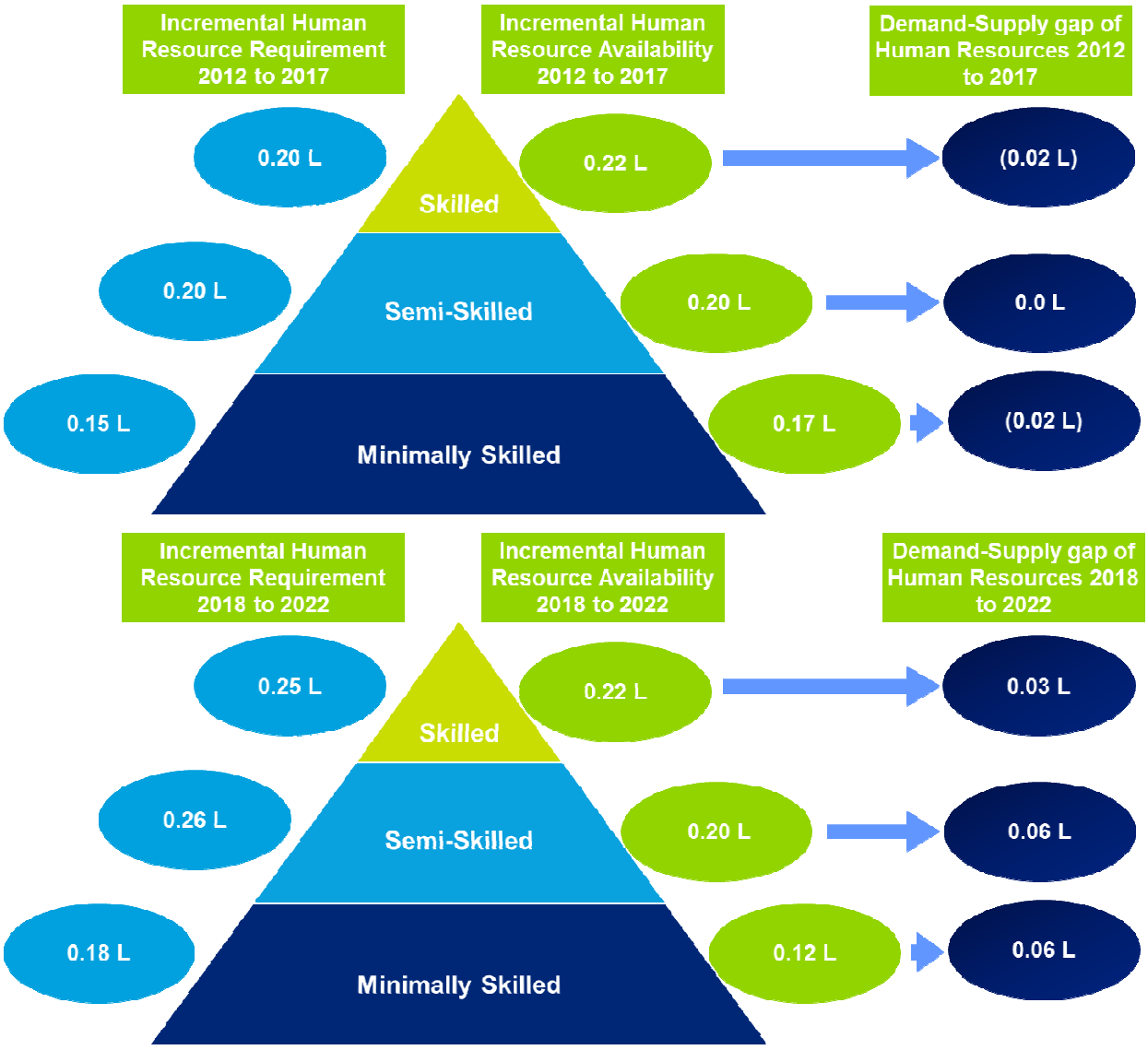
	2012-17	2017-22	Total
Skilled	218	219	438
Semi-Skilled	198	197	395
Minimally-Skilled	170	117	287
Incremental manpower supply (2012-22)	1120		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 29% in the 2012-17 period to 22% in the 2018-22 periods. This may be explained by improved enrolment and transition at the high school level, coupled with high pass ratio in the state- over 90% in X standard and nearly 80% in the XII standard.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 130: Incremental HR Demand Supply Gap- Pathanamthitta



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 11986 with the excess demand across all the segments over the period.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *In line with the rural urban distribution and dominance of agriculture in employment, the major contributor to skill gap is the minimally skilled segment which is in excess in the district and requires skilling and training programs to shift to the semi-skilled and skilled segments.*
- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Pathanamthitta are given in the table below.

Table 147: Qualitative Skill Gaps – Agro-Based Industries and BFSI

Sector	Level	Skill Gap
Agro-based Industries	Plant Associates and operators	• Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	• Limited awareness on quality, health and hygiene awareness • Limited basic computer skills including barcode reading
	Sales and marketing	• Limited Communication skills, ability and willingness to understand the manufacturing process
BFSI	Middle level managers	• Limited knowledge Banking operations • Poor Client and team management skills • Lack of Interpersonal and communication skills
	Officer and Trainee	• Lack of in-depth Product Knowledge • Poor Written and verbal communication Skills • Inadequate Inter-personal skills
	Customer Service Executives	• Limited Computer skills • Limited Accounting knowledge • Inadequate Communication Skills

4.11.7 Recommendations

Future Growth Opportunities in Pathanamthitta

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Pathanamthitta.

Table 148: Key Growth Sectors - Pathanamthitta

Sector	Growth Opportunities
Communication	• Communication sector has grown the fastest at 29% between 2004-05 and 2011-12. • In terms of anticipated incremental demand, it is expected to contribute the highest (17%) between 2011-12 and 2021-22.
Banking, Financial Services & Insurance (BFSI)	• In terms of growth rate, the banking and insurance sector has registered the second fastest growth rate of 14.5% between 2004-05 and 2011-12. • Pathanamthitta is expected to continue to witness surge in the banking industry, due to increasing foreign remittances.[264]
Manufacturing – Engineering Units, Rubber	• Engineering units form a key industrial cluster in the district with a focused KINFRA Industrial Park for the sector • Rubber-based industries are prominent since rubber is a key crop in the district
Food Processing	• Food processing units will be an emphasis with the proposed KINFRA Food Processing Park • Some of the focus industries will include dairy products, packed foods, snacks etc.[265]

Considering economic and skill landscape of Pathanamthitta, the proposed action plan that would be prepared at the end of the study would include the following priority areas in addition to other areas that may be identified during the course of the study. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 149: Key Recommendations for stakeholders - Pathanamthitta

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Communication • BFSI • Manufacturing – Engineering Units, Rubber • Food Processing
Private training providers	• Courses in in BFSI, Communication, Manufacturing and Food Processing sectors can be explored. • Institutes should create linkages with the industry for visits, internships and placements for students.
Government	• Youth interactions indicated the need for making practical exposure mandatory for all skill trainings

[264] Emerging Kerala Website
[265] Emerging Kerala Website

	• Youth interactions indicated the need for greater entrepreneurial awareness and support in the form of loans for young entrepreneurs
Industry	• Industry players should encourage training apprenticeships and industry visits for trainees from institutes with reasonable stipend • More industry interactions could be initiated in BFSI, Communication sectors etc. • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as BFSI, Communication etc.

4.12 Thiruvananthapuram

Thiruvananthapuram, the southern-most district of Kerala is situated between North latitudes at 8.17°– 8.54° and East longitudes 76.41°– 77.17°. The district stretches 78 kilometres (48 mi) along the shores of the Arabian Sea on the West, Kollam district lies on the North with Tirunelveli and Kanyakumari districts of Tamil Nadu on the East and South respectively. The district has an area of 2,192 square kilometres (846 sq. mi), which constitutes about 5.6% of the total geographical area of Kerala. The main rivers of the district are the Neyyar, the Karamana and the Vamanapuram rivers. It is divided into 4 taluks, 12 blocks and 117 villages. Thiruvananthapuram city is the district headquarters as well as the State capital of Kerala.

4.12.1 Demography

Thiruvananthapuram district has a population of 33 lakhs as of 2011 of which about 53.8% reside in urban areas. The urban population of Thiruvananthapuram is higher in comparison to the state average (48%). The decadal growth rate is 2.25% which is around half the growth rate of the state population. The district is densely populated with 1509 persons per sq. km. in comparison to the state average of 859.

Table 150: Demographic Indicators – Thiruvananthapuram

Demography	Thiruvananthapuram	Kerala
Population (2011)	33, 01,427 (9.8%)	3,34,06,061
Decadal Population Growth Rate (2001-11)	+2.25	+4.86
Population density per sq. km (2011)	1509	859
Sex Ratio (2011)	1087	1084
Percentage of Urban Population (2011)	53.8%	47.7%
Percentage of SC population(2011)	11.2%	9.09%
Percentage of ST population(2011)[266]	0.81%	1.45%

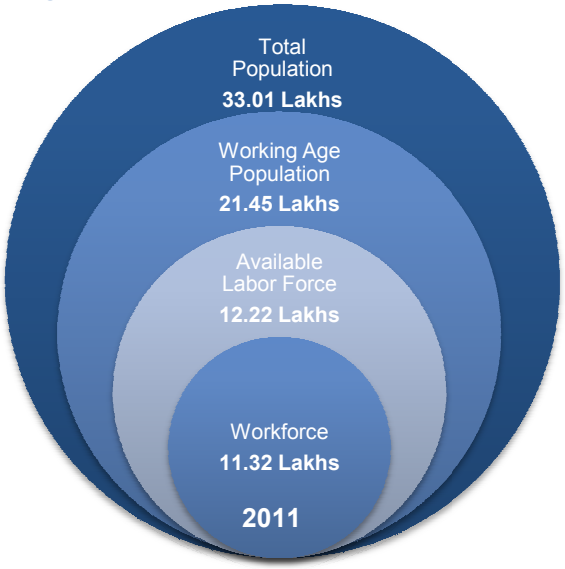
Source: Census 2011

It has the second highest population and the highest population density (1509) among all the districts in Kerala. The district has a slightly higher sex ratio (1087) than the state (1084).

The figure below depicts the estimated workforce in Thiruvananthapuram in the context of the population of the district. Out of the total population of 33 Lakhs the working age population (between 15-59 age group) constitutes to 21.45 lakhs or nearly 65%.

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 11.3 lakhs or nearly 52.8% of the working age population.

Figure 131: Work force in Thiruvananthapuram- 2011



Source: Census 2011 and Deloitte Analysis

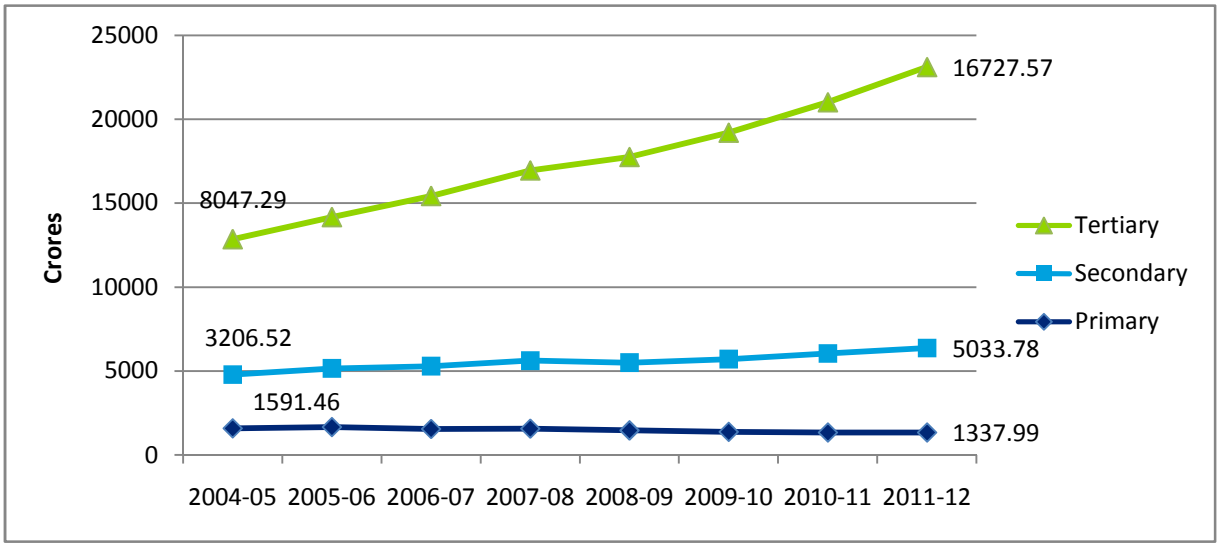
[266] Census 2011

4.12.2 Economic Profile

Gross District Domestic Product (GDDP) of Thiruvananthapuram has grown at a growth rate (CAGR) of 8.7% between 2004-05 and 2011-12[267]. In 2011-12, the tertiary sector contributes to 72.4%, followed by the secondary sector at 21.8% and primary sector at 5.8%. The contribution of primary sector has declined from 12.4% to 5.8% between 2004-05 and 2011-12, the secondary sector contribution has declined from 25% to 21.8% while the tertiary sector has been increasing its contribution from 62.6% to 72.4% during the same period.

The sector-wise GDDP growth and distribution from 2004-05 to 2011-12 is given in the figures below

Figure 132: Sector Level Contribution to GDDP-Thiruvananthapuram

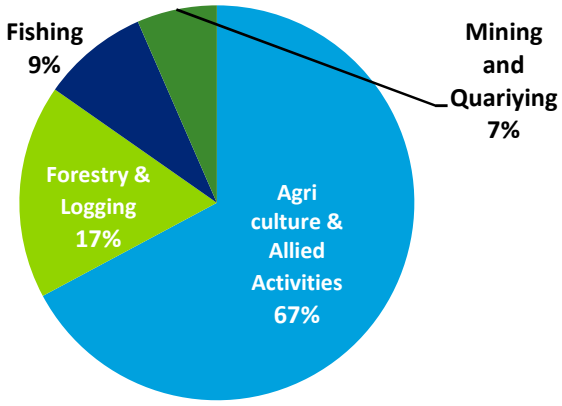


Source: Govt. of Kerala: Department of Economics and statistics

Primary Sector

Figure 133: Primary Sector Contribution, 2011-12- Thiruvananthapuram

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 5.8% to the GDDP in 2011-12. Agriculture and allied activities is the major contributor to the primary sector, (67%) followed by forestry and logging, fishing and mining and quarrying. As indicated in Figure 6, the primary sector has actually declined by 2.4% (CAGR) between 2004-05 and 2011-12, in real terms.



Source: Govt. of Kerala: Dept. of Economics and Statistics

59.8% of the geographical area of the district is its net sown area, which is higher than the state average of 52.5%. The total irrigated area is 8384 hectares with government canals (3722 hectares) and private wells (1255 hectares) being the main

[267] Govt. of Kerala, Department of Economics and statistics

sources of irrigation.[268]

The district has a reserve forest area of 359.1 sq. km, vested forest area of 3.6 sq. km and proposed forest area of 5.8 sq. km[269]. It ranks 4th among the states in terms of percentage of geographical area under forests[270].

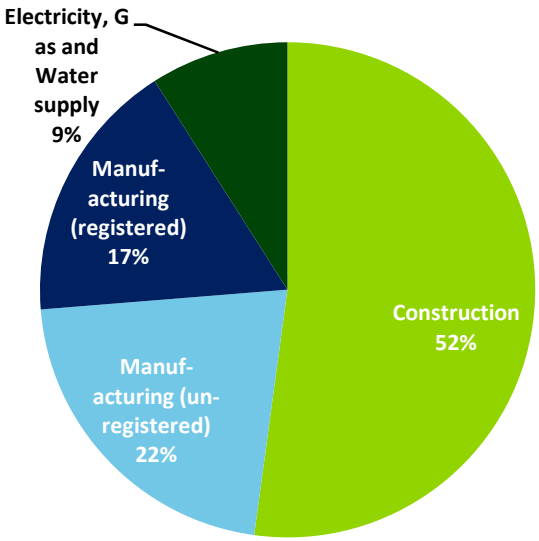
Key characteristics[271] of the primary sector in Thiruvananthapuram are presented below:

- Agriculture and allied activities contribute the most (67%) to the primary sector.
- Tamarind, plantains, tapioca, papaya, drumstick are the main produce in the district.
- Paddy, coconut, rubber and black pepper are other important agricultural products in terms of income generation.
- Forestry and fishing contribute 17% to the primary sector. Fisheries are an important occupation in Thiruvananthapuram employing 1.65 lakh persons in marine and inland fishing.
- Mining & Quarrying contributes to around 7% to primary sector output.
- The major minerals produced are China Clay, Silica Sand, Limeshell, Zircon, Bauxite, Quartz, Graphite while the minor minerals include laterite, granite building stone, sand etc.

Secondary Sector

Figure 134: Secondary Sector Contribution, 2011-12- Thiruvananthapuram

The contribution of secondary sector to district GDP in 2011-12 was about 21.8 %. The percentage contribution of secondary sector to the GDDP has been declining slowly from 25% in 2004-05 to 21.8% in 2011-2012.[272] As indicated in Figure 6, the secondary sector has actually grown by 6.7% (CAGR) between 2004-05 and 2011-12, in real terms. As shown in the graph below, construction is the major contributor (52%) of the total followed by manufacturing and electricity, gas and water supply. Manufacturing as a whole contributes 38.8% of the secondary sector of which unregistered units contribute to 55.6% of the total and the rest (44.4%) is attributed to registered units.



Source:Kerala Economics and Statics Department

According to the MSME DI report 2011-12, Thiruvananthapuram has a total of 21,963 registered industrial units of which 86 are large and medium units with an employment of 41,465 workers.

The key clusters identified in the MSME sector in the district include:

- Travancore Cane & Bamboo Company (P) Ltd. Chirayinkil
- Sreechitra Wooden Crafts & Carvings Development Society, Neyyatinkara
- Kerala Handloom Silk Consortium (P) Ltd, Balaramapuram

[268] Agricultural statistics 2011-12
[269] Kerala Economic Review 2012-13 (FSI 2011)
[270] Kerala Economic Review 2012-13 (FSI 2011)
[271] Agricultural statistics 2011-12 and Kerala Economic Review 2012-13, Brief Industrial Profile of Thiruvananthapuram District 2011-12, MSME Development Institute
[272] Govt. of Kerala Department of Economics and statistics

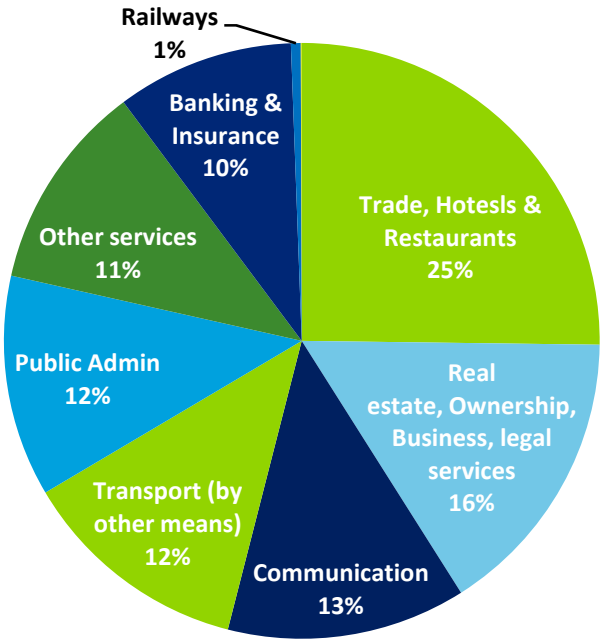
Key characteristics[273] of the secondary sector in Thiruvananthapuram are presented below:

- Building and Construction (52%) contributes the highest followed by Manufacturing (39%).
- The district ranks second in the state in terms of the number of medium and large scale industries present. Among the 94 medium scale units(registered in the district, the major sectors were agro based industries (15 units) and chemical and pharmaceuticals (10) were major contributors in addition to healthcare and travel, tourism and trade.
- The key traditional industries include handloom, handicrafts and coir.
- The textiles/garments sector is a key focus sector with an established KINFRA (Kerala Industrial Infrastructure Development Corporation) Apparel Park set up in the district. The Apparel Park has an investment of 11590.60 lakhs and provides employment to 6736 people.
- Kerala State Industrial Development Corporation (KSIDC) is establishing a life sciences park in the district which is expected to boost manufacturing of bio-medical equipment, pharmaceuticals and health care products.

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 62.6% to 72.4% to GDDP between 2004-05 and 2011-12. The sector grew by 11% during the same period, in real terms. Key contributors in the sector include trade, hotels and restaurants, real estate services, communication and transport and storage. In terms of growth rate, the communication sector has registered the fastest growth rate of 29% between 2004-05 and 2011-12

Figure 135: Tertiary Sector Contribution to GDDP- Thiruvananthapuram



Source: Govt of Kerala, Directorate of Economics and Statistics

[273] Emerging Kerala website and Kerala Economic Review

Key characteristics[274] of the tertiary sector in Thiruvananthapuram are presented below:

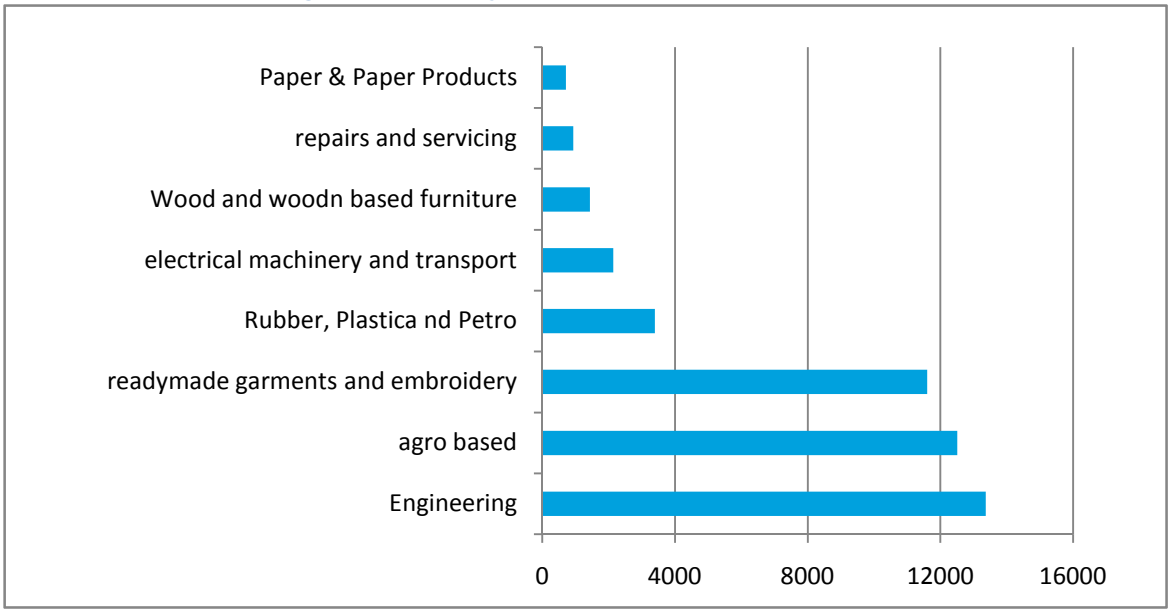
- The tertiary sector (services) contributes an overwhelming share of 72.4% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate, Ownership of Dwellings, Business and Legal Services and Communication sub-sectors.
- IT and ITeS sector is a key sector in the district and contributes more than 80% of software exports in the state. The district has a Techno Park with over 230 companies and more than 40,000 IT professionals.
- Healthcare and Life Sciences will also be a focus area with the establishment of the Life Sciences Park by KSIDC.

4.12.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (52.3%), and followed by the secondary sector (33.2%) and the primary sector (14.5%)[275]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (28.5%) and other services[276] and public administration (18% each) sectors. Within the secondary sector, the largest employer is the building and construction sector (48%).

The figure below indicates the employment in MSMEs in the district.

Figure 136: Employment in MSMEs - Thiruvananthapuram



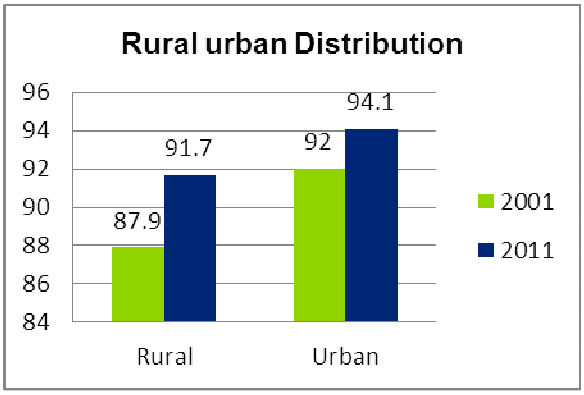
Source: Brief Industrial Profile of Thiruvananthapuram District 2011-12, MSME Development Institute

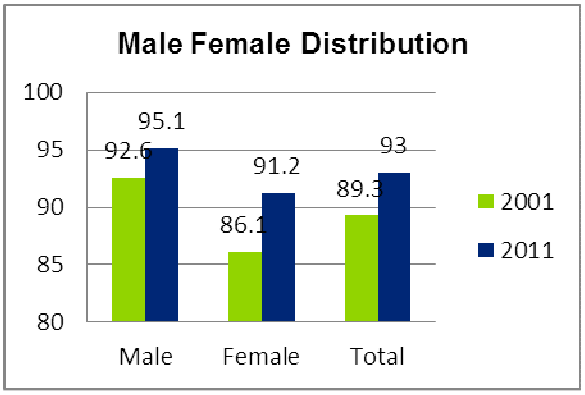
[274] Emerging Kerala Website
[275] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis
[276] Other Services includes education, health care services, and select informal sectors such as drivers, security guards, maids etc

4.12.4 Education Infrastructure

Thiruvananthapuram has a lower literacy rate of 93% in comparison to state average of 93.9 % and which shows a slight improvement from the literacy rate of 89.3% in the year 2001. It was 95.1% for males and 91.2% for females in the year 2011. However, literacy rates in Kerala are far higher than the national literacy level of 74.4%

Figure 137: Literacy Rate by Gender and Residence- Thiruvananthapuram





Source: Census 2011

Thiruvananthapuram has 1,272 schools with enrolments of 153447, 130530 and 126255 in lower primary, upper primary and high school levels respectively. The total number of schools in Thiruvananthapuram account for 8.3% of the total schools in the state while the enrolments in the school level (up to class X) account for 8.8% of the total state enrolments. The total number of teachers (17875) over the three sections account for 9.8% of the total teachers in the state.[277]

Table 151: School Education Profile - Thiruvananthapuram

School category	Thiruvananthapuram	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	617	7.8%
Upper Primary Schools (V-VII)	339	9.0%
High Schools (VIII-X)	316	8.7%
Total	**1,272**	**8.3%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	153,447	8.5%
Upper Primary Schools (V-VII)	130,530	8.6%
High Schools (VIII-X)	126255	9.3%
Total	**410,232**	**8.8%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	4,749	9.8%
Upper Primary Schools(V-VII)	4,794	8.4%
High Schools (VIII-X)	8,332	10.7%
Total	**17,875**	**9.8%**
Source: DISE and SEMIS data 2011-12		

[277] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Thiruvananthapuram has 41 vocational higher secondary schools[278] (30-Govt., 11-Aided)[279]. It also has a total of 73 ITIs and ITCs[280] including 7 government ITIs. Major trades offered in the Government ITIs and ITCs are fitter, electrician, draughtsman, computer operator, wiremen and machinist whereas most of the private ITIs and ITCs offer courses on diverse trades like radiology technician to data entry operator. Government ITIs in Thiruvananthapuram offer 19 to 24 courses under State Council for Vocational Training (SCVT)[281].

The ITIs of the district have a total intake of 8632 of which 3532 is in the government and 5100 is in the private ITIs. Further it is to be noted that while being 7 in number (9.6% of the total), the government ITIs account for 3532 seats (40.9% of total).

The number of units per trade on an average was also much higher (3.5) on an average for government ITIs in comparison to ITCs (2.2).

Table 152: Govt. ITIs in Thiruvananthapuram and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated	Total Capacity
Government ITI Chackai	24	71	1084
Government ITI, Dhanuvachapuram	19	54	820
Government ITI for Women, Kazhakuttom	10	17	276
Government ITI Attingal	26	81	1256
Government ITI,(SCDD) Kadakampally	1	1	16
Government ITI SCDD, Perumala	1	1	16
Government ITI SCDD Singarathoppe	1	2	32

Source: DGET website and Deloitte analysis

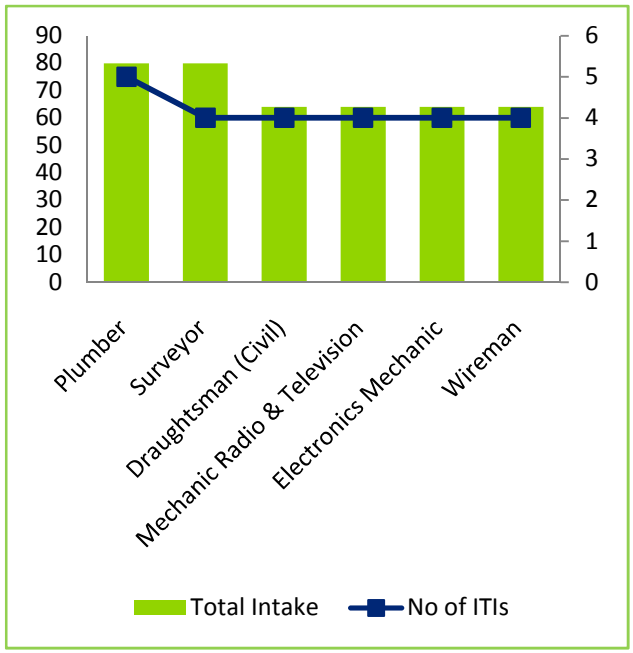
In addition to the ITI/ITCs, Thiruvananthapuram has 24 Vocational Training Providers of which 7 are government (29.2%) and the rest (70.8%) are private. All the government it is have Vocational Training facilities in addition to the ITI courses. Thiruvananthapuram has 5 Government polytechnic colleges with an intake of 1070 seats[282].

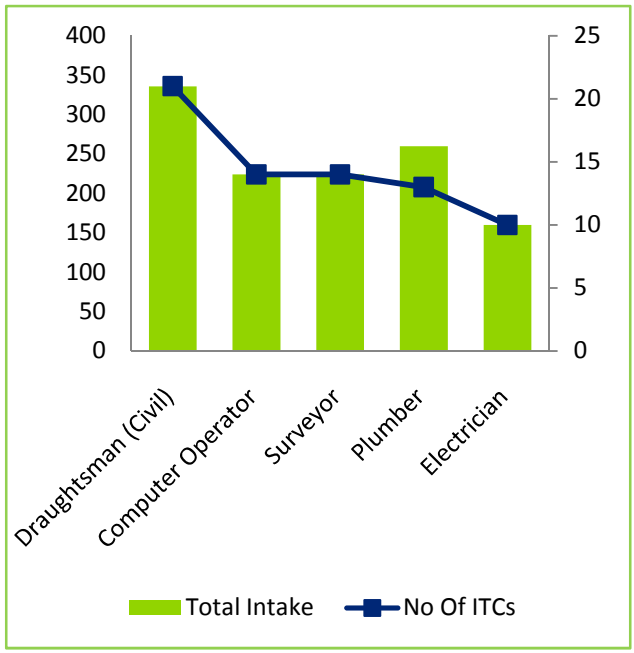
The Scheduled Caste Development Department runs Pre examination Training Centres at Thiruvananthapuram along with 3 other districts to provide special coaching to SC/ST candidates for various jobs in Government, Banks and other public sector undertakings. In addition, Kerala State Women's Development Corporation (KSWDC) has started job oriented training programme called REACH (Resource Enhancement Academy for Career Heights) at two centres, one in Thiruvananthapuram and other in Kunnur to provide job oriented training to young girls with higher secondary or Degree based education level. [283]

The major courses offered in the ITIs and ITCs and their capacity in Thiruvananthapuram is given in the figure below:

[278] VHSEs were introduced with an objective to impart at plus two level specific trade education in order to achieve self/wages/direct employment as well as vertical mobility. The trades vary from welding, plumbing to TV repair.
[279] Kerala Economic Review 2012-13
[280] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[281] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[282] Technical Education Website: http://www.tekerala.org/intt.html
[283] Human Development report 2012

Figure 138: Trades with max seats in ITI and ITCs- Thiruvananthapuram





Source: DGET website; Deloitte Analysis

Higher Education Infrastructure

As depicted in the table below, there are 24 engineering colleges, 3 medical colleges and 34 arts and science colleges. There are also 14 management and 2 law colleges in Thiruvananthapuram. Thiruvananthapuram is a major education hub in Kerala with 24 (15.7%) of the engineering colleges, and 2 law colleges (25%).The district also has the maximum intake (1153) in medical courses of government colleges. This is much higher in comparison to the share of population (9.98%).[284] The district ranks second in terms of the total number of unaided engineering colleges (22) functioning in the state after Ernakulam (28).[285]

Table 153: Higher Education Profile - Thiruvananthapuram

Educational Infrastructure	Number of Institutes		Source
	Thiruvananthapuram	Intake	
Engineering/ Technology	24	8288	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	34	10580	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	1	100	*CEE website*
Medicine (including Ayurveda, Homeopathy,	3	9349	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	13	5161	
Paramedical and Allied Sciences	3	921	
BPharm	5	1578	

[284] Kerala Economic Review 2012-13
[285] Kerala Economic review 2012-13

Law	2	**255**	*CEE website*
Management	14	**930**	*AICTE website*
Total	99	**37162**	

The educational centres of excellence in this district include Technopark, Vikram Sarabhai Space Centre, Rajiv Gandhi Centre for Biotechnology, Indian Institute of Science Education & Research, National Institute for Interdisciplinary Science & Technology, HLL Lifecare Limited, BrahMos Aerospace Limited, Central Tuber Crops Research Institute, Tropical Botanic Garden & Research Institute, Sri Chitra Tirunal Institute for Medical Sciences & Technology, Regional Cancer Centre, Trivandrum Medical College, College of Engineering Trivandrum, Centre for Development Studies[286].

[286] Emerging Kerala Report 2012

4.12.5 Youth Aspirations

The key observations about aspirations of the youth of the district have been captured below along the broad dimensions of education and employment, are highlighted in the table below:

Table 154: Youth Aspirations- Thiruvananthapuram

Parameters	Responses
Preferred Jobs	• Most of the respondents prefer Govt. jobs as they offer security of employment and prestige with comparatively lesser work pressure and good benefits. • The average salary expectations of the youth range from Rs. 10,000 to Rs. 25,000 (per month) • Most of the respondents prefer to be employed in the district or the state.
Preferred Course	• Interest in courses such as mechanical, electrical and construction trades such as surveyor and civil. • Since students are expected to compete with diploma holders and engineering graduates, they prefer courses with industry / national recognition
Issues with VET Infrastructure	• More frequent industry visits and practical training esp. in trades such as plumber, mechanical. • Increase seats in trades such as surveyor and civil (draughtsman). • Increase frequency of virtual classroom sessions in trades such as motor mechanic vehicle, mechanic (diesel), electrical etc. • Teachers should have more experience and training in ITI specific trades
Suggestions by Youth	• Soft skills training, including English language, should be given to students in rural areas – right from high school level • Institutes should tie-up with industries and provide internships to every pass-out for 3-6 months • Functioning of the Employment Exchanges should be improved so that they are able to offer better services. • All training providers should issue NCVT certificates for all trades. • For courses such as Wireman, contract licenses could also be issued to students along with course certificate to promote self-employment.

4.12.6 Skill Gap Assessment

Based on our analysis and primary interaction, the primary sector is expected to continue to decline and will experience people moving out of this sector in terms of employment. Within the secondary sector, the expected growth sectors include agro food processing sector, general/light engineering, construction and handlooms, textiles and garments sectors. In the tertiary sector, the sectors expected to show growth include IT and ITeS, banking/insurance, communication, tourism, life sciences and healthcare.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 7%. The secondary and tertiary sector contributions are estimated to increase to 32.5% and 60.3% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the building and construction (16.6%), manufacturing (15.4%) and trade, hotels and restaurants (13.4%) which are also confirmed by our primary interactions with government stakeholders, institutes and industries in Thiruvananthapuram.

Table 155: Projected Employment Contribution and Growth Rate - Thiruvananthapuram

#	Economic Sector [287]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-4.7%	6.9%
2	Mining and Quarrying	-8.5%	0.3%
3	Manufacturing	1.2%	15.4%
4	Electricity, Gas & Water supply	1.7%	0.6%
5	Building and Construction	2.5%	16.6%
6	Trade, Hotels and Restaurants	1.0%	13.4%
7	Railways	-3.2%	0.1%
8	Transport & Storage	0.2%	5.1%
9	Communication	6.7%	8.0%
10	Banking and Insurance	10.2%	5.7%
11	Real estate services and business services etc.	6.9%	7.4%
12	Public Administration	1.6%	8.7%
13	Other Services	4.4%	11.9%
Source: Deloitte Analysis			

[287] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

Manpower Demand

As per the methodology highlighted in the estimated incremental manpower demand in the period 2012-22 will be about 3.74 lakhs. While building and construction and communication sectors are expected to contribute a significant proportion of this demand (33%) based on the relatively higher anticipated growth rates, public administration and Banking, Financial Services and Insurance (BFSI) segments are also expected to contribute to the incremental demand.

Table 156: Incremental Demand – Key sectors- Thiruvananthapuram

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Communication	52	104	104	72	145	145
Building & construction	42	112	126	47	127	142
Banking/ Insurance/ Finance	108	98	11	176	159	18
Other Services	89	41	7	122	56	9
Education/ Skill development services	84	19	26	105	24	32
Manufacturing	21	62	47	23	66	50
Select Informal Sector	10	37	58	13	45	71
Public Administration	59	24	15	63	26	16
IT / ITES Services	49	22	4	68	31	5
Real estate services	8	28	20	12	39	27
Total +ve demand	554	624	461	737	803	565
Overall Incremental Demand	**3744**					
Workers exiting sectors						
Mining and Quarrying	-4	-12	-24	-2	-7	-13
Agriculture and allied activities	-12	-41	-353	-9	-29	-253
Total workers exiting[288]	-16	-53	-377	-11	-36	-266

Some of the key trends observed on the demand side include

- *A significant number of the workforce (over 25,000) is expected to exit from the agriculture sector between 2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *While the projected incremental demand in Communication, BFSI and IT and ITeS sectors contribute to 16.6, 15.2% and 4.8% respectively, growth of these sectors typically result in the creation of significant number of indirect employment, especially in sectors like construction, education, healthcare etc.*
- *Education sector contribute significantly to the creation of jobs in the skilled (14.6%). This is in line with the views of the industry and government officials that Thiruvananthapuram is expected to emerge as one of the hubs for education and health care.*

[288] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Manpower Supply

The population of Thiruvananthapuram in 2011 was about 33 lakhs which is expected to increase to about 34.3 lakhs in 2017 and about 35.4 lakhs in 2022. As per the methodology highlighted in section 2 the estimated incremental manpower supply from 2012 to 2022 will be about 2.95 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district.

Table 157: Incremental Labour-force as per Skill Levels- Thiruvananthapuram

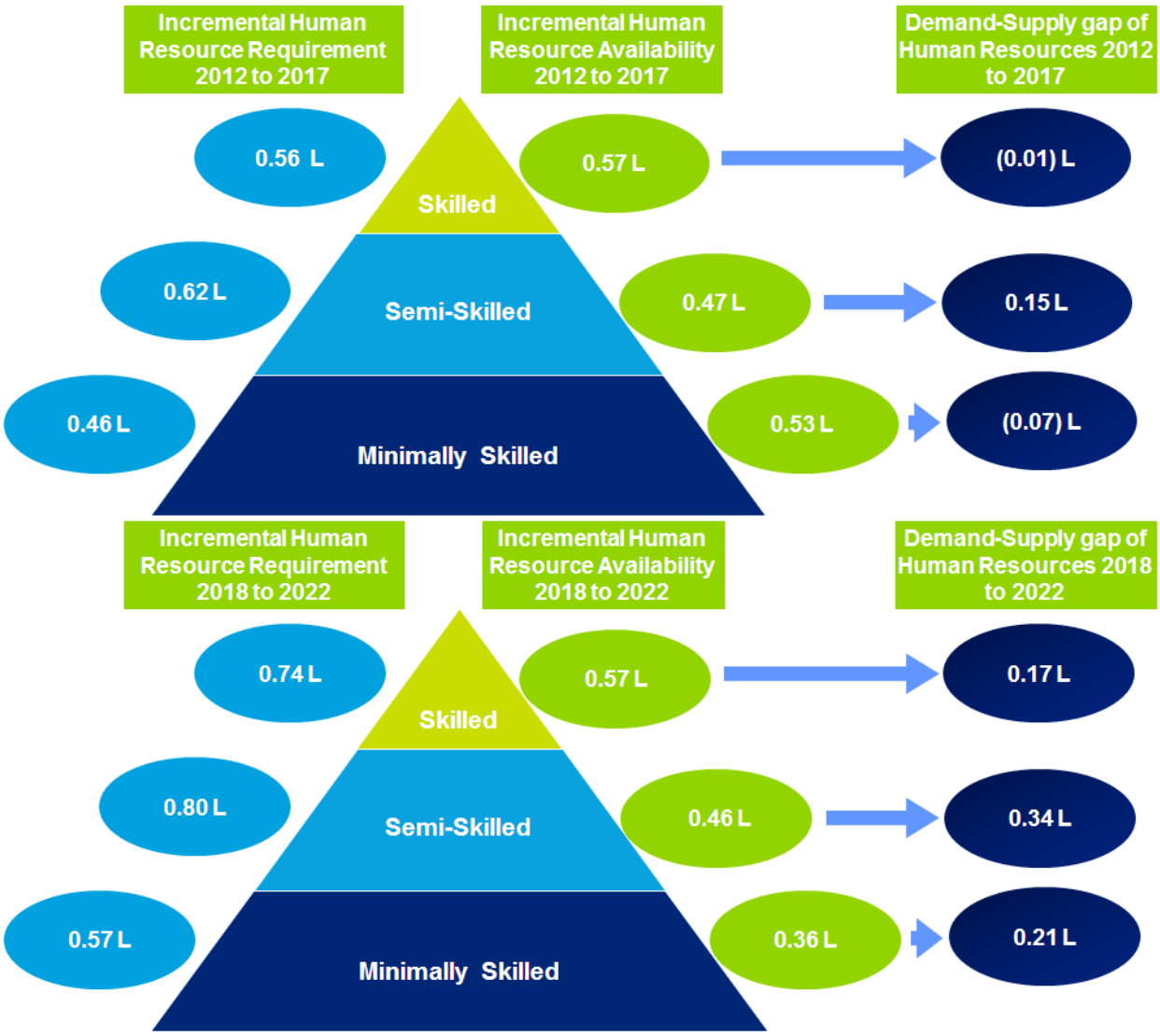
	2012-17	2017-22	Total
Skilled	568	569	1137
Semi-Skilled	467	460	927
Minimally-Skilled	536	358	894
Incremental manpower supply (2012-22)	2958		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 34% in the 2012-17 period to 26% in the 2018-22 periods. This may be explained by improved enrolment and transition at the high school level, coupled with high pass ratio in the state- over 90% in X standard and nearly 80% in the XII standard.*
- *The trend of migration is expected to be outward across skill levels and would account to nearly 4% of the supply.*
  According to our primary interactions this number may be higher since the youth expectations of compensation may not be matched by the industry, especially in the minimally skilled roles. Accordingly, there is a trend towards inward migration from other states, especially for minimally skilled jobs in sectors like building and construction and hospitality.
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 139: Incremental HR Demand Supply Gap- Thiruvananthapuram



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 78,601 with the excess demand across skilled segment and excess supply in the semi-skilled and minimally skilled segments.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources.*
  However, the excess supply in the semi-skilled segment presents a case for introducing training programs to augment the skills of this segment to cater to the demand in the key sectors of growth.
- *Even in cases of excess supply, it is pertinent to note that it does not imply industry demand for skills is being sufficiently met. Employability linked skills have emerged as a key area of concern among*

industry. The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers.

- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Indicative Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Thiruvananthapuram are given in the table below. These will be further augmented with gaps identified for each priority sector in the final report.

Table 158: Qualitative Skill Gaps –Construction and Healthcare Sector

Sector	Level	Skill Gap
Construction	Engineers	• Lack of exposure to latest technology • Inadequate understanding of practical application of theory • Lack of awareness on safety standards
	Supervisors	• Inadequate understanding of theoretical concepts • Inadequate communication skills
	Construction Labourers	• Limited Communication skills in local language • Limited ability to understand drawings • Lack of hygiene • Poor awareness of safety standards
Healthcare	Mid-Size Healthcare device equipment company – Factory Workers	• Lack of understanding of safety standards • Lack of awareness of Good Manufacturing Practice (GMP), 5S standards etc.
Tourism, Hospitality and Travel	Tour Operators and Guides	• Poor English and Communication Skills • Lack of grooming and punctuality • Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels - Customer facing staff	• Poor English and Communication Skills • Poor customer service levels
	Restaurants and Hotels – Management and Proprietors	• Poor management skills • Limited accounting and business knowledge
	Restaurants and Hotels – Kitchen Staff	• Limited knowledge of variety cuisines • Lack of adherence to hygiene standards
	Drivers – Auto rickshaws, Taxis	• Lack of adequate communication skills • Lack of adherence to driving rules and regulations • Inadequate knowledge of safety norms

4.12.7 Recommendations

Future Growth Opportunities in Thiruvananthapuram

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high incremental demand of workers, high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Thiruvananthapuram.

Table 159: Key Growth Sectors - Thiruvananthapuram

Sector	Growth Opportunities
Building & Construction	• This sector contributes the highest share to the secondary sector DDP in the district (52%) in 2011-12. • In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from building and construction (16.6%).
Communication	• In terms of growth rate, the communication sector has registered the fastest growth rate of 29% between 2004-05 and 2011-12. • Thiruvananthapuram city being the state capital of Kerala is expected to see growth in employment in the communication sector at nearly 7% between 2011-21.
Tourism and Hospitality	• Trade, Hotels & Restaurants is the highest contributor within the tertiary sector. Tourism and hospitality sector which contributes significantly to the trade, hotels and restaurants segment is expected to be key sectors of employment in the future. • Thiruvananthapuram city is well connected with major cities and is also a potential for medical tourism. In terms of international and domestic tourist arrivals, it is one of the leading destinations in Kerala.
Banking, Financial Services & Insurance (BFSI)	• In terms of growth rate, the banking and insurance sector has registered the second fastest growth rate of 14.5% between 2004-05 and 2011-12. • Thiruvananthapuram city being the state capital of Kerala is expected to see growth in employment in the BFSI sector at nearly 10% between 2011-21.
IT & ITeS	• IT and ITeS sector is a key sector in the district and contributes more than 80% of software exports in the state. The district has a Techno Park with over 230 companies and more than 40,000 IT professionals. • While the projected incremental demand in IT and ITeS contribute to 5%, growth of these sectors typically result in indirect employment.
Education and Skill Development	• There are multiple centres of excellence and research centres in this district • There are 24 engineering colleges in the district and is one of the hubs for technical education in the state. • Education is expected to contribute significantly to the creation of jobs in the skilled segments. This is in line with the views of the industry and government officials that Thiruvananthapuram is expected to emerge as one of the hubs for education and health care.
Healthcare	• Healthcare and Life Sciences will also be a focus area with the establishment of the Life Sciences Park by KSIDC. • There are 3 medical colleges in the district including Sri Chitra Tirunal Institute for Medical Sciences & Technology, Regional Cancer Centre, Trivandrum Medical College, etc.

Sector	Growth Opportunities
Manufacturing	• The district ranks second in the state in terms of the number of medium and large scale industries present. The major sectors include agro based industries and chemical and pharmaceuticals apart from traditional industries like handloom, handicrafts and coir. • The textiles/garments sector is a key focus sector with an established KINFRA (Kerala Industrial Infrastructure Development Corporation) Apparel Park set up in the district.

Considering economic and skill landscape of Thiruvananthapuram, the proposed action plan that would be prepared at the end of the study would include the following priority areas in addition to other areas that may be identified during the course of the study. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 160: Initial recommendations for stakeholders - Thiruvananthapuram

Stakeholder	Priority Areas	
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz.	
	• Building & Construction • Communication • Tourism and Hospitality • BFSI	• IT & ITeS • Education and Skill Development • Healthcare • Manufacturing • Retail
Private training providers	• Skill development institutes need to include soft skills esp. English language/ communication skills as part of the curriculum. • There is demand for more courses in computer-based trades and courses in IT & ITeS, BFSI, Healthcare and Communication sectors can be explored. All training providers to provide recognised certificates for all trades. • Engage industry practitioners from various fields who may be retired as faculty members in skill development/training institutes • The interactions revealed that workers might be returning from Middle East to work in the district and targeted skill development/ training initiatives may be designed to orient them back to the local context and requirements	
Government	• Functioning of the Employment Exchanges should be improved so that they are able to offer better services. There is an initiative by the government related to the same and needs to be enhanced in the future. • Infrastructure and capacity in ITIs and ITCs could be enhanced to include latest equipment/ machinery especially civil & surveyor trades • Virtual Classrooms initiative to scale up in training related to building/ construction and Mechanic, electrical trades in ITI/ ITCs • Soft Skills may be provided at high school level in government schools	
Industry	• Industry players should encourage training apprenticeships for trainees from institutes with reasonable stipend • More industry interactions could be initiated in the Building & Construction sector, and private skill training providers for BFSI, IT/ITeS and Healthcare • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Communication, BFSI, IT/ITeS etc.	

4.13 Thrissur

Thrissur is located in the Central Kerala, India and was formed on 1st July, 1949. It lies between the north latitudes 10 31' and 10 52' and east 76 13' and 76 21'. It is bounded on the North by the Malappuram and Palakkad districts, on the east by Palakkad and Tamilnadu, on the west by Arabian Sea and on the south by the Ernakulam district of Kerala. The district is spread over an area of 3032 Sq. kms, which accounts for 7.8 percent of the total area of the state. The district is divided into 5 taluks, 92 Gram Panchayats and 254 villages. It has a coastline of 54 km and five rivers, i.e. Periyar, Chalakudy, Karuvannur, Kurumali River and Ponnani are the main river systems of the district.

4.13.1 Demography

Thrissur has a population of 31.2 Lakhs according to the 2011 Census of which about 67.1% reside in urban areas.[289] According to Kerala Economic Review 2012-13, Thrissur ranks 4th in the state in terms of population with a growth rate of 4.9% with a population density of 1108 persons per Km^2.The urban population of Thrissur is higher in comparison to the state average and the district has a higher sex ratio than the state, as indicated in the table below.

Table 161: Demographic Indicators – Thrissur

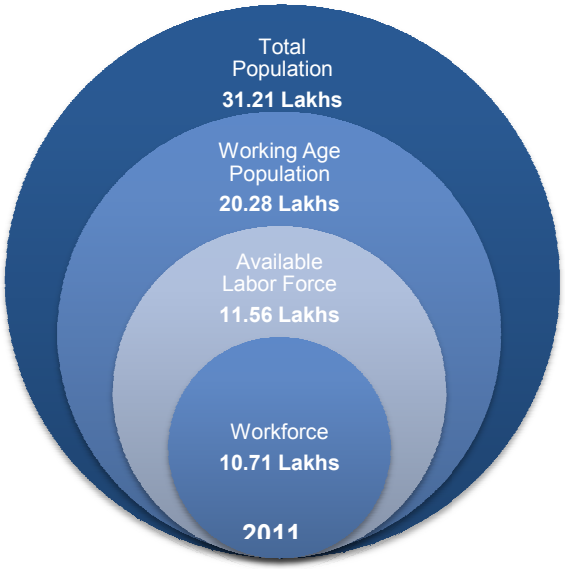
Demography	Thrissur	Kerala
Population (2011)	31,21,200	33,406,061
Decadal Population Growth Rate (2001-11)	4.9	4.8
Population density per sq. km (2011)	1031	859
Sex Ratio (2011)	1108	1084
Percentage of Urban Population (2011)	67.1%	47.7%
Percentage of SC population(2011)	10.3%	9.1%
Percentage of ST population(2011)[290]	0.3%	1.4%

Source: Census 2011

The district ranks 7th in the state terms of population density.[291] Nearly half of SC population of the State is distributed in the four districts of Palakkad, Thiruvananthapuram, Thrissur and Kollam.[292] It has the lowest proportion of Scheduled Tribes in the state.

The adjoining figure depicts the estimated workforce in Thrissur in the context of the population of the district. Out of the total population of 31.2 Lakhs the working age population (between 15-59 age group) constitutes to 20.28 lakhs or nearly 65%.

Figure 140: Work Force in Thrissur- 2011



Source: Census 2011 and Deloitte Analysis

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 10.7 lakhs or nearly 52.8% of the working age population.

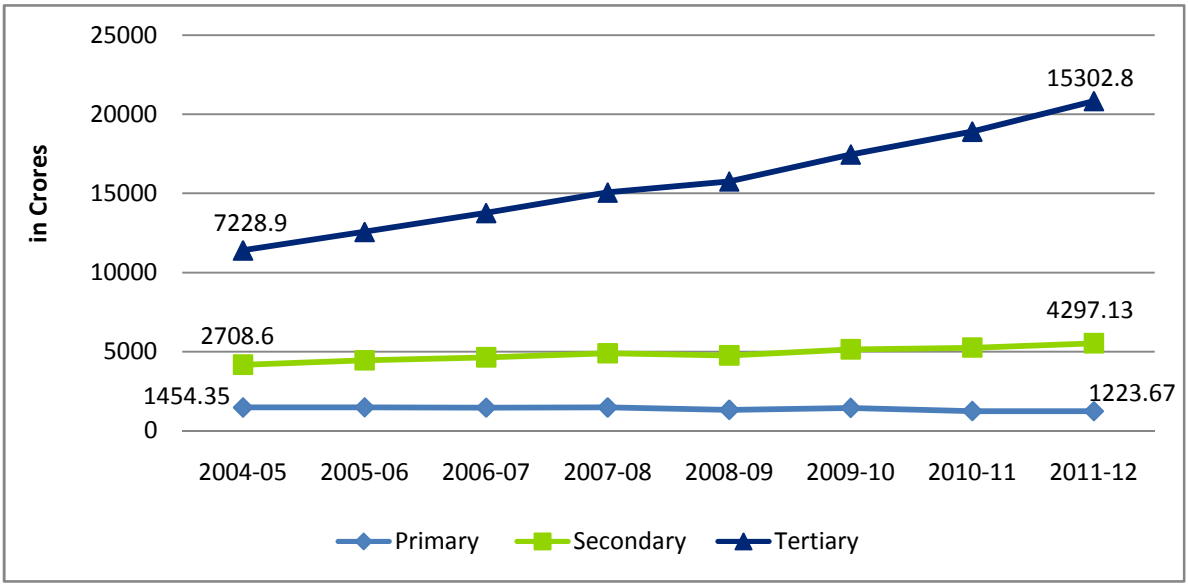
[289] Census of India, 2011
[290] Census 2011
[291] Kerala Economic Review 2012
[292] Human Development Report 2012

4.13.2 Economic Profile

The Gross District Domestic Product (GDDP) of Thrissur has grown at a growth rate (CAGR) of 9.0% between 2004-05 (Rs. 11391 Cr.) and 2011-12 (Rs. 20823 Cr.). In 2011-12, tertiary sector contributed about 73.5% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant activities, followed by the secondary sector at 20.6% and primary sector at 5.9%.

As indicated in the graph below, the contribution of primary sector has been steadily declining from 1454.3 Cr. (2004-05) to 1223.7 Cr. (2011-12). The contribution of secondary sector also increased from 278.6 Cr. to 4297.1 Cr. during the same period. The tertiary sector has registered positive growth in its share to GDDP from 7228.9 Cr. to 15302.8 Cr. over this period.

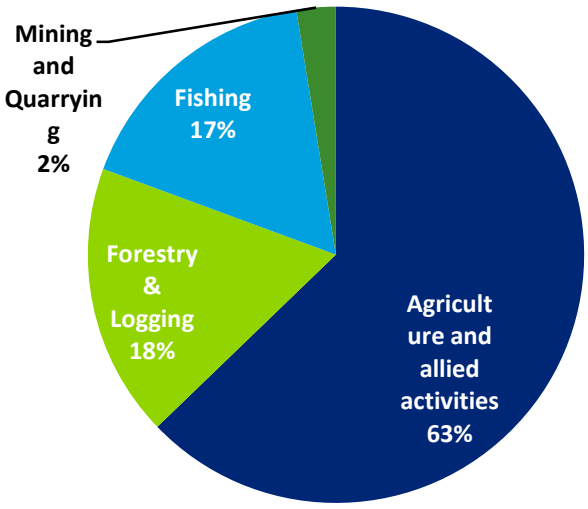
Figure 141: Sector Level Contribution to GDDP, Thrissur



Source: Govt. of Kerala: Department of Economics and Statistics

Primary Sector

Figure 142: Primary Sector Contribution, 2011-12– Thrissur



The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 5.9% to the GDDP in 2011-12.The percentage contribution of primary sector to the GDDP has seen a drastic decline of 6.9% between 2004-05 and 2011-12, with a negative CAGR of 2.4% owing to a decline of agriculture and allied activities (CAGR -3.9%).

In the district, net sown area is 59.8% of total geographic area of 3,02,919 hectares, which is slightly higher than that for Kerala (52.5%). The total irrigated area is 64399 Ha with most contribution from private wells (37160 Ha) and government canals (13875 Ha). The major crops cultivated in the district include Paddy, Chillies,

tamarind, nutmeg etc. In terms of area under cultivation, Thrissur stands 2st in position for nutmeg and in 3rd position for mango and plantain.[293]

Key characteristics[294] of the primary sector in Thrissur are presented below:

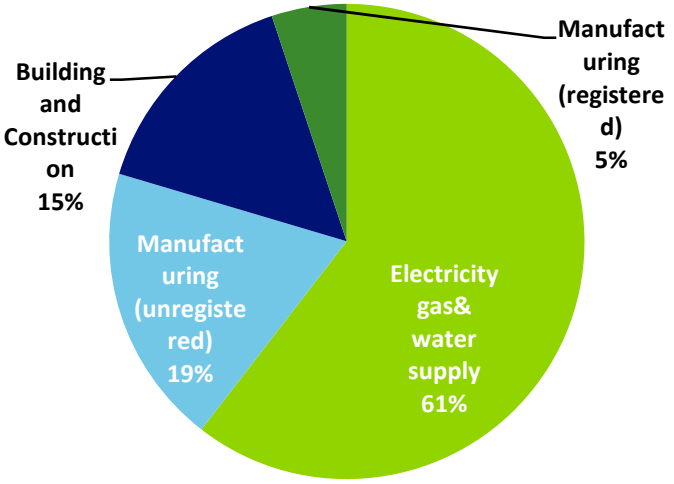
- Agriculture & Allied activities constitute about 63% of the contribution of primary sector to the GDDP.
- The district is rich in crops like nutmeg, mango, paddy, coconut, plantain etc.
- Thrissur district stands 2nd in the cultivation of nutmeg with a production of 3794 tonnes which accounts for 31.5% of the total production
- The minerals in the district are granite and laterite.

Secondary Sector

Figure 143: Secondary Sector Contribution, 2011-12– Thrissur

The contribution of secondary sector to district GDP in 2011-12 was about 20.6%. The sector has registered a growth of 6.8% between 2004-05 and 2011-12. Building and construction sector recorded highest growth rate of 7.8%, followed by manufacturing sector (6.6%).

According to the MSME District Profile for Thrissur, there are a total of 28290 registered industrial units with 11 medium and large units in the district. The key identified clusters[295] in the manufacturing sector include Ayurvedic Cluster, Terra Tile Cluster, and Kuthampully Handloom Cluster



Source: Govt of Kerala, Directorate of Economics and Statistics

Key characteristics[296] of the secondary sector in Thrissur are presented below:

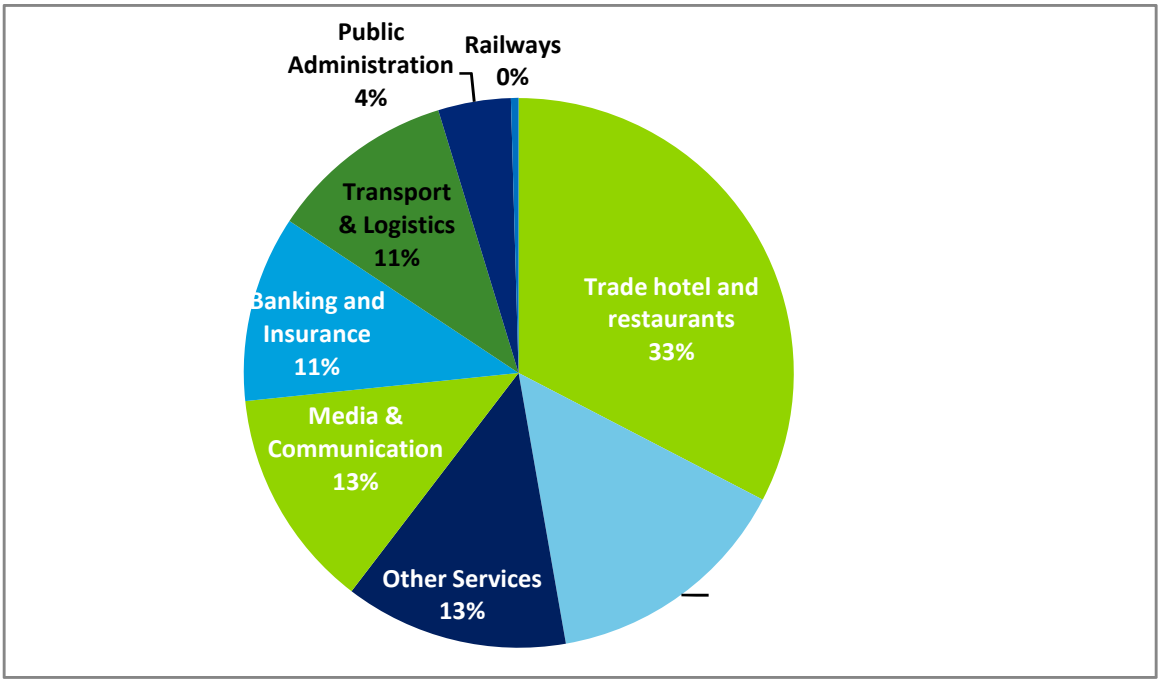
- Building and Construction (61%) contributes the highest followed by Manufacturing (34%).
- The district accounts for 10.1% of the state secondary output and ranks 3rd after Ernakulam and Thiruvananthapuram
- The major sectors are handlooms, textiles, tiles, cashew and canning
- The district has one of the five integrated power loom co-operative societies in the state.
- KCPL, Kerala Solvent Extraction Ltd. and Thrissur Co-operative Spinning Mill etc. are some of the large scale enterprises in the district
- Kinfra Small Industries Park focuses on Ceramic products, building materials, plastic products, spices, light and general engineering

Tertiary Sector

[293] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[294] Agricultural statistics 2011-12, District MSME Report and Kerala Economic Review
[295] Brief Industrial Profile of Thrissur District 2011-12, MSME Development Institute
[296] Emerging Kerala website, District MSME Report and Kerala Economic Review

The tertiary sector has been increasing its share of contribution from 63.5% to 72.0% to GDDP between 2004-05 and 2011-12. The sector grew by 11.3% during the same period, in real terms. Key contributors in the sector include trade, hotels and restaurants, real estate services, communication and other services.

Figure 144: Tertiary Sector Contribution to GDDP– Thrissur



Source: Govt. of Kerala: Department of Economics and Statistics

Key characteristics[297] of the tertiary sector in Thrissur are presented below:

- The tertiary sector (services) contributes a significant share of 72.0% to the district's economy.
- Thrissur ranks third among the states in terms of high tertiary output
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector
- Athirapilly Water Falls, Chavakad Beach, Punnathur Kotta Elephant Sanctuary are some of the major tourist attractions in the district.
- Thrissur has an Infopark for promotion of IT sector.

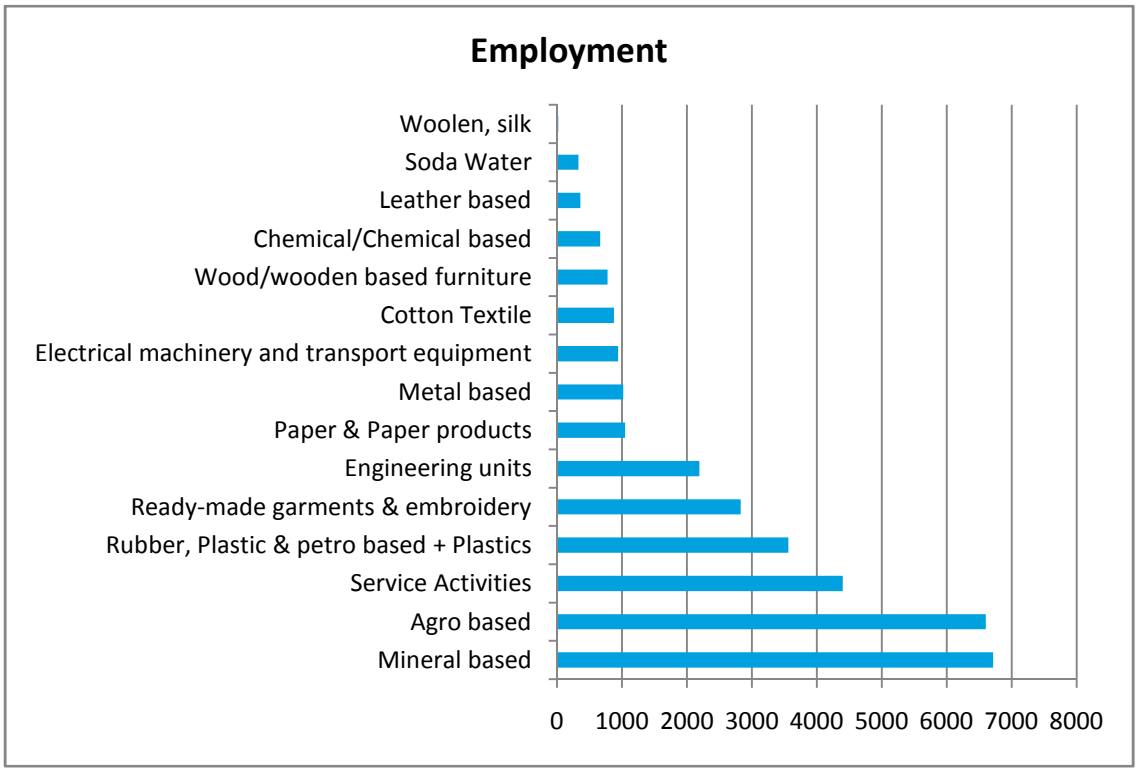
[297] Emerging Kerala website, District MSME Report and Kerala Economic Review

4.13.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2012-13 is highest in the tertiary sector (52.6%), followed by the secondary sector (32.1%) and the primary sector (15.4%)[298]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (37.4%) and other services (21.5%) sectors. Within the secondary sector, the largest employer is the building and construction sector (54.5%) and manufacturing (44.5%).

Within the MSME Sector, as shown in the graph below, mineral based units employ the largest share of workers (6712), followed by agro based units (6600) and repairs and servicing (4400).

Figure 145: Employment in MSMEs - Thrissur



Source: MSME DI Profile, Thrissur

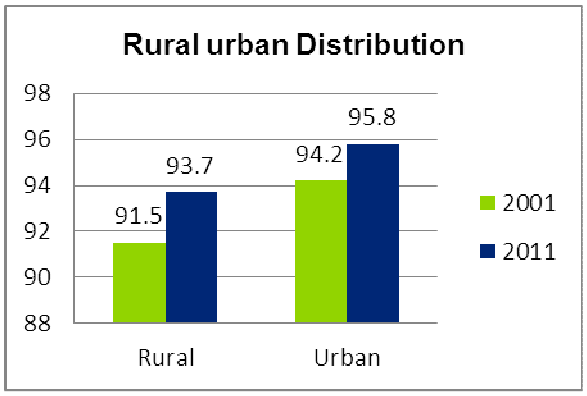
[298] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.13.4 Education Infrastructure

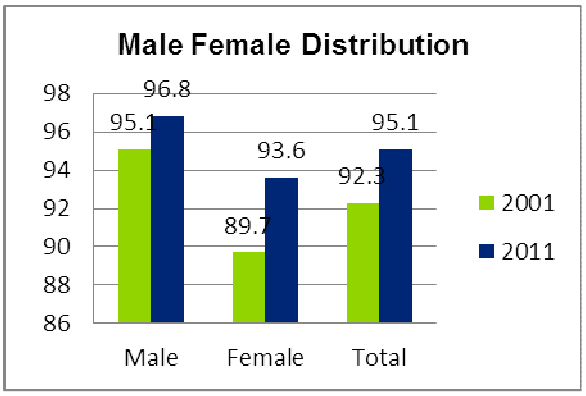
Thrissur has a higher literacy rate of 95.1% in comparison to state average of 93.9%. In 2011, male and female literacy rates were 96.8% and 93.6% respectively with a total literacy rate of 95.1% as compared to 2001 literacy rate of 92.3%. In terms of the rural urban distribution, the literacy rates are 93.7% and 95.8% for rural and urban areas respectively in the year 2011.

Figure 146: Literacy Rate by Residence and Gender, Thrissur

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Thrissur ranks second among the states both in terms of total enrolments as the number of teachers. The district has 1,194 schools with enrolments of 174718, 142,557 and 124614 in lower primary, upper primary and high school levels respectively. The total number of schools in Thrissur account for 7.8% of the total schools in the state while the enrolments in the school level (up to class X) account for 9.5% of the total state enrolments. The total number of teachers (19249) over the three sections account for 10.5% of the total teachers in the state.[299]

Table 162: School Education Profile - Thrissur

School category	Thrissur	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	560	7.1%
Upper Primary Schools (V-VII)	289	7.7%
High Schools (VIII-X)	345	9.5%
Total	**1,194**	**7.8%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	174,718	9.7%
Upper Primary Schools (V-VII)	142,557	9.4%
High Schools (VIII-X)	124614	9.2%
Total	**441,889**	**9.5%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	4,157	8.5%
Upper Primary Schools(V-VII)	5,550	9.8%
High Schools (VIII-X)	9,542	12.3%
Total	**19,249**	**10.5%**
Source: DISE and SEMIS data 2011-12		

[299] DISE data 2011-12 and SEMIS data 2011-12

Vocational Education

In terms of vocational training infrastructure, Thrissur has 36 vocational higher secondary schools (26-Govt., 10-Aided) [300]. It has a total of 53 ITIs and ITCs[301]. Some of the trades offered in the Government ITIs and ITCs are mechanic radio and television, electrician, electronics mechanic, fitter and machinist whereas most of the private ITIs and ITCs offer courses on diverse trades like draughtsman (civil), electrician, electronics mechanic, fitter and mechanic (motor vehicle). The ITIs of the district have a total intake of 5184 of which 1100 is in the government and 4084 in the ITCs. Further it is to be noted that while being 8 in number (15.1% of the total), the government ITIs account for 1100 seats (21.2% of total).

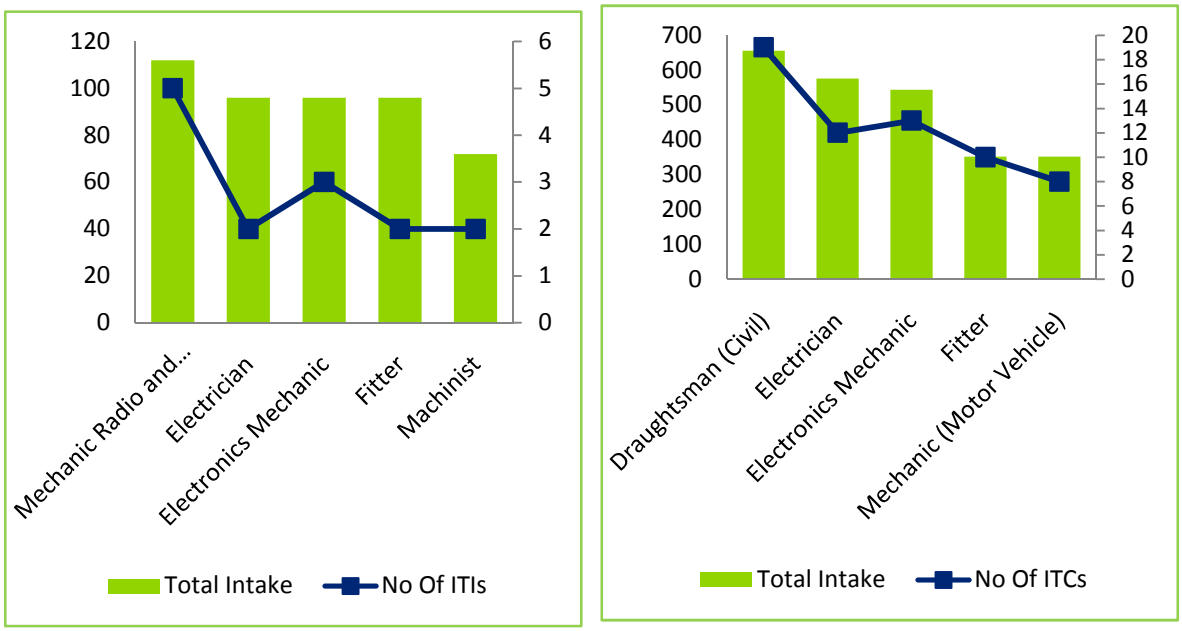
Table 163: Govt. ITIs in Thrissur and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Government ITI, Chalakudy	18	54
Government ITC (SCDD), Nedupuzha	1	2
Government ITC ,Mayannur	1	1
Government ITC, Pulloot	1	1
Government ITC Chalakudy	2	3
Government ITC, Nadathara	2	2
Government ITC, Mala Kuruvalisy	2	3
Government ITI for Women, Vellikkuangara	3	6

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Thrissur is given in the figure below:

Figure 147:Trades with max seats in ITI and ITCs- Thrissur



Source: DGET website; Deloitte Analysis

[300] Kerala Economic Review, 2012
[301] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm

In addition to ITIs/ITCs, Thrissur has 8 Polytechnic Colleges, 3 Government polytechnics and one Government Women's polytechnic offering Diploma programs in Electronics, Computer Engineering and Commercial Practice with approved intake of 60 students. . The Government polytechnic offers diploma programme in electronics, computer science engineering and textile, polymer technology with approved intake ranging from 40 to 60 seats.[302]

Higher Education Infrastructure

As depicted in the table below, there is 17 engineering college, and 23 arts and science colleges. The district has 5 medical and 9 Nursing colleges. It has 2 agriculture colleges and 1 Law College as well. .

The Centres of Excellence in Thrissur include Kerala University of Health and Allied Sciences, Kerala Agricultural University, Kerala Forest Research Institute, Amala Cancer Research Centre, Amala Ayurvedic Hospital and Research Centre, Kerala Sahitya Akademi, Kerala Kalamandalam Deemed University for Art and Culture, Rashtriya Sanskrit Sansthan Deemed University, Oushadhi, Vaidyaratnam Oushadhasala.

Table 164: Higher Education Profile – Thrissur

Educational Infrastructure	Number of Institutes		Source
	Thrissur	Intake	
Engineering/ Technology	17	**5,343**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	23	**9180**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	2	**89**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	5	**547**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	9	**644**	
Paramedical and Applied Sciences	2	**76**	
Law	1	**190**	*CEE website*
Management	5	**360**	*AICTE website*
Total	64	**16239**	

[302] Department of Technical Education, GOK

4.13.5 Youth Aspirations

The key observations about aspirations of the youth of the district have been captured below along the broad dimensions of education and employment:

Table 165: Youth Aspirations- Thrissur

Parameters	Responses
Preferred Jobs	• Most of the respondents prefer Govt. jobs as they offer security of employment. • The average salary expectations of the youth range from Rs. 10,000 to Rs. 15,000 (per month) • Most of the respondents are willing to relocate to another district or state. E.g.: Bangalore is a preferred location. • None of the respondents would like to set up their own establishment. • There are limited employment opportunities in the district. Salaries offered are also low.
Preferred Course	• Computer Operator Programme Application (COPA) and Electronics courses are popular among ITI students.
Issues with VET Infrastructure	• Library facilities need improvement, number of reference books need to be increased. • Institute does not provide any hostel accommodation, canteen or transportation facilities for students. • Teachers should have more experience and training in ITI specific trades
Suggestions by Youth	• Soft skills training, including English language, should be given to students in rural areas – right from high school level • Course content should be revised based on industry need and trends. Institute should partner with the industry to bring about this change. • Government should schedule the ITI courses in alignment with polytechnics. Currently ITI exams are completed by July and Polytechnic admissions are closed by end of June. Students who wish to apply to polytechnics are forced to wait an entire year. • Respondents felt that institutes should conduct exhibitions and competitions to encourage innovation and entrepreneurship.

4.13.6 Skill Gap Assessment

Based on our analysis and primary interaction, the primary sector is expected to decline and people will continue to move out of this sector. If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 8.0%. The secondary and tertiary sector contributions are estimated to increase to 31.6% and 60.3% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the building and construction (18.2%), trade, hotels and restaurants (17.3 %) and other services (14.4%). Accordingly building and construction, tourism and hospitality sector, retail sector which constitute the trade, hotels and restaurants segment are expected to be key sectors of employment in the future.

Table 166: Projected Employment Contribution and Growth Rate - Thrissur

#	Economic Sector [303]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-4.3%	7.4%
2	Mining and Quarrying	-1.0%	0.6%
3	Manufacturing	1.5%	13.2%
4	Electricity, Gas & Water supply	0.3%	0.3%
5	Building and Construction	2.7%	18.2%
6	Trade, Hotels and Restaurants	1.0%	17.3%
7	Railways	-3.2%	0.1%
8	Transport & Storage	0.2%	4.4%
9	Communication	6.7%	7.9%
10	Banking and Insurance	10.2%	6.4%
11	Real estate services and business services etc.	6.9%	6.8%
12	Public Administration	1.6%	3.1%
13	Other Services	4.8%	14.4%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology highlighted in section 2 the estimated incremental manpower demand in the period 2012-22 will be about 3.66 lakhs. Building and Construction sector is expected to contribute a significant proportion of this demand (17.3%) based on the relatively higher anticipated growth rates, along with BFSI and Communication segments.

Table 167: Incremental Demand – Key sectors (in '00s) - Thrissur

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Building & construction	44	118	133	51	135	152
Banking/ Insurance/ Finance	113	102	11	184	166	18
Communication	47	94	94	65	130	130
Education/ Skill development services	97	22	30	123	28	38
Other Services	80	37	6	110	51	8
Select Informal Sector	12	42	67	15	53	84
manufacturing	21	62	48	23	67	52
Organized retail	12	38	27	12	40	28
IT / ITES Services	41	19	3	57	26	4
Real estate services	7	24	17	10	33	23
Total +ve demand	518	614	464	699	794	570
Overall Incremental Demand	**3659**					

[303] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

	2012-17			2017-2022		
Workers exiting sectors						
Agriculture and allied activities	-11	-36	-312	-8	-26	-226
Total workers exiting[304]	-11	-37	-315	-8	-27	-229

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 62000) is expected to exit from the agriculture sector between 2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *In terms of anticipated incremental demand, Building & Construction (17.3%), BFSI (16.2%) and Communication (15.3%) are the key sectors.*

[304] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Manpower Supply

The population of Thrissur in 2011 was about 31.2 lakhs which is expected to increase to about 32.4 lakhs in 2017 and about 33.47 lakhs in 2022. As per the methodology the estimated incremental manpower supply from 2012 to 2022 will be about 2.52 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district

Table 168: Incremental Labour-force as per Skill Levels- Thrissur

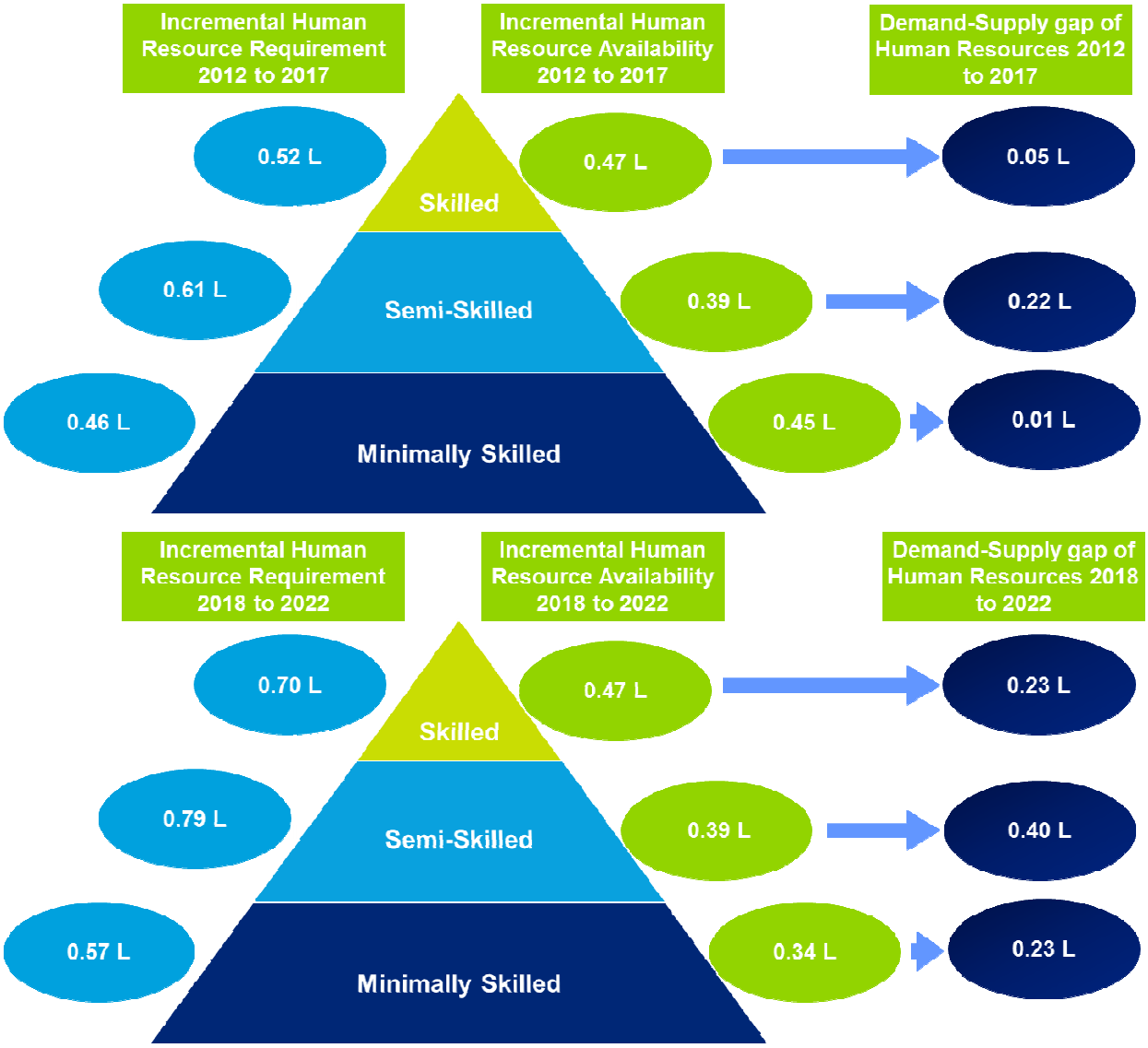
	2012-17	2017-22	Total
Skilled	466	469	935
Semi-Skilled	391	396	787
Minimally-Skilled	459	336	795
Incremental manpower supply (2012-22)	2517		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 34.8% in the 2012-17 period to 28.0% in the 2018-22 periods. This may be explained by improved enrolment and transition at the high school level, coupled with high pass ratio in the state- over 90% in X standard and nearly 80% in the XII standard. However it is important to note that the presence of a high percentage of minimally skilled labour in the district throughout the period of 10 years, a characteristic of a district with 96.14% rural population in the year 2011.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 148: Incremental HR Demand Supply Gap- Thrissur



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about 1,14,134 with the excess demand across all the segments however the gap for skilled and semi-skilled labour is more in comparison to minimally skilled manpower. When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources.*
- *It is important to note that Thrissur being a key district in terms of secondary and tertiary output has a higher demand and therefore shows a positive demand supply gap in all the segments.*

- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Indicative Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Thrissur are given in the table below. These will be further augmented with gaps identified for each priority sector in the final report.

Table 169: Qualitative Skill Gaps –Construction and Healthcare Sector

Sector	Level	Skill Gap
Construction	Engineers	• Lack of exposure to latest technology • Inadequate understanding of practical application of theory • Lack of awareness on safety standards
	Supervisors	• Inadequate understanding of theoretical concepts • Inadequate communication skills
	Construction Labourers	• Limited Communication skills in local language • Limited ability to understand drawings • Lack of hygiene • Poor awareness of safety standards
Tourism, Hospitality and Travel	Tour Operators and Guides	• Poor English and Communication Skills • Lack of grooming and punctuality • Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels - Customer facing staff	• Poor English and Communication Skills • Poor customer service levels
	Restaurants and Hotels – Management and Proprietors	• Poor management skills • Limited accounting and business knowledge
	Restaurants and Hotels – Kitchen Staff	• Limited knowledge of variety cuisines • Lack of adherence to hygiene standards
	Drivers – Auto rickshaws, Taxis	• Lack of adequate communication skills • Lack of adherence to driving rules and regulations • Inadequate knowledge of safety norms

4.13.7 Recommendations

Future Growth Opportunities in Thrissur

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high incremental demand of workers, high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Thrissur.

Table 170: Key Growth Sectors - Thrissur

Sector	Growth Opportunities
Tourism and Hospitality	• Trade, Hotels & Restaurants is expected to be the second highest contributor to employment in 2021-22. • According to the Emerging Kerala website, medical tourism, beach-based resorts are expected to provide significant investment potential in the future.
Banking, Financial Services & Insurance (BFSI)	• The district has also emerged as a prominent banking hub of South India. It is the headquarters of three major scheduled banks, South Indian Bank, Catholic Syrian Bank and Dhanalakshmi Bank Ltd
Manufacturing – Ayurveda drugs, Rubber and Plastics	• Out of the 850 Ayurvedic drug-manufacturing units in Kerala, about 150 units, including some majors like the Oushadhi, Vaidyaratnam Oushadhasala, KP Namboodiris are headquartered in the district. An Ayurvedic manufacturing cluster has been developed at Koratty in Thrissur[305] • Tyre-moulding is a key industry in Thrissur.
Building & Construction	• This sector contributes the highest share to the secondary sector DDP in the district (61%) in 2011-12. In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from building and construction (18.2%).
Education and Skill Development	• Education is expected to contribute significantly to the creation of jobs in the skilled segments. This is in line with the views of the industry and government officials that Thrissur is expected to emerge as one of the hubs for education and health care.

Considering economic and skill landscape of Thrissur, the following table summarizes recommendations for key stakeholders. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government

Table 171: Recommendations for stakeholders - Thrissur

Stakeholder	Priority Areas	
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz.	
	• Building & Construction • Tourism and Hospitality • BFSI	• Education and Skill Development • Manufacturing • Food Processing
Private training providers	• Course content should be revised based on industry need and trends. Institute should partner with the industry to bring about this change • Training institutes can conduct exhibitions and competitions to encourage innovation and entrepreneurship.	

[305] Emerging Kerala Website

Government	• Soft Skills may be provided at high school level
Industry	• Industry players should encourage training apprenticeships for trainees from institutes with reasonable stipend • More industry interactions could be initiated in the Building & Construction sector, and private skill training providers for BFSI, Tourism & Hospitality, Education/Skill Development etc. • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as Communication, BFSI, Tourism & Hospitality, Education/Skill Development etc.

4.14 Wayanad

Wayanad is located in the north-east of Kerala, India and was formed on November 1, 1980 as the 12th district, carved out of Kozhikode and Kannur districts. It lies between the north latitudes 11 27' and 15 58' and east 75 47' and 70 27'. It is bounded on the North by the Coorg district of Karnataka, on the east by Nilgiris and Mysore districts of Tamilnadu and Karnataka respectively, and on the west by Kozhikode and Kannur and on the south by the Malappuram district of Kerala. The district is spread over an area of 2132 Sq. kms, which accounts for 5.5% of the total area of the state. The district is divided into 3 taluks and 25 Gram Panchayats and 49 villages.

4.14.1 Demography

Wayanad has a population of 8.17 Lakhs as of 2011 of which about 3.9% reside in urban areas.[306] According to Kerala Economic review 2012-13, Wayanad ranks second last in the state in terms of population with a growth rate of 4.7% and a population density of 384 persons per Km^2.The population of Wayanad is concentrated in the rural areas which account for 96.1% of the district population. The district has a lower sex ratio (1035) than the state (1084), as indicated in the table below.

Table 172: Demographic Indicators – Wayanad

Demography	Wayanad	Kerala
Population (2011)	8,17,420 (2.4%)	33,406,061
Decadal Population Growth Rate (2001-11)	4.7%	4.8%
Population density per sq. km (2011)	384	859
Sex Ratio (2011)	1035	1084
Percentage of Urban Population (2011)	3.8%	47.7%
Percentage of SC population(2011)	3.9%	9.1%
Percentage of ST population(2011)[307]	18.5%	1.4%

Source: Census 2011

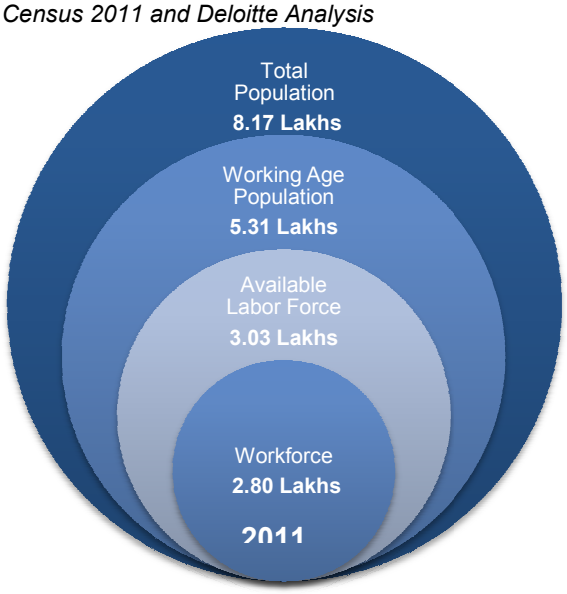
The district ranks second last in terms of the population density in Kerala.[308] It has the lowest population among all districts in the state. The Scheduled Tribe population in Kerala is geographically concentrated and overwhelmingly rural. Highest concentration of Scheduled Tribes is seen in Wayanad followed by Idukki and Palakkad and these three districts together account for over 60 % of STs in the State.[309]

The adjoining figure depicts the estimated workforce in Wayanad in the context of the population of the district. Out of the total population of 8.2 Lakhs the working age population (between 15-59 age group) constitutes to 5.31 lakhs (64.7%).

Based on the labour force participation rate and the worker participation rate, the workers/ workforce in 2011 are estimated at 2.8 lakhs, approximately 52.8% of the working age population.

Figure 149: Work Force in Wayanad- 2011

Source: Census 2011 and Deloitte Analysis



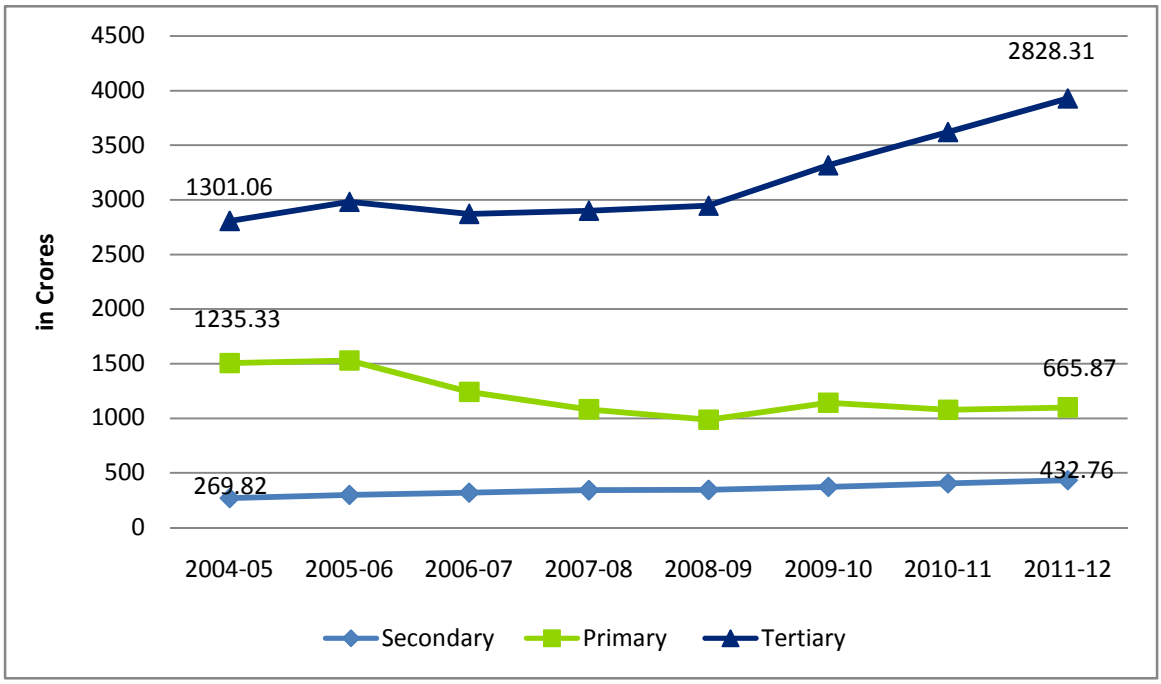
[306] Census of India, 2011
[307] Census 2011
[308] Kerala Economic Review 2012-13
[309] Kerala Human Development Report 2012

4.14.2 Economic Profile

The Gross District Domestic Product (GDDP) of Wayanad has grown at a growth rate (CAGR) of 4.9% between 2004-05 (Rs. 2806 Cr.) and 2011-12 (Rs. 3927 Cr.). In 2011-12, tertiary sector contributed about 72% of the GDDP in 2011-12 primarily on account of contribution coming from trade, hotels & restaurant and real estate activities, followed by the primary sector at 17% and the secondary sector at 11%. This is in contrast to most of the districts of the state where the secondary sector contributes more than the primary sector.

As indicated in the graph below, the contribution of primary sector has been steadily declining from 1235.3 Cr. (2004-05) to 665.9 Cr. (2011-12). On the other hand, the secondary sector and tertiary sector have registered positive growth in its share to GDDP from 269.8 Cr. to 432.7 Cr. and from 1301 Cr. to 2828.3 Cr. respectively, over this period.

Figure 150: Sector Level Contribution to GDDP, Wayanad

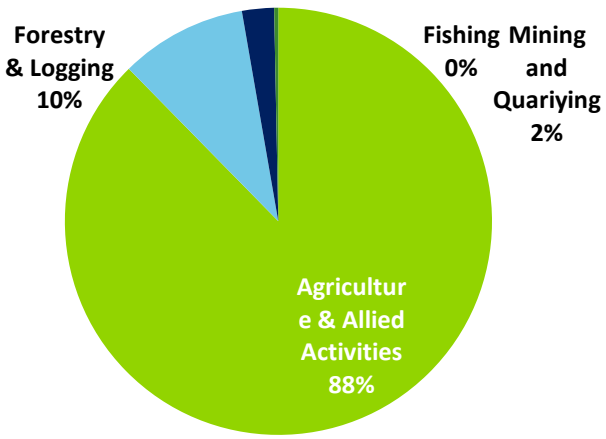


Source: Govt. of Kerala: Department of Economics and Statistics

Primary Sector

Figure 151: Primary Sector Contribution - Wayanad, 2011-12

The primary sector (agriculture, forestry & logging, fishing and mining & quarrying) contributed about 16.9% to the GDDP in 2011-12. In spite of being a predominantly rural district, the primary sector contribution to the GDDP has seen a drastic decline of 27% between 2004-05 and 2011-12, with a negative CAGR of 8.4% owing to a decline of agriculture and allied activities (CAGR of -9.5%) although mining and quarrying, fishing and forestry logging registered a positive growth.



In the district, net sown area is 54.1% of total geographic area of 2,12,966 hectares, which is slightly higher than that for Kerala (52.5%). The total irrigated area is 13902 Ha. The major crops cultivated in the district include paddy, ginger, turmeric, jackfruit, banana, etc. In terms of area under cultivation, Wayanad stands first in the state for yam and coffee cultivation and second in position for pepper and third for arecanut. It is also a major producer of banana.[310]

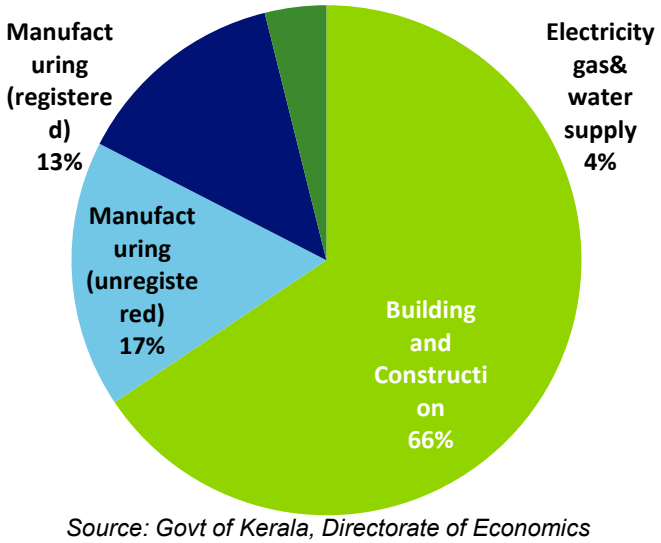
It is important to note that forests cover approximately 37% of the total geographical area. Further, the percentage of area under forests in Wayanad is greatest among all the districts. The forests are an important source of hard wood (teak, sandalwood, etc.), softwood (eucalyptus, rubber), medicinal plants, etc.[311]

Key characteristics[312] of the primary sector in Wayanad are presented below:

- Agriculture & Allied activities constitute about 88% of the contribution of primary sector to the GDDP.
- The district is rich in crops like coffee, pepper, tea, arecanut, cardamom, banana, yam, ginger, turmeric, etc.
- Wayanad district stands 1st in the cultivation of coffee with an area of 67,364 Ha and it represents 79% of the total area under coffee cultivation in the state.
- It is an important district in the state for mining. The important minerals in the district are granite and laterite building stone.

Secondary Sector

Figure 152: Secondary Sector Contribution - Wayanad, 2011-12



Source: Govt of Kerala, Directorate of Economics and Statistics

The contribution of secondary sector to district GDP in 2011-12 was approximately 11%. The sector has registered a growth of 7% (in real terms) between 2004-05 and 2011-12. Manufacturing sector recorded highest growth rate of 18.5%, while building and construction sector showed a slight decline (3.4%).

According to the MSME District Profile for Wayanad, there are a total of 1338 registered industrial units with 2 medium and large units in the district. The total employment in the units is 5244 workers with a total turnover of Rs. 10418 lakhs (small scale 4918 lakhs, medium and large scale 5500 lakhs).[313]

The key identified clusters[314] in the manufacturing sector have been highlighted below:

- **Kalpetta Bamboo Cluster, Wayanad**: Bamboo products like bamboo craft, curtains, shoot pickles, etc. are manufactured in this cluster with around 20 functional units with a turnover of Rs. 1.6 Cr.. The focus area for this cluster is the direct export of the products.

[310] Agricultural Statistics, Department of Economics & Statistics, Kerala 2012
[311] Kerala economic review 2012-13
[312] Agricultural statistics 2011-12, District Industrial Profile, MSME Development Institute
[313] District wise MSME Report
[314] Brief Industrial Profile of Wayanad District 2011-12, MSME Development Institute

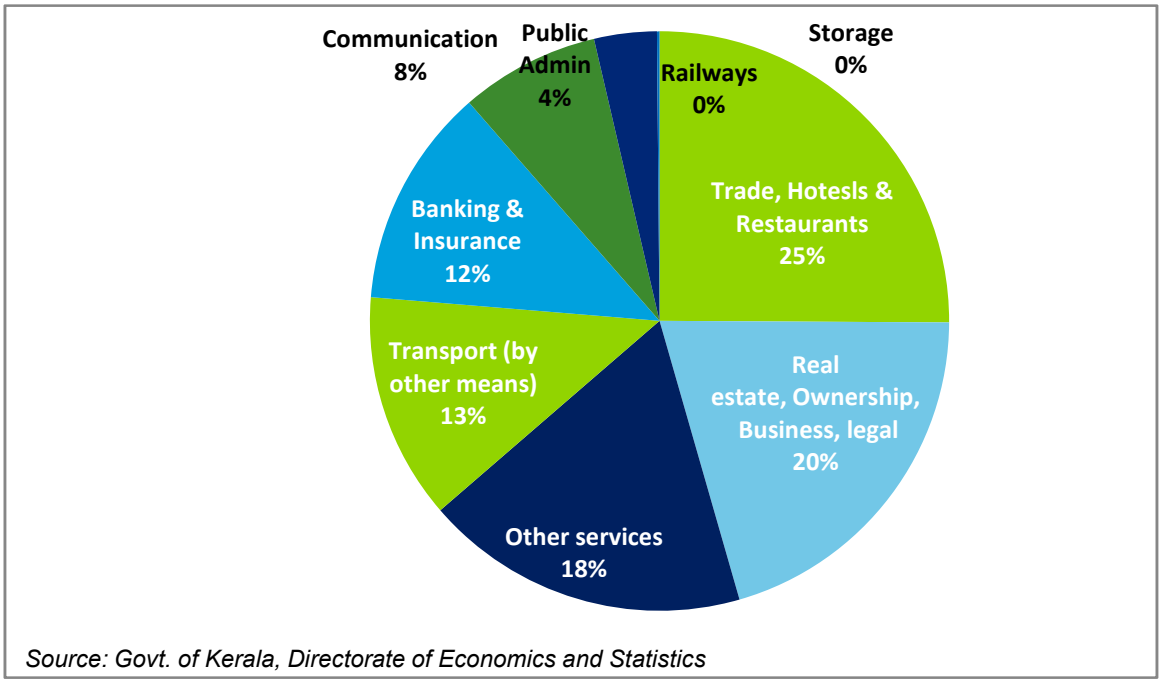
Key characteristics[315] of the secondary sector in Wayanad are presented below:

- Building and Construction (66%) contributes the highest followed by Manufacturing (30%).
- KINFRA Small Industries Park, Wayanad mini industrial estate and SIDCO are the major industrial areas
- KINFRA Small Industries Park, Seethangoli which focuses on Agro/food industries, garments, building materials/wood products, ceramic industries, plastic products, etc. with an area of 50 acres focuses on industrial development of the district.
- The district has one of the five integrated power loom co-operative societies in the state.
- Only 0.3 lakh persons are employed in the organised sector, which is the lowest in the state.

Tertiary Sector

The tertiary sector has been increasing its share of contribution from 46.4% to 72.0% to GDDP between 2004-05 and 2011-12. The sector grew by 11.7% during the same period, in real terms. Key contributors in the sector include trade, hotels and restaurants, real estate services, transport and storage and communication.

Figure 153: Tertiary Sector Contribution - Wayanad, 2011-12



Source: Govt. of Kerala, Directorate of Economics and Statistics

Key characteristics[316] of the tertiary sector in Wayanad are presented below:

- The tertiary sector (services) contributes a significant share of 72.0% to the district's economy
- Trade, Hotels & Restaurants is the highest contributor within the tertiary sector, followed by Real estate, Ownership of Dwellings, Business and Legal Services and Transport sub-sectors.
- Wayanad is one of the significant tourist destinations in Kerala. Edakkal Caves, Wayanad wildlife Sanctuary are some of the important tourist attractions which attract tourists from all over the world.

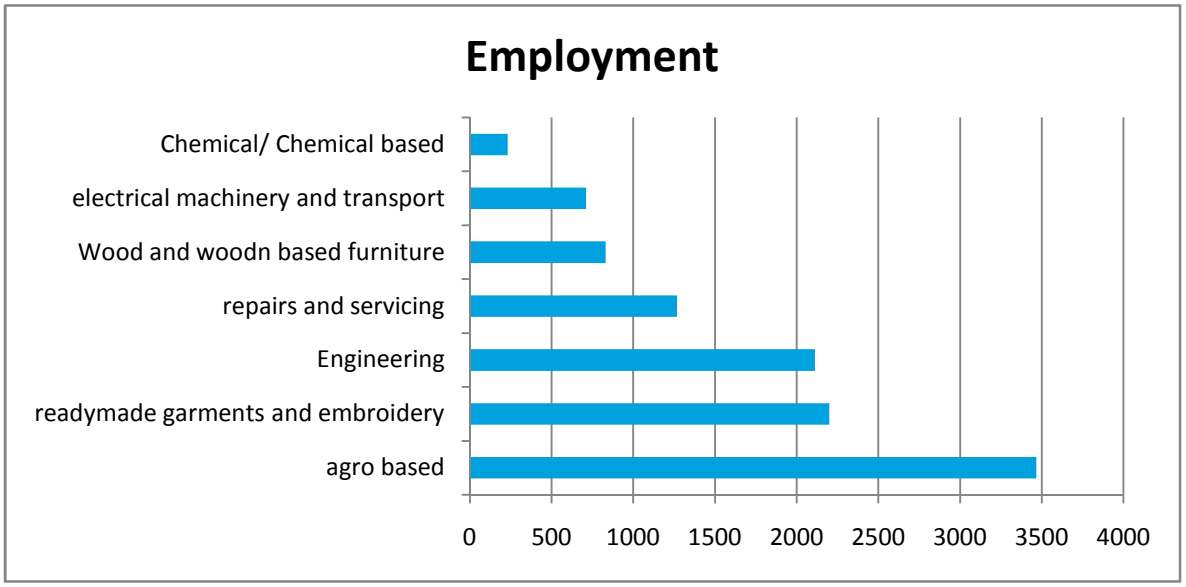
[315] Emerging Kerala website, District MSME Report and Kerala Economic Review
[316] Emerging Kerala Website

4.14.3 Employment

In line with the economic analysis of contributions of the primary, secondary and tertiary sectors presented in the economic profile of the district, the estimated district employment in 2011-12 is highest in the tertiary sector (44.5%), and followed by the primary sector (39.8%) and the secondary sector (15.7%)[317]. Within the tertiary sector, the largest employers are the trade, hotels and restaurants (30.9%) and other services (31.2%) sectors. Within the secondary sector, the largest employer is the building and construction sector (59.4%) and manufacturing (39.8%).

The figure below indicates the employment in MSMEs in the district.

Figure 154: Employment in MSMEs - Wayanad



Source: District Industrial Profile, MSME Development Institute

As indicated in the graph above, agro based units employ the largest share of workers (3467), followed by readymade garments and embroidery (2200) and repairs and servicing (2111). In terms of investments, the top three sectors were agro-based products (Rs.2059 lakhs), followed by readymade garments and embroidery (Rs.1313 lakhs) and engineering units (Rs.754 lakhs).

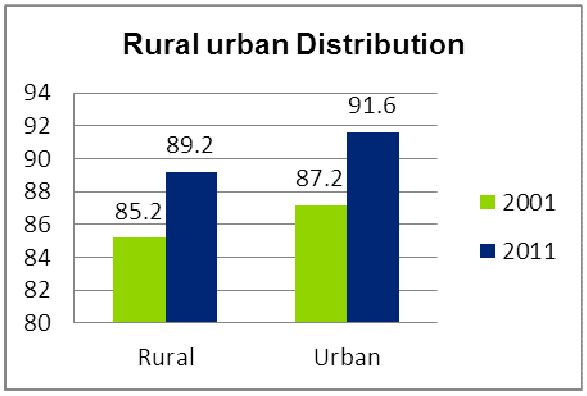
[317] NSS Report No. 537: Employment and Unemployment Situation in India, 2009-10, Kerala Ecostat website, Deloitte Analysis , Deloitte Analysis

4.14.4 Education Infrastructure

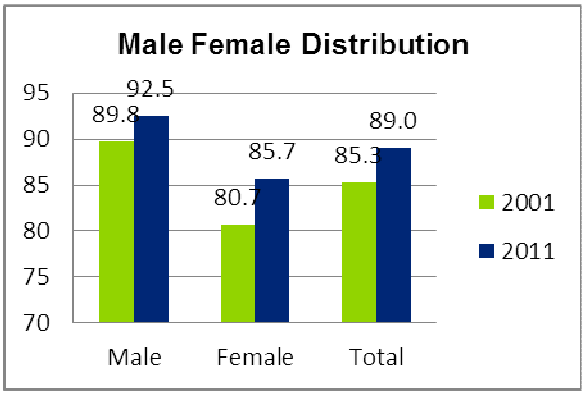
Wayanad has a low literacy rate of 89.7% in comparison to the state average of 93.9%. In 2011, male and female literacy rates were 92.5% and 85.7% respectively with a total literacy rate of 89.0% as compared to 2001 literacy rate of 85.2%.In 2011, the rural literacy rate was recorded to be 89.2% while the urban literacy rate was recorded to be 91.6%

Figure 155: Literacy Rate by Residence and Gender - Wayanad

Literacy Rate By residence



Literacy Rate By Gender



Source: Census 2011

Wayanad ranks last among the districts in terms of the total number of schools as well as the total enrolments. Wayanad has 425 schools with enrolments of 58156, 46361 and 37932 in lower primary, upper primary and high school levels respectively. The total number of schools in Wayanad account for 2.8% of the total schools in the state while the enrolments in the school level (up to class X) account for 3.1% of the total state enrolments. The total number of teachers (4633) over the three sections account for 2.5% of the total teachers in the state.318.Wayanad has the highest dropout ratio in the lower primary section (1.2%), upper primary section (1%) and high school section (2.2%) among the districts of Kerala which has an average dropout rate of less than 0.5%[319].

Table 173: School Education Profile - Wayanad

School category	Wayanad	Kerala
NUMBER OF SCHOOLS		
Lower primary Schools (I-IV)	220	2.8%
Upper Primary Schools (V-VII)	96	2.6%
High Schools (VIII-X)	109	3.0%
Total	**425**	**2.8%**
TOTAL ENROLMENT		
Lower primary Schools(I-IV)	58,156	3.2%
Upper Primary Schools (V-VII)	46,361	3.0%
High Schools (VIII-X)	37932	2.8%
Total	**142,449**	**3.1%**
TOTAL TEACHERS		
Lower primary Schools(I-IV)	1,040	2.1%
Upper Primary Schools(V-VII)	1,598	2.8%

[318] DISE data 2011-12 and SEMIS data 2011-12
[319] Kerala Economic Review, 2012

High Schools (VIII-X)	1,995	2.6%
Total	**4,633**	**2.5%**
Source: DISE and SEMIS data 2011-12		

Vocational Education

In terms of vocational training infrastructure, Wayanad has 10 vocational higher secondary schools (8-Govt., 2-Aided) [320]. It has a total of 7 ITIs and ITCs[321]. Some of the trades offered in the Government ITIs and ITCs are draughtsman (civil), electrician, electronics mechanic, mechanic (diesel) and plumber whereas most of the private ITIs and ITCs offer courses on diverse trades like Draughtsman (Civil), Mechanic (Motor Vehicle), Electronics Mechanic, Electrician and Plumber. The ITIs of the district have a total intake of 762 of which 144 is in the government and 618 in the ITCs. Further it is to be noted that while being 1 in number (14.3% of the total), the government ITIs account for 144 seats (18.9% of total).

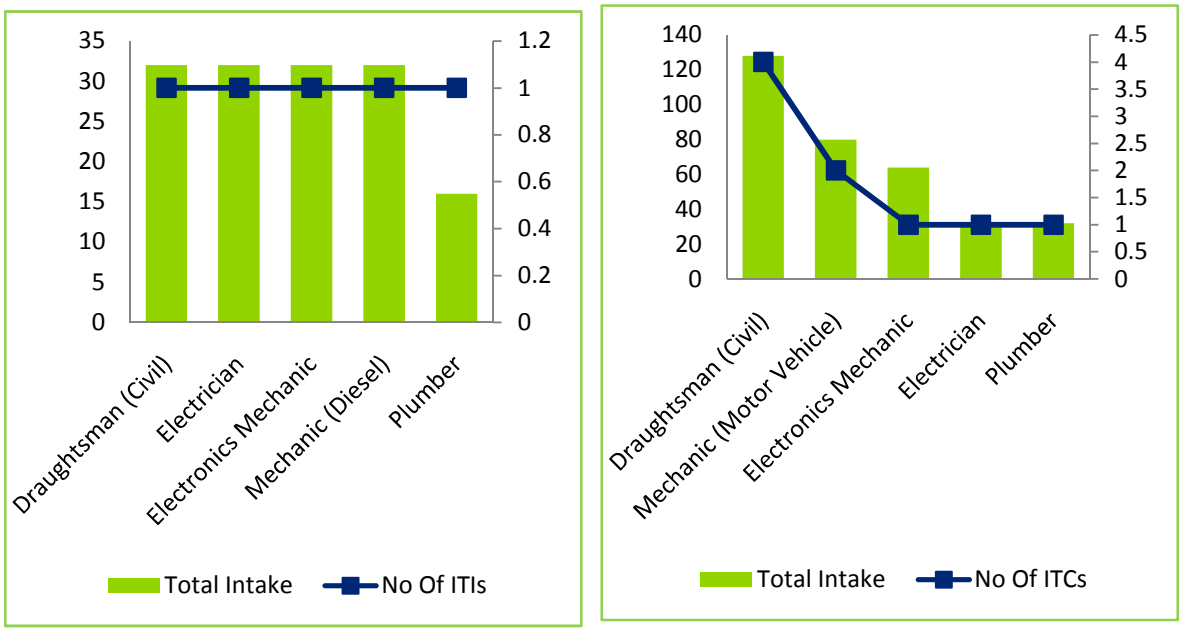
Table 174: Govt. ITIs in Wayanad and their capacity

Name of ITI/ITC	Number of courses offered	Total Units affiliated
Govt Krishna Mohan Memorial ITI Kapetta	5	9

Source: DGET website and Deloitte analysis

The major courses offered in the ITIs and ITCs and their capacity in Wayanad is given in the figure below:

Figure 156:Trades with max seats in ITI and ITCs- Wayanad



Source: DGET website; Deloitte Analysis

In addition to ITIs/ITCs, Wayanad has 2 Government Polytechnic Colleges, offering diploma programme in computer hardware, civil, mechanical, electronics, chemical, & computer science engineering with approved intake ranging from 40 to 60 seats.[322]

[320] Kerala Economic Review, 2012
[321] DGET website: http://dget.nic.in/lisdapp/nvtis/nvtis.htm
[322] Department of Technical Education, GOK

Higher Education Infrastructure

As depicted in the table below, there is 1 engineering college, and 12 arts and science colleges in the district. However the district does not have any medical law or agriculture college. Wayanad has the lowest number of colleges in the district.

The Centres of Excellence in Wayanad include M.S Swaminathan Research Foundation, Ambedkar Memorial Rural Institute for Development (AMRID), Research & Extension Wing of Coffee Board[323].

Table 175: Higher Education Profile – Wayanad

Educational Infrastructure	Number of Institutes		Source
	Wayanad	Intake	
Engineering/ Technology	1	**189**	*Directorate of technical education (2012-13)*
Arts Science and Commerce Colleges	12	**2377**	*University websites of Kannur University, Calicut University, MG University and Kerala University*
Agriculture	0	**0**	*CEE website*
Medicine (including Ayurveda, Homeopathy,	0	**0**	*List of Medical Colleges (Kerala University Of health Sciences)*
Nursing	1	**40**	
BPharm	0	**0**	
Paramedical and Applied Sciences	0	**0**	
Law	0	**0**	*CEE website*
Management	0	**0**	*AICTE website*
Total	14	**2606**	

[323] Emerging Kerala Website

4.14.5 Youth Aspirations

The key observations about aspirations of the youth in Wayanad have been captured below along the broad dimensions of education and employment:

Table 176: Youth Aspirations- Wayanad

Parameters	Responses
Preferred Jobs	• Majority of the respondents would prefer private sector jobs. • Airlines, tourism, sales & marketing, hotel industry and event management are preferred jobs/sectors. • The average salary expectations of the youth is Rs. 15,000 (per month) • Most of the alumni have moved out of the state and country for jobs but respondents would prefer to find employment in their home districts.
Preferred Course	• Location of institute, accessibility via public transport and general weather conditions at the institute influencing the decision of students. • None of the respondents want to go in for higher studies right away they would prefer to gain some experience and decide the need of further studies later on.
Issues with VET Infrastructure	• IT facilities in institutes need to be improved. Eg: Wi-fi, Computer lab etc. • Students find a mismatch between training received in the institute and the actual work environment in the industry. The gap needs to be understood and addressed.
Suggestions by Youth	• Government needs to regulate and monitor compensation and working conditions/hours in the hotel industry • Institutes should take initiative to build relations with sectors other than hotels. Eg: Airlines, Event management etc. • Faculty must keep themselves abreast of the latest trends in the industry. • Course fees are relatively high and scholarships are sought after in tourism and hospitality courses.

4.14.6 Skill Gap Assessment

Based on our analysis and primary interactions, the primary sector is expected to play a major role and will continue to be an important sector in terms of employment although people will continue to move out of this sector. Being a predominantly rural district, agriculture and allied activities contribute the highest to employment (24%) among the sectors in the year 2021-22. Within the secondary sector, the expected growth sectors include agro food processing sector, construction and handlooms, textiles and garments sectors. In the tertiary sector, the sectors expected to show growth include tourism, banking/insurance, and other services.

If the trends in employment continue, in 2021-22, the share of employment across the primary sector employment is expected to decline to 25.4%. The secondary and tertiary sector contributions are estimated to increase to 17.1% and 57.5% respectively, as indicated in the table below. This trend appears to be in line with the national trend as well where people are moving out of the primary sector and moving into the secondary and tertiary sectors respectively.

In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from the agriculture and allied activities (24.8%), other services (17.9 %) and trade, hotels and restaurants (13.6%) which are also confirmed by our primary interactions with government stakeholders, institutes and

industries in Wayanad. Accordingly, agriculture-based activities along with tourism and hospitality sector, retail sector which constitute the trade, hotels and restaurants segment are expected to be key sectors of employment in the future.

Table 177: Projected Employment Contribution and Growth Rate - Wayanad

#	Economic Sector [324]	Projected Employment CAGR (2012-13 to 2021-22)	Projected Employment Contribution (2021-22)
1	Agriculture and Allied activities	-3.2%	24.8%
2	Mining and Quarrying	-2.7%	0.6%
3	Manufacturing	1.4%	6.4%
4	Electricity, Gas & Water supply	0.4%	0.1%
5	Building and Construction	2.5%	10.6%
6	Trade, Hotels and Restaurants	1.1%	13.6%
7	Railways	0.0%	0.0%
8	Transport & Storage	0.3%	2.8%
9	Communication	6.7%	4.8%
10	Banking and Insurance	9.0%	6.4%
11	Real estate services and business services etc.	6.9%	9.6%
12	Public Administration	1.6%	2.5%
13	Other Services	3.8%	17.9%
Source: Deloitte Analysis			

Manpower Demand

As per the methodology highlighted in section 2, the estimated incremental manpower demand in the period 2012-22 will be about 0.58 lakhs. Banking and finance sector is expected to contribute a significant proportion of this demand (17.3%) based on the relatively higher anticipated growth rates, along with Building and Construction and Education and skill development segments.

Table 178: Incremental Demand – Key sectors (in '00s) - Wayanad

	2012-17			2017-2022		
Key Sectors	Skilled	Semi-Skilled	Minimally-skilled	Skilled	Semi-Skilled	Minimally-skilled
Banking/ Insurance/ Finance	20	18	2	30	27	3
Education/ Skill development services	19	4	6	23	5	7
Building & construction	5	12	14	5	14	15
Communication	5	10	10	7	14	14
Select Informal Sector	2	8	13	3	10	16
IT / ITES Services	11	5	1	15	7	1
Real estate services	2	6	4	3	9	6
Organized retail	2	6	4	2	6	5
Manufacturing	2	5	4	2	5	5
Healthcare services	2	4	2	3	5	2
Total +ve demand	94	94	65	125	122	80
Overall Incremental Demand	**579**					

[324] DES – Directorate of Economics and Statistics of each state presents the economic data such as GDDP and GSDP in terms of the 13 sectors depicted in the table

	2012-17			2017-2022		
Workers exiting sectors						
Agriculture and allied activities	-5	-15	-133	-3	-11	-98
Total workers exiting[325]	-5	-16	-135	-4	-12	-10

Some of the key trends observed on the demand side include

- *A significant number of the workforce (almost 26,561) is expected to exit from the agriculture sector between2012-22 and added to the incremental supply of workers in this period. From a skilling perspective, this is an important target segment for reskilling so that they can positively contribute to the economy.*
- *Education sector contribute significantly to the creation of jobs in the skilled segment (19.3%).*

[325] This figure indicates the number of workers estimated to exit the current sector and is assumed to be added to the supply of workers. Accordingly, since there is a net outflow of manpower from these sectors, incremental demand is zero for these sectors.

Manpower Supply

The population of Wayanad in 2011 was about 8.2 lakhs which is expected to increase to about 8.5 lakhs in 2017 and about 8.76 lakhs in 2022. As per the methodology highlighted in section 2 the estimated incremental manpower supply from 2012 to 2022 will be about 0.9 lakhs.

Incremental manpower supply can be further classified into skilled, semi-skilled and minimally- skilled as per education qualifications and estimated output of educational and vocational training institutes in the district. Please refer annexure **0** for skill definitions.

Table 179: Incremental Labour-force as per Skill Levels (in '00s)- Wayanad

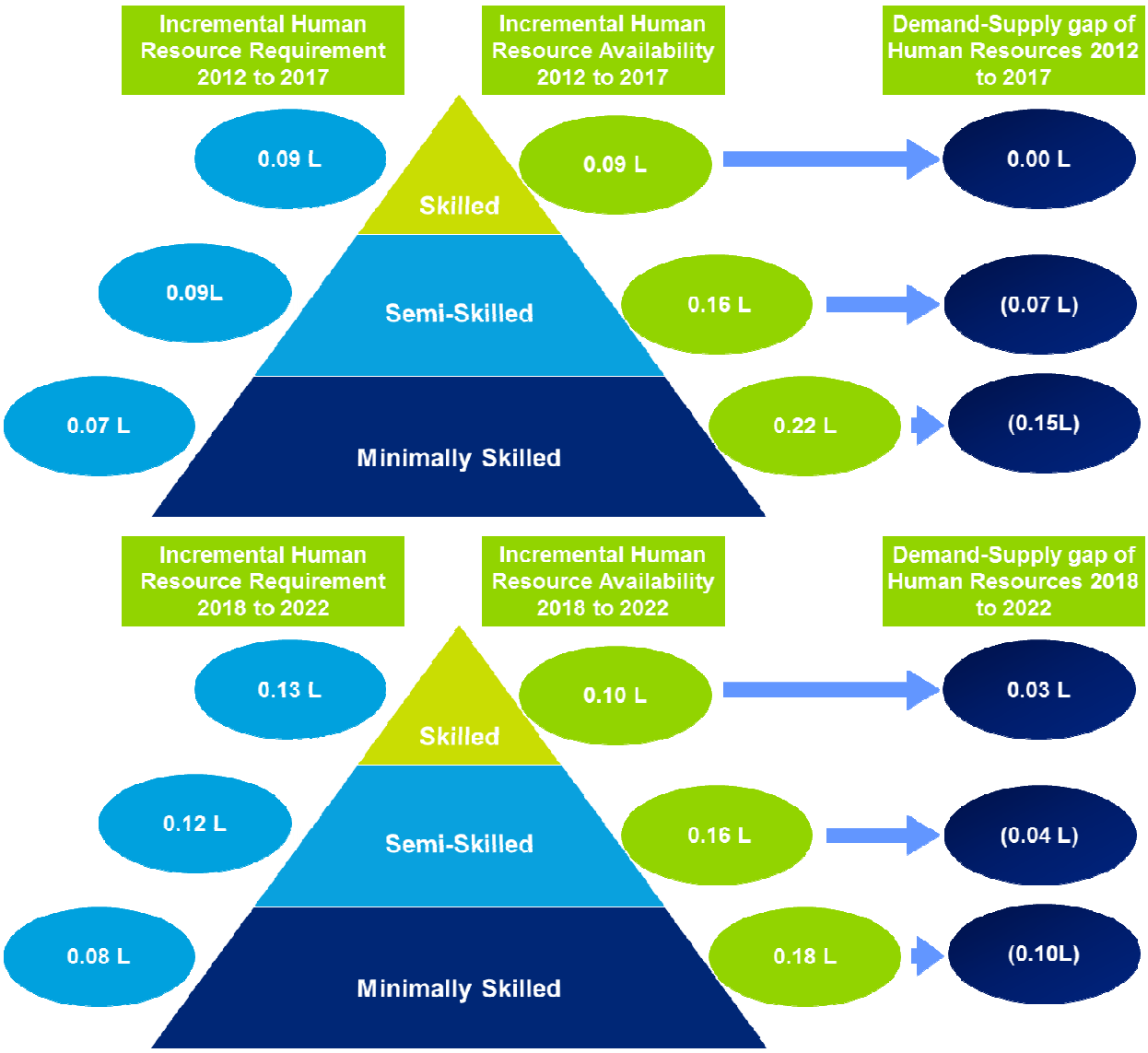
	2012-17	2017-22	Total
Skilled	97	97	194
Semi-Skilled	159	164	323
Minimally-Skilled	216	180	396
Incremental manpower supply (2012-22)	913		

Some of the key trends observed on the supply side include

- *Over the period of time the proportion of incremental supply of minimally skilled manpower is expected to decline from 45.7% in the 2012-17 period to 40.6% in the 2018-22 periods. However it is important to note the presence of a high percentage of minimally skilled labour in the district throughout the period of 10 years, perhaps reflective of a district with 96.1% rural population in the year 2011.*
- *The incremental supply of manpower is also expected to be increased significantly due to workforce moving from agriculture and other sectors showing negative growth and/ or negative employment elasticity to the supply market.*

Incremental Demand Supply Gap

Figure 157: Incremental HR Demand Supply Gap- Wayanad



During the period 2012-22 the incremental manpower demand supply gap of the district (across all sectors mentioned above) is expected to be about -33,366 with the excess demand across skilled segment and excess supply in the semi-skilled and minimally skilled segments. Further the major contributor to the skill gap is the excess of minimally skilled population over the years which accounts for more than 65% of the gap.

When the 2012-17 and 2018-22 periods are considered separately, it is indicated that composition of the gap is also expected to shift.

- *The excess demand in the skilled segment is expected to continue in the district. It can also be assumed that this segment is relatively more mobile in seeking employment outside the state and the country which may further heighten the demand for skilled resources. There is also an increase in the gap of skilled labour over the years while there is excess supply in the other 2 segments which*

requires a shift in the distribution of supply which in turn presents a case for introducing training programs to augment the skills of this segment to cater to the demand in the key sectors of growth.

- *Even in cases of excess supply, it is pertinent to note that it does not imply industry demand for skills is being sufficiently met. Employability linked skills have emerged as a key area of concern among industry. The changing trends of the sector including use of new technology and practices imply a need for reskilling and up skilling of existing workers.*
- *In line with the rural urban distribution and dominance of agriculture in employment, the major contributor to skill gap is the minimally skilled segment which is in excess in the district and requires skilling and training programs to shift to the semi-skilled and skilled segments.*
- *As indicated in the figures above, the excess supply of minimally skilled human resources seen in the 2012-17 period is likely to decrease in the period 2018-22. This is in line with the improvement in the education and skill development levels in the state.*

Qualitative Skill Gaps

The qualitative skill gaps that were highlighted during our primary interactions with industry at Wayanad are given in the table below..

Table 180: Qualitative Skill Gaps – Agro-Based Industries and Tourism, Hospitality and Travel

Sector	Level	Skill Gap
Agro-based Industries	Plant Associates and operators	• Limited basic engineering knowledge esp. on practical aspects, process knowledge e.g. distillation
	Material Handlers	• Limited awareness on quality, health and hygiene awareness • Limited basic computer skills including barcode reading
	Sales and marketing-	• Limited Communication skills, ability and willingness to understand the manufacturing process
Tourism, Hospitality and Travel	Tour Operators and Guides	• Lack of English and Communication Skills • Lack of grooming and punctuality • Inadequate knowledge of history and cultural aspects of tourist places
	Restaurant and Hotels/Resorts -Customer facing staff	• Lack of English and Communication Skills • Low Customer service levels
	Restaurants and Hotels/Resorts – Management and Proprietors	• Limited Management skills • Limited Accounting and business knowledge
	Restaurants and Hotels/Resorts – Kitchen Staff	• Limited Knowledge of variety cuisines • Lack of Adherence to hygiene standards
	Drivers – Auto rickshaws, Taxis	• Inadequate communication skills • Limited Adherence to driving rules and regulations • Inadequate Knowledge of safety norms

4.14.7 Recommendations

Future Growth Opportunities in Wayanad

In the context of the current economic profile and proposed investments of the district, we have analyzed the demand for human resources at various skill levels. Based on our analysis and considering factors like high employment potential, priority sector for the state government, investment trends, etc. the following sectors/industries have been identified with future growth opportunities for employment and subsequently, skill development in Wayanad.

Table 181: Key Growth Sectors - Wayanad

Sector	Growth Opportunities
Tourism and Hospitality	• Trade, Hotels & Restaurants is the highest contributor to employment (13.6%) within the tertiary sector, after the other services sector. • Tourism and hospitality sector which contributes significantly to the trade, hotels and restaurants segment is expected to be key sectors of employment in the future. • According to the Emerging Kerala website, Wayanad is being positioned as a key tourism destination for adventure tourism and medical tourism.
Banking, Financial Services & Insurance (BFSI)	• In terms of growth rate, the banking and insurance sector has registered a high growth rate of 14.5% between 2004-05 and 2011-12. • Wayanad is expected to see growth in employment in the BFSI sector at nearly 9% between 2011-21.
Manufacturing	• Agro-based industries will provide immense potential for growth in the district esp., in rubber, coffee, pepper and cardamom, • Manufacturing of spice extracts and herbal medicines will also provide investment opportunities in the district.
Building & Construction	• This sector contributes the highest share to the secondary sector DDP in the district (52%) in 2011-12. In 2021-22, of the total estimated employment, the bulk of employment is expected to arise from building and construction (19.4%). • The building and construction and real estate sectors are expected to contribute a significant proportion of the incremental demand (19%) based on the relatively higher anticipated growth rates.
Education and Skill Development	• Education is expected to contribute significantly to the creation of jobs in the skilled segments. This is in line with the views of government officials and the Emerging Kerala website which indicates that immense investment potential exists in the education space

Considering economic and skill landscape of Wayanad, the table below provides a list of suggested recommendations for various stakeholders. These observations have been mainly derived from the growth opportunities identified above and through primary interactions with industry & industry association representatives in the district, students, training institutes and government.

Table 182: Key Recommendations for stakeholders - Wayanad

Stakeholder	Priority Areas
NSDC	NSDC can focus the efforts of its training partners in the key sectors identified in the district, viz. • Tourism and Hospitality • BFSI • Manufacturing • Building and Construction • Education and Skill Development
Private training providers	• There is demand for more courses in tourism and hospitality and courses in BFSI, Agro-based Manufacturing, Education and Skill Development sectors can be explored. • Engage industry practitioners from various fields who may be retired as faculty members in skill development/training institutes • Institutes in the Tourism and Hospitality sector may also consider connecting with event management companies, airline companies etc. apart from hotels and restaurants, to provide greater employment opportunities
Government	• Youth interactions indicated need for better working conditions and compensation for employees. • Soft Skills may be provided at high school level in government schools
Industry	• Industry players should encourage training apprenticeships for trainees from institutes with reasonable stipend • More industry interactions could be initiated in the Building & Construction sector, and private skill training providers for BFSI, Tourism/Hospitality etc. • Industry players to participate in SSCs to provide relevant inputs especially in sectors such as BFSI, Tourism/Hospitality etc.

5 Annexure

5.1 List of Key Official Interactions

#	District	Name	Designation	Department
1.	Thiruvananthapuram	Mr. Prashant	MD	Kerala Academy of Skills Excellence
2.	Thiruvananthapuram	Mr. Biju	Former MD	Kerala Academy of Skills Excellence
3.	Thiruvananthapuram	Mr. V.S. Senthil	Principal Secretary	Planning and Economic Affairs Department
4.	Thiruvananthapuram	Mr. K.M. Chandrashekar	Vice Chairman	State Planning Board
5.	Thiruvananthapuram	Mr. Vijayaraghavan	Member	State Planning Board
6.	Thiruvananthapuram	Mr. Shrikumar	Additional Director	Directorate of Employment and Training
7.	Thiruvananthapuram	Mr. B. Justin Raj	Joint Director	Directorate of Employment and Training
8.	Thiruvananthapuram	Mr. K Sudhir	Additional Director	Directorate of Industries and Commerce
9.	Thiruvananthapuram	Mr. P. R. Rainold	Additional Director	Directorate of Employment and Training
10.	Thiruvananthapuram	Mr. K.M. Abraham	Principal Secretary	Higher Education and Social Justice Department
11.	Thiruvananthapuram	Mr. George Thomas	Additional Secretary	Higher Education and Social Justice Department
12.	Thiruvananthapuram	Dr. J. Letha	Director	Directorate of Technical Education
13.	Thiruvananthapuram	Mrs. Malini	DGM	Kerala State Industrial Development Corporation (KSIDC)
14.	Thiruvananthapuram	Mr Noyal Thomas	Former CEO	NORKA
15.	Thiruvananthapuram	Mr. V. Ramachandran	Director	Directorate of Economics and Statistics
16.	Thiruvananthapuram	Mr. M.S. Venugopal	Deputy Director - Planning	Department of Tourism
17.	Thiruvananthapuram	Mr Joy Oommen	CMD	Kerala Financial Corporation
18.	Thiruvananthapuram	Mr. Mushtaq Ahmed	DGM	Kerala Financial Corporation
19.	Thiruvananthapuram	Mr. Ramesh Chandra	GM	District Industries Centre
20.	Thiruvananthapuram	Mr. K. Narayanan	District Planning Officer	District Planning Office
21.	Thiruvananthapuram	Mr. Bahulaya Panikar	Employment Officer	District employment Exchange
22.	Ernakulam	Prof. G. Balachandran,	Chairman	Coir Board (Ministry of MSME, GoI)

Note: The table above is only an indicative list, representing some of the key interactions held.

5.2 List of Key Industry and Industry Association Representatives Met/Interacted

#	District	Name	Designation	Industry/Industry Association
1	Thiruvananthapuram	Mr. P. Ganesh	MD	GEFAB FAÇADE Solutions Private Ltd.
2	Thiruvananthapuram	Mr. Vargese	General Manager	Hotel Pattom Royal
3	Thiruvananthapuram	Mr. C. Balagopal	Former MD	Terumo Penpol
4	Thiruvananthapuram	Mr. Solomon	Deputy Director	CII
5	Thiruvananthapuram	Mr. Elango	AGM - HR	SFS Pvt. Ltd
6	Thiruvananthapuram	Mr. Harikumar	Secretary	Builders Association of India, Kerala Chapter
7	Thiruvananthapuram	Raghu Chandran Nair	General Secretary	CREDAI Kerala
8	Thiruvananthapuram	Mr. Haridas	Senior Manager, Placements	ITL Group
9	Kozhikode	Mr. Manual Antony	Manager	Hotel Malabar Palace
10	Kozhikode	Mr. Premraj	Director	VKC Foot Wear
11	Kozhikode	Mr. Subramanya Padikkal	Director	VKC Footwear
12	Kozhikode	Mr. A.V Sunil Nath	Secretary	Small Scale Industries Association
13	Kozhikode	Mr. Manju Lal	CEO	Nexegen Consultancy Services
14	Ernakulam	Mr. John Kuruvilla	Deputy Director	CII
15	Ernakulam	Mr Jose Varkey	Corporate Chef	CGH Earth
16	Ernakulam	Ms. Devi	Manager, Training	CGH Earth
17	Ernakulam	Mr. M R Rajeshkumar	Head, Corporate HR and Training	Synthite Industries
18	Ernakulam	Ms. Pretty Mariam Sijo	Manager HR	Abad Builders
19	Ernakulam	Mr. K Prem Kumar	CEO	Eastern Condiments Pvt. Ltd.
20	Ernakulam	Mr. A S Girish	Head-HR and Admin	Apollo Tyres
21	Ernakulam	Mr. Anilkumar G	GM-HR	Carborundum Universal Ltd.
22	Ernakulam	Air Vice marshal (Retd) P K Kuruvilla	Chief Executive	Kunnel Constructions
23	Ernakulam	Col. (retd) Joy Cyriac	Head HR	Lakeshore Hospital

Note: The table above is only an indicative list, representing some of the key interactions held.

5.3 List of Key Education and Skill Institutes Met

#	District	Name	Designation	Education/Skill Development Institute
1	Thiruvananthapuram	Mr. Nehas	Principal	Women's ITI, Kazhakoottam
2	Thiruvananthapuram	Mr. Rajan Thampuran	Visiting Faculty	Centre for Development of Imaging Technology
3	Thiruvananthapuram	Dr. Pulapre Balakrishnan	Director	Centre for Development Studies
4	Thiruvananthapuram	Ms. Anitha	Group Instructor	Govt ITI, Aryanad
5	Thiruvananthapuram	Dr Vijayakumar	Principal	Kerala Institute of Tourism & Travel Studies
6	Kozhikode	Mr. V.V. Nair	Director	Calicut Institute of Engineering and Technology (CEIT)
7	Kozhikode	Dr. Debashish Chatterjee	Director	IIM- Kozhikode
8	Kozhikode	Mr. K.P.A Hashim	Director-in-charge	FDDC (Footwear Development and Design Center
9	Ernakulam	Mr. Vinayarajan	CEO	S. B. Global Educational Resources Pvt. Ltd
10	Ernakulam	Dr. C. Sengottuvelu	Professor and Head, Consultancy	School of Communication and Management Studies (SCMS)

Note: The table above is only an indicative list, representing some of the key interactions held.

5.4 List of FGD and Youth Surveys

#	Name of the District	Name of Institute	Number of Participants
1	Thiruvananthapuram	Centre for Development of Imaging Technology; Government ITI, Aryanad	16; 40
2	Kozhikode	Zamorin's Higher Secondary School	19
3	Kollam	Bishop Benzeger College of Nursing	19
4	Alappuzha	Jubilee Memorial ITC, Alappuzha	30
5	Kottayam	Theophilus College of Nursing	40
6	Ernakulam	Munnar Catering College	23
7	Thrissur	Government Women's' ITI	31
8	Palakkad	Govt. ITI, Malampuzha, Palakkad	52
9	Malappuram	Malabar Dental College and Research Centre	54
10	Wayanad	Oriental College, Wayanad	28
11	Kannur	Govt. Ayurveda College, Kannur	12
12	Kasargod	Government Polytechnic College, Periya	54
13	Idukki	Muttom Polytechnic	15
14	Pathanamthitta	Govt. Women's ITI	22

This report has been prepared by Deloitte Touche Tohmatsu India Private Limited (DTTIPL)

"Deloitte" refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Deloitte provides audit, tax, consulting, and financial advisory services to public and private clients spanning multiple industries with a globally connected network of member firms in 153 countries. Deloitte Touche Tohmatsu India Private Limited (DTTIPL) is a member firm in India that provides non-audit consulting services. We have a strong national presence and wide reach through our offices in 13 cities namely Ahmedabad, Bengaluru, Chennai, Coimbatore, Goa, New Delhi, Hyderabad, Jamshedpur, Kochi, Kolkata, Mumbai, Pune, and Vadodara.

We provide consulting services in the area of Strategy and Operations, Human Capital, Enterprise Applications, Technology Integration and GUIDe. The public sector group in India uses an acronym to describe its focus as GUIDe (Government, Utilities, Infrastructure and Development). The team essentially consists of industry specialists in Government policies, regulations and governance; energy and resources; transport and infrastructure such as roads, railways, ports, airports and industrial infrastructure; public service delivery such as public health, education and skill development.

Our in-depth understanding also enables Deloitte to remain at the cutting edge in terms of new product and process development offerings to our clients. Listed below are the key GUIDe service offerings:

- Policy Design and Review - Visioning, Development planning, Policy effectiveness, Thematic/cross-sector planning
- Economic Analysis and Regulations - Effectiveness of regulatory environment, design of new regulatory institutions/processes, sector budget analysis, sector entry/feasibility, sector FRA, PETS
- Institutional Strengthening - Institutional structuring, Role mapping, Business Strategy, Organization Design, Governance, Procurement management
- Performance Improvement - Design of effective service delivery processes and systems, Capacity building, Change management, Training, Citizen charter, Grievance redressal
- Partnership Management - Assessing & Structuring viable PPP arrangements, CSR management
- Monitoring and Evaluation - Key public programs/schemes in the focus sectors, Surveys, Impact assessment, Concurrent monitoring

Anindya Mallick
Senior Director
+91 (0124) 6792895
anmallick@deloitte.com

Mohammed Ali Shariff
Senior Manager
+91 80 66276266
mshariff@deloitte.com

Arvind B.
Manager
+91 080 66276371
arvindb@deloitte.com

Elizabeth Mathew
Senior Consultant
+91 80 66276397
emathew@deloitte.com

For more details please contact:

N·S·D·C
National
Skill Development
Corporation

National Skill Development Corporation
Block A, Clarion Collection, (Qutab Hotel)
Shaheed Jeet Singh Marg
New Delhi - 110 016
Tel: +91 11 4745 1600-10
Fax: +91 11 4656 0417
Email: skillgapstudies@nsdcindia.org

Industry Partner

CII
Confederation of
Indian Industry

www.nsdcindia.org