Skilling for the Future

Skill Gap Assessment & Action Plan for Tamil Nadu

District Skill Development Plan for Thoothukudi

November 2019

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Published by
TNSDC, Chennai

Acknowledgement

We extend our thanks to district officials of Thoothukudi, youth, employers, industrial associations and training service providers who participated in focus group discussions and surveys, for their support in conducting research and drafting this report.

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List of Abbreviations

S. No	Abbreviation	Meaning
1.	BFSI	Banking Financial Services and Insurance Sector
2.	BPL	Below Poverty Line
3.	DC MSME	Development Commissioner, Ministry of Medium, Small and Micro Enterprises
4.	DDU-SKY	Deen Dhayal Upadhyaya Grameen Kaushalya Yojana
5.	DES	Directorate of Economics and Statistics
6.	DIC	District Industries Center
7.	GDDP	Gross District Domestic Product
8.	GoTN	Government of Tamil Nadu
9.	GSDP	Gross State Domestic Product
10.	GSVA / GVA	Gross State Value Added / Gross Value Added
11.	ITI	Industrial Training Institute
12.	IT-ITES	Information Technology and Information Technology Enabled Services
13.	LFPR	Labour Force Participation Rate
14.	LMIS	Labour Market Information System
15.	Manuf.	Manufacturing
16.	NEET	Not in Employment, Education or Training
17.	NSDC	National Skill Development Corporation
18.	NSDA	National Skill Development Authority
19.	NSQF	National Skills Qualification Framework
20.	NULM	National Urban Livelihood Mission
21.	PMKVY	Pradhan Mantri Kaushal Vikas Yojana
22.	Pub. Admin.	Public Administration
23.	QP-NOS	Qualification Pack – National Occupational Standards
24.	SIPCOT	State Industries Promotion Corporation of Tamil Nadu
25.	SPIC	Southern Petrochemical Industries Corporation
26.	SSC	Sector Skill Council
27.	TANSIDCO	Tamil Nadu Small Industries Development Corporation
28.	TIDCO	Tamil Nadu Industrial Development Corporation
29.	TN	Tamil Nadu
30.	TN-GIM	Tamil Nadu Global Investors Meet
31.	TNSDC	Tamil Nadu Skill Development Corporation
32.	THUDITSSIA	Thoothukudi District Small Scale Industries Association
33.	Tr. & Tou.	Trade and Tourism Sectors
34.	VOC	V.O.Chidambaranar Port
35.	W / S Emp.	Wage or Salary Employment

Executive Summary

Background: The Vision 2023 of Tamil Nadu envisages shaping its future by empowering the youth in the state, through imparting market relevant skill training; to become responsible and participating citizens who drive a new era of development, growth, and productivity. Tamil Nadu has formulated a State Youth Policy, which aims at reinforcing and accomplishing the broader objectives of 'Vision Tamil Nadu 2023'. The policy focuses on upgrading the human capital of the state by building on the intellectual and creative potential of youth in various fields, thereby transforming Tamil Nadu into the innovation hub and knowledge capital of India. It also aims at enabling Tamil Nadu to collaborate with other States in the country and the rest of the world on multiple dimensions: increasing the flow of workforce and goods/services, enhancing the levels of exchange of ideas and culture, and facilitating the movement of people to and from Tamil Nadu for opportunities. To attain this objective the State envisages training and skilling of 20 million persons by 2023[1].

Tamil Nadu currently has the highest Gross Enrolment Ratio in Higher Education (48.6)[2], among all the states in India. The state faces a mandate of developing and maintaining high quality human resources to deal with the evolving economy and ensuring social justice in the form of decent employment for its educated populace. Thus, it is essential to carefully analyse the industry demand, investment patterns, and youth aspirations and re-align policy/ programmatic initiatives in that direction. Thus, taking youth aspiration and industry growth potential is critical to be able to avoid labour demand-supply mismatch, and support overall development of the State.

Context for Present Study: In 2012, The National Skill Development Corporation commissioned a skill gap study for Tamil Nadu. The study covered 12 Districts, based on which an extrapolation was done for the remaining districts. The study adopted a mix of secondary and primary research and relied largely on focus group discussions with various stakeholder groups such as youth, employers, industry associations, government officials, and skill training providers. Skill gaps were estimated for a period of 10 years, up to FY 2022. Given the rapid change in the state's social and economic context, there was a need for a fresh assessment of the state's skill ecosystem. There is also a need to understand the needs of the youth from diverse geographical backgrounds across the state, especially reaching out to economically backward regions. It is expected that a contemporary estimation, using both quantitative and qualitative analysis would reveal more relevant insights and findings related to the demographic profile, socio-economic characteristics of the youth, emerging sectors and job roles, and the skill-sets in demand.

The Present Study: The Tamil Nadu Skill Development Corporation (TNSDC) has, through a competitive procurement process, engaged PricewaterhouseCoopers Private Limited (PwC) to carry out "Skill Gap Assessment and Action Plan for Tamil Nadu". This is the first time such a comprehensive State-wide study taking into consideration 6 blocks from each District has been attempted in Tamil Nadu. The study aims at identifying sources for self and wage employment in all 32 districts, estimating the sector-wise current and future labour demand (over the next six years) by industry, and assessing the overall the labour supply and estimating the existing and emerging skill gaps.

The Skill Gap study offers insights into: (i) which skills are required to support the State's economic growth, while also catering to the career aspirations of the youth; and (ii) how to design appropriate interventions that will enable active collaboration between various stakeholders for the common good. Workforce demand-projection for the upcoming years, disaggregated as skilled and semi-skilled workforce requirement has been estimated at the district level.

Methodology for Study: Mixed-method research design is adopted encompassing a blend of quantitative and qualitative data collection techniques, and desk research on secondary data sources. Structured into two phases, the first phase of the study comprised a comprehensive desk review of the state's demography, economy, labour market, educational and skill development profile. The second phase of the study comprised the following:

1**. Youth aspiration survey:** a quantitative survey covering 360 in each district across the following groups – engaged in economic activity (self-employed, wage-employed, entrepreneurs), students in formal education, vocational and skill training institutions (Polytechnics, ITI), and those who fall under the Not in Education, Employment or Training (NEET) category. Six blocks in the district were covered viz. Pudur, Vilattikulam, Ottappidaram, Srivaikuntam, Kovilpatti, Tuticorin

2. Quantitative employer survey: covering target of 45 in the district with adequate representation from Large, Medium, Small and Micro Industries across the key sectors defining the district economy.

[1] Tamil Nadu Skill Development Corporation [https://www.tnskill.tn.gov.in/index.php/link/abouttnsdc]
[2] All India Survey on Higher Education 2017-18

3. Focus Group Discussions (FGD's) and stakeholder consultations across a wide group of stakeholders including, representatives from Industrial units (with additional focus on MSME sector), district-level Industry Associations across priority sectors, officials from various government departments, representatives from various higher education institutions, and training service providers. In all, interactions with more than 20 stakeholders have been conducted across the district.

Estimation of labour demand and supply were undertaken based on analysis of data from, the Census of India, State and District Gross Domestic Product from the Department of Economics and Statistics of Government of Tamil Nadu, data from the Reserve Bank of India and Reports from the National Sample Survey and the Bureau of Labour and Employment. Estimates were further refined based on data on investments, and developments in key sectors, including due consideration to emerging sectors and job roles. The sectors and job roles in demand have been organized into training projects, which are informed by the demand estimations, quantitative survey findings and qualitative consultations. Budgets have been estimated based on the cost categories as defined in the Common Cost Norms released by the Ministry of Skill Development and Entrepreneurship, Government of India.

Key Findings:

Key findings of the study are presented hereunder:

Key Findings	
Demographic Analysis	• At 29 years, the median age of Thoothukudi is on par with the state average. It is expected to increase further to 35 years by 2025, lower than the state average of 37 years. • Aging population could drive for demand for palliative care. • Urban population in the district grew at a decadal rate of 32% compared to a 5.6% decline in rural areas.
Economic Analysis	• Thoothukudi is a moderately industrialised and economically developed district, contributing to 4% of the state GDP, in comparison to other districts in the state. • It ranks 15th in GDDP per Capita at ₹1.29 Lakhs and 15th in terms of disposable income per household at ₹4.2 Lakhs per annum (marginally higher than state average). • The district economy grew at a CAGR of 4% between 2011-12 and 2016-17
	Agriculture Sector:
	• The district's rapid urbanization is resulting in a decline of a dedicated workforce for agriculture sector and resultantly in cultivation. • Thoothukudi contributes 12.5% of the states marine fishing output. However, there has been in decline in fisheries output in recent years.
	Industrial Sector
	• The district is home to large industries in the Power, Chemical & Petrochemical, and Apparel & Textile sectors such as Thoothukudi Thermal Power Station, Heavy Water Plant, SPIC, Tuticorin Alkali Chemicals and Fertilizers, Laksmi Mills, Loyal Textiles. • Industrial sector grew at a CAGR of 5% 2011-12 and 2016-17 • Salt, Seafood Processing, Ready Made Garments, Safety Match are the key industrial clusters in the district • The safety match industry is facing several challenges including compliance with health and safety concerns. • The industries are labour intensive and provide opportunities for employment for skilled workers.
	Services Sector
	• The service sector grew at 6% per annum between 2011-12 and 2016-17. The growth was largely driven by impressive performance of the logistics, trade and tourism sub-sectors. Thoothukudi is the gateway to the sea trade for South and Western Tamil Nadu, and Southern Kerala • Thiruchendur Murugan Temple and the Churches and Beach of Manapad are key attractions for tourism.

Key Findings	
Labour Market Analysis	• With 50% of the total workforce engaged as casual labourers, the district's labour market is characterised by predominance of informal employment. • 35% of the workforce employed in agriculture and allied sectors, which is rapidly declining in terms of contribution to overall district economy. Manufacturing employs a significant 20% of the workforce.
Education & Skill Development	• The district sees a high proliferation of private school education. • With Over 24,000 seats per annum, arts and science programs are the dominant option for tertiary education. • Skill Development programs largely cater to entry level, low skilled jobs and not some of the specialist roles required in the market.
Findings from Primary Survey	
Youth Profile and Aspirations	• Not in Education, Employment, or Training (NEET) category respondents were largely female and generally belonged to age category of 20-29 years. • 21% of the respondents who had completed a Diploma or higher levels of education had been engaged in unskilled work, the highest among all categories. • 66% of the NEET category respondents wished to work at some point in the future • 28% of the youth wanted employment in the Public Sector. • Salary (wages) / income, job security, proximity to residence were key determinants of selection of work. • Lack of sufficient education qualification, lack of jobs locally, low financial strength were identified as major challenges in pursuing desired careers. • Relevant work experience, soft skills, education attainment identified as key factors of employability. • Female respondents aspired for careers in the food processing, BFSI, Education and Skill Development. • Males aspired for Furniture and Furnishing, Media & Entertainment, Chemical & Pharma, and Iron, Steel and other Metal sectors • Median income expectation from the entry level job is around ₹18,700 • 35% of the respondents open to taking up vocational training. • There is a requirement for providing greater information on the labour market and counselling services.
Employer & Other Key Stake holder Perspective	• 98% of the employers recruit through references, only 7% recruit from vocational courses • Candidate disinterest and attitude, high local wages, nature of work requiring strenuous physical labour are the major challenges in recruitment of workforce • High attrition rates are witnessed, lower wages and job opportunities across the state. • Youth largely preferred work in white collared service sector jobs in Retail, IT/ITES, BFSI, and Logistics. • Being a source of migrant workforce for other districts, there is a constant shortage of labour, especially skilled workers for the local industries. The lower wage rates are bringing investments from other parts of India and the state. • Poor 'English Communication' skills among the workers was a major challenge in the services sector. • Investments are being made in technological upgradation, but there will be continued demand for skilled workers from ITIs. • One of the key challenges in recruiting from vocational programs was the student's lack of experience in working environment. • Though industries are willing to partner with the Govt. in Skill Development and vocational initiatives, simplification of processes was urgently required in apprenticeship and short-term skill development programs.

Key Findings	
 **Incremental Demand**	• Nearly 68,000 additional skilled and semi-skilled workers are expected to be in demand over the next 6 years. • Key sub-sectors driving the demand are Manufacturing, Education & Health, and Logistics, Allied sectors of agriculture, Tourism & Hospitality.

Key Recommendations:

1. **Convergence:** There is a requirement for better interface between Industry and the Skill Development ecosystem across the Southern Districts of Tirunelveli, Thoothukudi, Kanyakumari and Virudhunagar. The fluid labour force necessitates better coordination between the state agencies across the region to cater to the larger market to dynamically adapt to Industrial requirements. This coordination would help in appropriate provision of trades, avoidance of duplication of both trainings and candidates, and a uniform quality assurance regime. The district collectorate has developed a local Labour Market Information System (LMIS). The Directorate of Employment and Training has taken several initiatives to (i) counsel youth in schools and colleges and (ii) promote apprenticeship in local industries. These efforts must be strengthened with support from other stakeholders and the state Govt.
2. **Awareness generation:** There is mismatch in perception and aspirations of youth (about salaries/wages, working conditions, career growth prospects, etc.) and market realities. Hence there is a requirement for initiating counselling on career prospects and market trends at the secondary levels of education, continuing through higher levels of education.
3. **Industry Experience:** It is seen that the earning potential among graduates does not vary significantly from Diploma / ITI holders over their career path. To enhance the value of the programs at the graduate level, it is necessary to strengthen the exposure to work environments among both technical and non-technical programs through mandatory hands-on training at appropriate organizations in the industrial and services sectors.
4. **Augmenting Labour at MSMEs:** MSMEs have highlighted the unavailability of local labour due to large scale migrations of skilled workers from the Southern Districts to other parts of the state. . The Apprenticeship scheme or wage subsidies on the lines of MGNREGA could be designed for supporting the local Industry to channelize labour towards them.
5. **Market linked Trainings:** There is a requirement for diversity in sectors as well as training in higher levels of the NSQF including at supervisory roles and those with higher technological requirements. It is seen that, even in ITIs and polytechnics, the exposure to advanced machinery or content is less than sufficient to make the candidates job ready. Chemicals, Food Processing, and Education sectors are key areas of requirement.

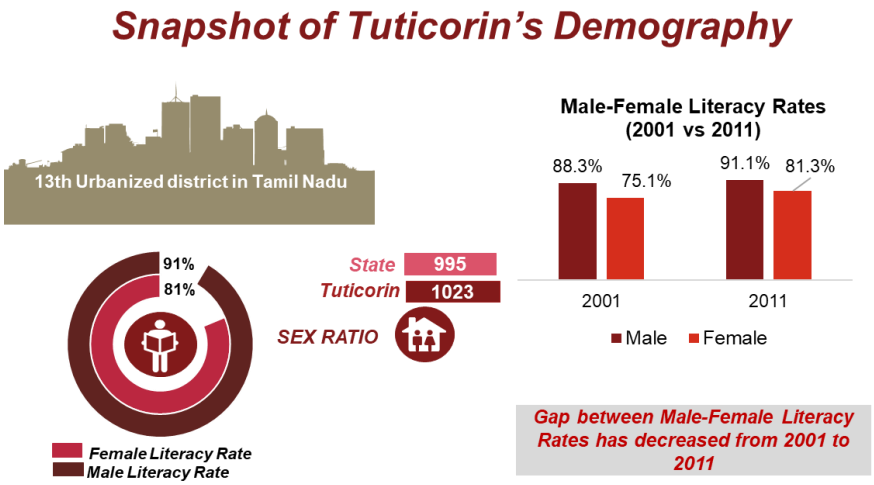
1. District Profile

1.1. Demographic Profile

Thoothukudi, (or Tuticorin) colloquially known as “Pearl City” for the pearl fishing activity, has been a major centre for ports, maritime and fisheries historically. Thoothukudi is surrounded by Virudhunagar and Ramanathapuram districts in the north, Gulf of Mannar in the east and Tirunelveli district in the south and west. The district was carved out of the larger Tirunelveli district in the year 1986. Thoothukudi houses one major port, the V.O. Chidambaranar Port Trust (VOCPT). It was the homeport of the first modern indigenous shipping services company, the Swadeshi Steam Navigation Company, started by V.O. Chidambaranar.

Table 1: Key Demographic Indicators– Thoothukudi vs Tamil Nadu

SN	Indicator[3]	Thoothukudi	Tamil Nadu
1	Total population	17,50,176	7,21,47,030
2	Population Density per sq.km (2011)	369	555
3	Urban Population	50.1%	48.4%
4	SC population (as % of total population)	19.9%	20.0%
5	ST population (as % of total population)	0.3%	1.1%
6	Differently abled population (as % of total population)	1.8%	1.6%
7	Population in age group 15-34 years (as % of total population)	32.6%	34.8%
8	SC population aged 15-34 years (as % of SC population)	36.4%	36.6%
9	ST population aged 15-34 years (as % of ST population)	0.3%	35.0%
10	Literacy rate	86.2%	80.3%



Key Highlights from the analysis of Census Data:

- **Population Growth and Urbanization:** The Decadal growth rate **of the population in the district** was **9.9%** between 2001 & 2011, compared to **15.6%** at state level. During the same period, the urban population grew by **32%** while the rural population declined by 5.9%. The population growth has been driven by the urbanization of rural areas and inward migration.
- **Literacy: In 2011,** the district had a female literacy rate of 81.3% while the male literacy rate of 91.4%. These are higher than the corresponding literacy rates at the state level (seen in Table 1). Between 2001 and 2011, the literacy rates among males increased by 2-3% while among females it increased by 6%, reducing the gap between them from a 13% in 2001 to 9.8% in 2011. The reducing gap between the

[3] Census 2011 & 2011

male and female literacy rates indicates a higher level of education attainment among females in the district.

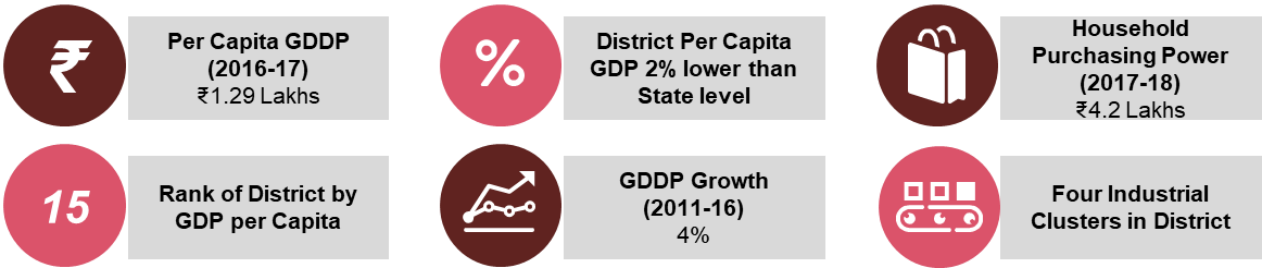
- **Youth Demography:** About one-third of the population was in the age category of 15-34 years in 2011. The Median age was 29 years, on par with the state. The population is set to get older with median age in 2026 expected to be around 35, as illustrated in the age-specific population pyramid of the district as seen below. [4] However, this lower than the state average of 37 years. This indicates a relatively wider opportunity to tap the demographic dividend as compared to other regions of the state that are ageing at a faster pace.

Figure 1 Age-wise Population Pyramid of Thoothukudi (2011 vs 2026)

1.2. Economic Profile

Thoothukudi is the most Industrialised among the southern districts of the state and contributes to 4% of the states GDP.[5] The establishment of the port has acted as a gateway to the industrialisation of the district. The major exportable items produced in the district are **chemicals**, **garments, salt** and **processed food**. The southern districts of the state have a rich history of entrepreneurs with the state's leading brands in Retail, Tourism & Hospitality, and Food Processing having their roots here. The district is **15th in terms of Per Capita Income and Household Purchasing Power capacity of around 4.18 lakhs per annum.** [6] **The district is among the mid-ranking states in terms of economic well-being.**

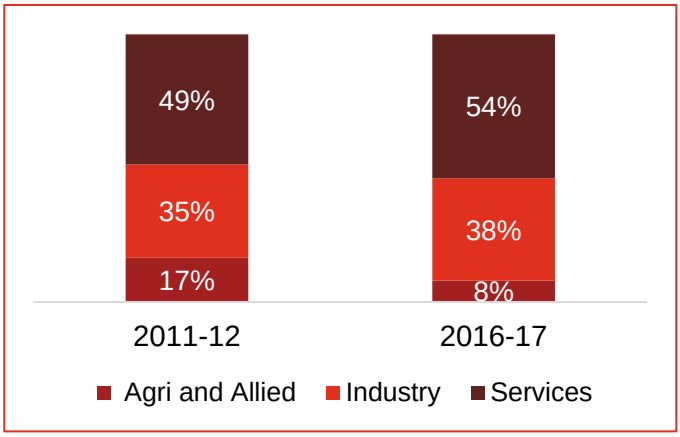
Figure 2 Key Economic Indicators of Thoothukudi District



[4] Age wise Population projected for 2026 based on age group wise life expectancy, birth and death rates
[5] D0ES, GoTN
[6] Household Purchasing Power is calculated from the total purchasing power (disposable income after savings/ investments) of the district, divided by the projected number of households (savings/ investment data calculated from RBI database on savings). A strong correlation exists between the Per Capita GDP, the Banking Sector indicators (adjusted to population) and the consumption expenditure (disposable income) reported under NSSO at the national and state level. This relationship was further verified with data over several years. The state level purchasing power is then further broken down to the district level based on the district level banking data (savings and deposits) and the district level consumption estimates of the NSSO. Source: District-metrics.com

1.2.1. Sector wise Analysis

Figure 3 Sectoral Share of GVA (2011-12 & 2016-17)

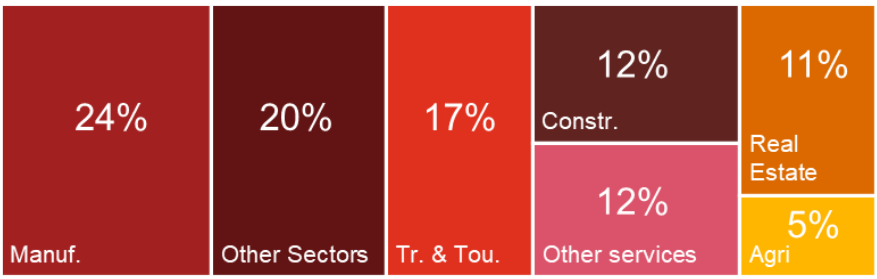


The Economy[7] of the District is dominated by the service and Industrial sectors, which jointly accounted for about 92% of the district output in 2016-17. The district has grown at a compounded annual growth rate of 4% largely driven by the services sector, which grew at an average of 6% per annum between 2011-12 and 2016-17. The share of the agriculture sector in the district output fell by six percentage points. The Industrial sector has witnessed a steady growth, though not on par with growth of the services Sector. At sub-sector level, Manufacturing, Real Estate, Trade & Tourism, Construction & Cultivation of Crops are the major contributors to the district's economy.

Table 2 Sector wise- Annual Growth Rate in Thoothukudi

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR between 2011-2016
Agri & Allied	-33%	11%	13%	-16%	-18%	-11%
Industry	81%	-38%	-2%	14%	5%	5%
Services	6%	9%	7%	2%	4%	6%

Figure 4 Share of GVA by Industry of Origin (2016-17)



Manufacturing contributes to nearly 24% of the District Output. Other key sectors are Trade & Tourism, Construction, Real Estate and Cultivation of Crops

Agriculture and Allied Sector

The agriculture and allied sector's share in output has declined in recent years. The main crops cultivated include Black and Green Grams, which account for 41% of the cultivated land. Other crops like paddy, chillies, pearl millet, and banana are also grown[8]. However, the district has seen declining production in several crops including banana since 2011-12. Further, the district is one of the major centres for fishing in the state contributing to 12.5% of the state's marine fishing output[9]. However, fishing has seen reduced output owing to several factors including over fishing. These factors, combined with a drastic urbanisation has resulted in considerable slowdown of the agriculture sector between 2011-12 and 2016-17.

Figure 5 GVA of Agri and Allied Sectors (2016-17)

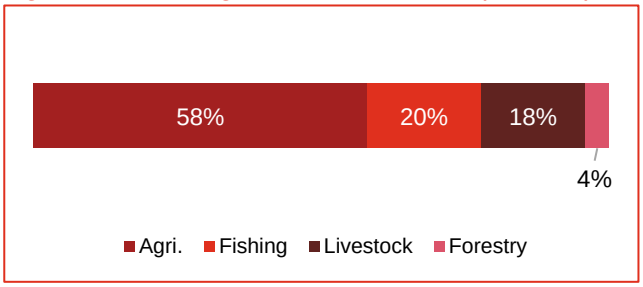
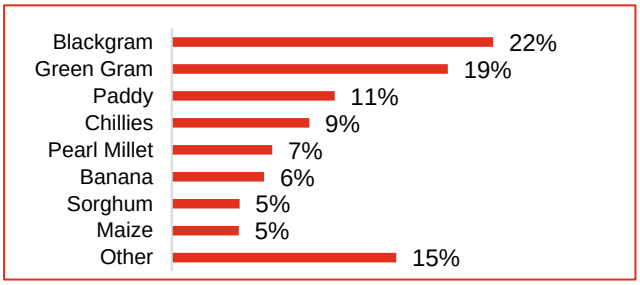


Figure 6 Crops by Share of Cultivated Area

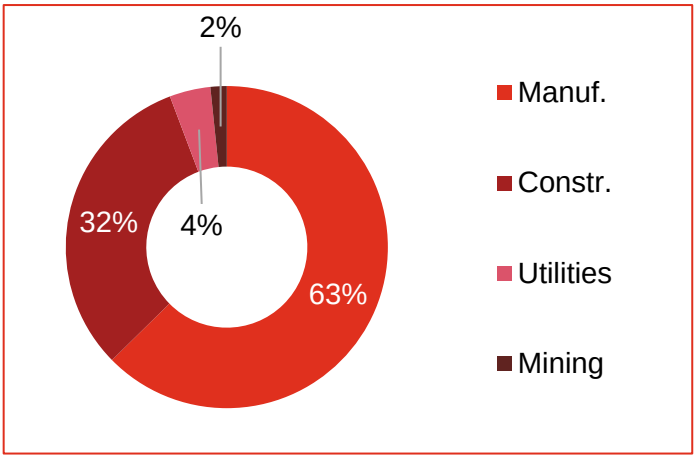


[7] Analysis in this section accounts is from data on GDDP provided by Directorate of Economics and Statistics, GoTN
[8] District Agriculture Contingency Plan, Dept. of Agriculture Cooperation and Farmer Welfare
[9] Statistical Handbook of Tamil Nadu, 2017

Industrial Sector

Recent growth in the manufacturing sector (8% between 2011-12 and 2016-17), has led growth in the industrial sector. The sector grew at 5% per annum during the period of 2011-12 and 2016-17. The sector is dominated largely by manufacturing and construction, which jointly, account for over 95% of the output. Metals, Textiles, Chemical production and Food Processing, were some the key industries in the district. The district is home to some of the major large industrial units including the Thoothukudi Thermal Power Station, Heavy Water Plant, SPIC, Tuticorin Alkali Chemicals and Fertilizers, Laksmi Mills, Loyal Textiles among others.

Figure 7 Industrial Sector GVA (2016-17)



Key Clusters and Traditional Industries

Salt	Seafood Processing	Sea-shell products
Ready Made Garments	Safety Match	Palm Leaf / Grass mats

Table 3 Profile of Manufacturing Sector from ASI

Industry	No of Units	Employees	Average No of Workers	Share of Employment	Share of GVA
Other Chemical	145	6,252	43	16%	4%
Textile	40	4,654	116	12%	4%
Food Processing	82	4,497	55	11%	2%
Basic Chemicals & Fertilizers	31	4,300	139	11%	-1%
Food Processing - Fish	17	3,364	198	8%	5%
Plastics	21	3,042	145	8%	1.1%
Iron & Steel	5	2,751	550	7%	33%
Others	397	11,431	29	28%	52%
Total	738	40,291	55	100%	100%

According to the ASI 2014-15, around 738 Industrial units were present in the district, directly employing more than 40,000 workers. Chemical, Textile, Food Processing were the key industries as per output and employment.

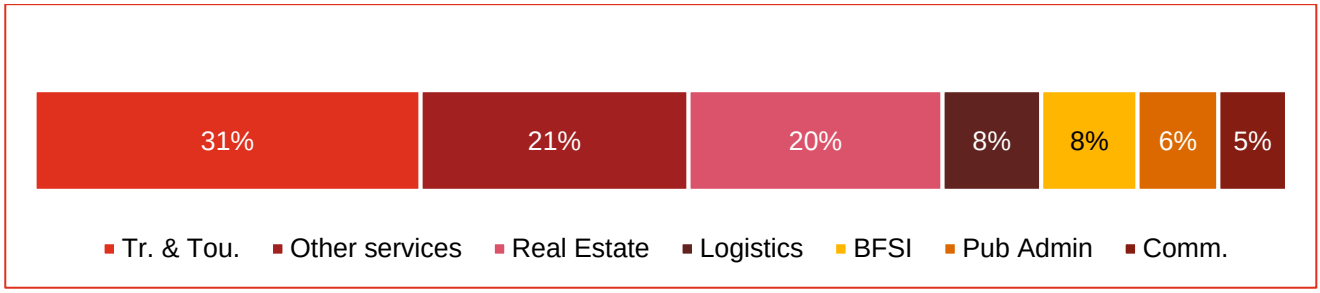
Table 4 Existing Industrial Estate & Plants

S.No	Name	Industries
1.	State Industries Promotion Corporation of Tamil Nadu (SIPCOT) – Tuticorin	Chemicals, Marine products, Salt, Spices, Cold storage, HDPE Bags, Textile industries
2.	Tamil Nadu Small Industries Development Corporation Limited Industrial Estate (TANSIDCO) – Kovilpatti	
3.	Tamil Nadu Industrial Development Corporation (TIDCO)- Tuticorin	

Services Sector

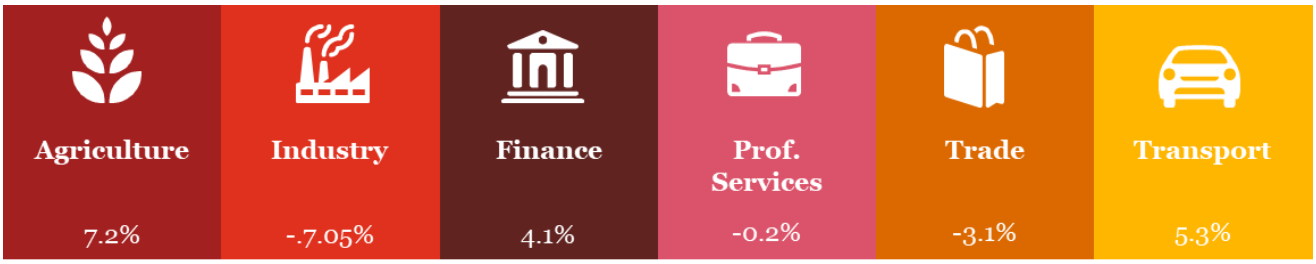
The sector has witnessed a steady growth with an average of 6% per annum between 2011-12 and 2016-17. Trade and Tourism contribute to nearly a third of the services sector. High rates of urbanization in the district has resulted in a high share of Real Estate and Business Services. This is owing to increasing real estate development and resultantly rent al income. The VOC port makes the district an important trading hub in Southern Tamil Nadu driving the trade, business services and logistics sectors. The tourism in the district is driven by the Thiruchendur Murugan temple, the beaches and steeples of Manapad, and the temple circuits of Nava Tirupati and Nava Kailayam around Sri Vaikuntam.

Figure 8 GVA of Services Sector (2016-17)



1.2.2. Investments and key economic drivers

Figure 9 Sector-wise growth of Credit off Take (2013-16) - RBI



According to the RBI data, the district has seen recent growth in credit off take in Agriculture, Transport and Financial Services indicating higher business investments in the sectors. However, the credit offtake in industry has suffered owing to recent policy uncertainties like the closure of the Sterilite Plant.

Other key investments and sectors include

- According to TN-Global Investors Meet data, more than 6,000 Crores of investment is expected in the manufacturing sector in Chemical and Petrochemicals, Textile, Food Processing and Electronic Manufacturing
- Tourism circuits are being developed under the 'Swadesi Dardhan Scheme" including major uplifts to temples, churches and beaches.
- VOC port is investing in the development of the outer harbour, and optimization of the inner harbour.
- The Madurai Tuticorin Industrial Corridor project is under planning as part of the larger Chennai Kanyakumari Industrial Corridor.

A sector-wise analysis of the key investments in the southern districts of Tamil Nadu[10] and upcoming projects have been listed below

[10] The districts of Southern Tamil Nadu viz. Tirunelveli, Virudhunagar, Thoothukudi and Kanyakumari are socially, and economically interlinked. The labour markets are fluid, with, workers often moving from one district to another, (a central location like Tirunelveli) for economic purposes on a daily / weekly basis. Hence, the investments have the potential to benefit the entire region apart from the district itself.

Sectors		Key Investments
	Textile	• Investments > Rs. 200 Crore signed as part of GIM with expected Employment of more than 200 people as directly employed
	Agro & Food Processing	• Investments > Rs. 300 Crores signed as part of GIM with expected Employment of 300 Direct employment in the Southern Districts • Key investments expected through the setting up of Mega Food Parks in Virudhunagar, Tirunelveli, Thoothukudi costing more than Rs. 2,000 Crores • Virudhunagar Dairy Plant Project costing more than Rs. 100 Crores • Fish Processing Business Incubation Centre, Thoothukudi
	Electronics Manufacturing	• Investments > Rs. 75 Crores signed as part of GIM with expected Employment of 3000 Direct employment
	Infrastructure	• Smart City Projects in Tirunelveli and Thoothukudi in water & sanitation, road infrastructure
	Chemical & Petro Chemical	• Investments of close to Rs, 5,000 crores signed as part of GIM
	Logistics	• Investments > Rs. 150 Crores signed as part of GIM with expected Employment of 1300 Direct employment
	IT/ ITES	• SEZ for IT/ITES sector being developed at Rs.1000 Crore investment
	Renewable Energy	• Investments in tune of Rs. 3,000 Crores for Thoothukudi Wind power Project

1.3. Labour Market Profile

The district's major labour market[11] indicators are largely in line with those of the state. Around 56% of the working age population (15 years and above) are available for work while around 55% are in the workforce. However, a major contrast in the district is with regard to the nature of employment of the workforce. The largest category is that of the casual labour at 59% against the state average of 44%. The district has low level of overall unemployment rate (2%). However, among the youth aged 15-29 years, the unemployment rate is 8% indicating the lack of mismatch between the demand and supply for jobs among the youth.

Figure 10 Key Labour Market Indicators

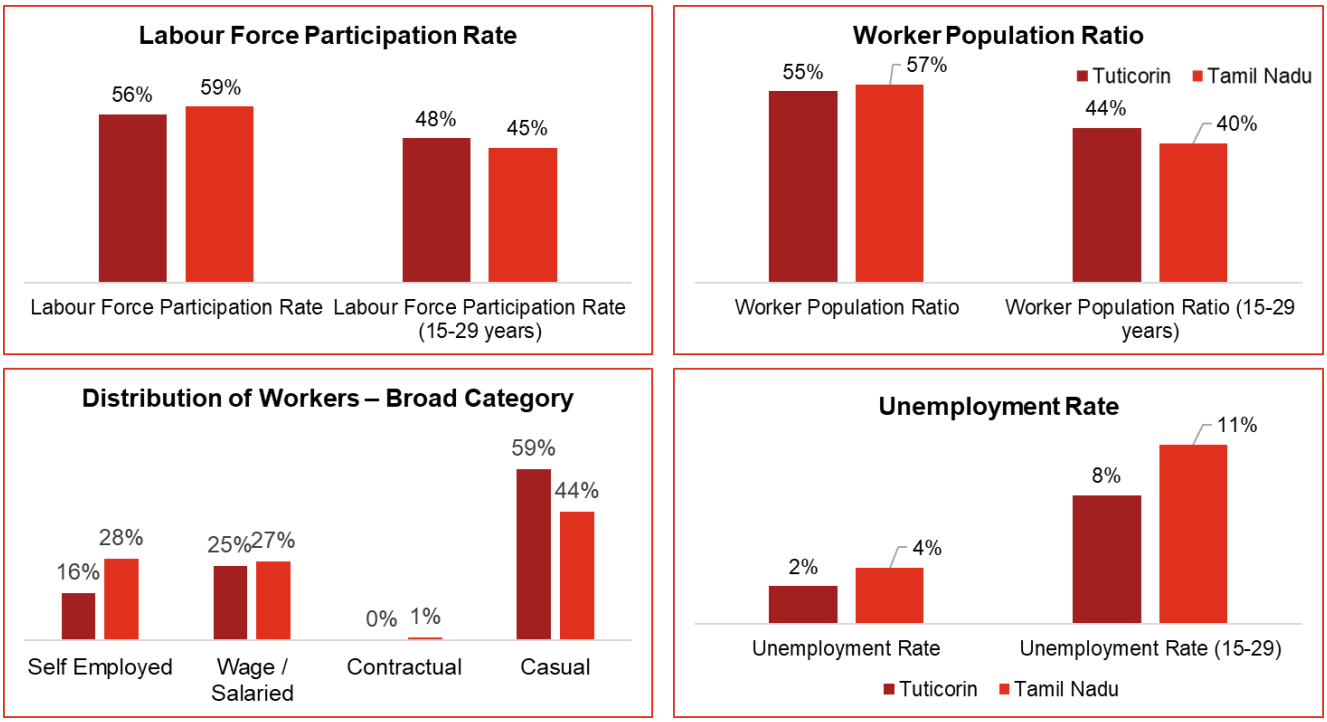
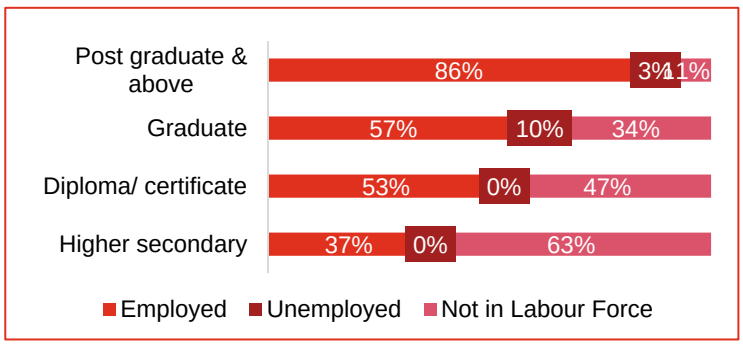


Figure 11 Distribution of Working status by Qualification



The education wise classification of the population in the district indicates a positive correlation between higher levels of education and higher unemployment rate. This points towards mismatch between industry demand and the output from the education system. 10% of Graduates were unemployed. This translates into an unemployment rates[12] of 15% in the graduate category. The large casual nature of the workforce meant, lower unemployment rates at lower levels of education.

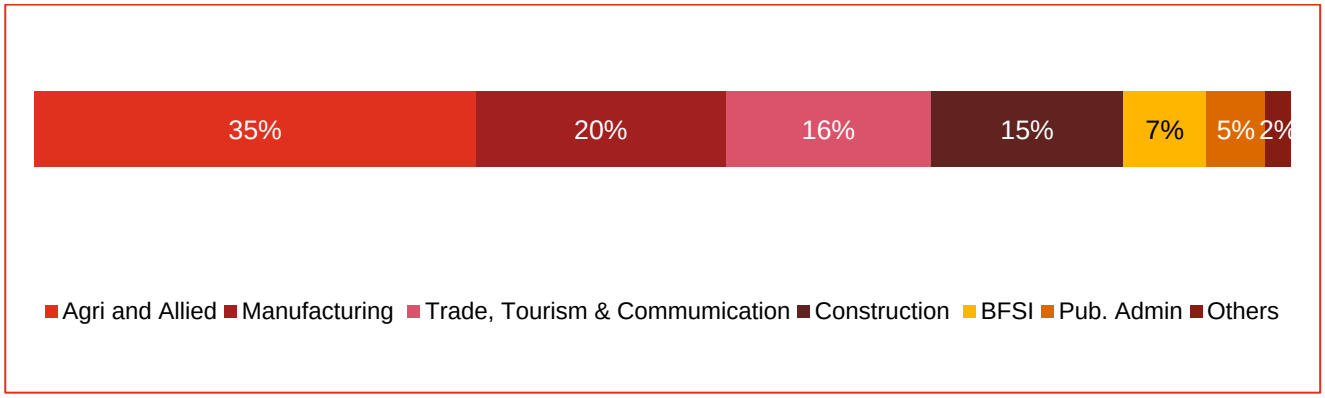
Table 5 LFPR and Unemployment Rate by Sex & Location

Sex	LFPR		Unemployment Rate	
	Rural	Urban	Rural	Urban
Male	75.0%	69.3%	1.5%	1.7%
Female	46.7%	30.1%	3.3%	5.3%

Disaggregating LFPR by sex and location of the respondent, it is seen that the participation rate of urban females is only **30.1%** compared to the 46.7% of the rural females in the working age population. The difference is marginal among males. A higher proportion of females in the labour force do not find suitable jobs as compared to men in the labour force.

[11] Analysis in this section are based on the District Level Estimates, EUS, 2013-14, Labour Bureau
[12] Unemployment rate is a proportion of the Labour force who are willing but unable to find work.

Figure 12 Sector-wise share of Employment



More than one-third of the workforce in the district is employed in the agriculture sector reflecting the dominating influence of the sector in the district. Manufacturing and Trade, Tourism and Communication are the second and third most important sectors in terms of employment.

1.4. Education and Skill Development Profile

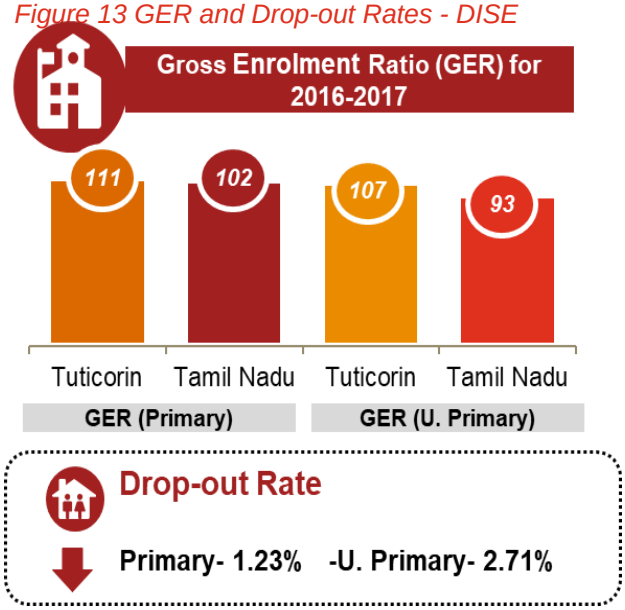
1.4.1. Education Profile

The southern districts of the state outperform most other regions and are important centres for education. Thoothukudi is also a major centre for school education housing several residential schools apart from having students travel from other districts on a daily basis for the purpose of education.

Table 6 Primary Education Profile - DISE

Particulars	Number
Schools in 2015-16	1,811
Schools in 2016-17	1,815
Public Schools	718
Private Schools	1,091
Enrolment in 2015-16	2,41,125
Enrolment in 2016-17	2,36,175
Enrolment in Pvt. Schools	1,84,700
Enrolment in Pub. Schools	50,832

Figure 13 GER and Drop-out Rates - DISE



According to DISE 2016-17 (refer Table 6), there were 1,815 schools in the district, marginally higher than the previous year, while the number of enrolments has fallen by around 2%. The private sector dominates both the number of schools and the enrolments. The Gross Enrolment Ratio at both primary and upper primary are higher than the state averages (Figure 13). The ratio indicates that the number of students in the district outstrip the expected population in the age cohort by a large margin. The skew is attributed, among other reasons, to the presence of several schools that cater to students from the neighbouring districts. The drop-out rates are 1.23% and 2.7% at the primary level and at the upper primary level respectively.

The Higher Education[13] is dominated by the General Engineering Stream with 25 colleges catering to 24,845 students in total, followed by the 10 General Arts & Sciences Colleges with an enrolment of 12,393. Males dominate the admissions in Engineering Colleges and Polytechnics while the females dominate the admissions in Arts and Sciences programs.

Table 7 Institutions of Higher Education in Thoothukudi District

S.No	Institution Type	No of Institutions	Students		
			Males	Females	Total
1.	General Education	25	7,094	17,751	24,845
2.	Engineering	10	7,130	5,263	12,393
3.	Industrial Training Institutes	12	--	--	1,412
4.	Polytechnics	7	5,584	1,226	6,810
5.	B.Ed.,	6	47	466	513
6.	Fisheries	1	122	110	232
7.	Home Science	1	-	660	660
8.	Agriculture	1	195	282	477
9.	Medical	1	283	322	605

[13] District Statistical Handbook, Govt. of Tamil Nadu

10.	Nursing	1	-	167	167
11.	Total	65	20,455	26,247	48,114

1.4.2. Vocational Education Profile

The skill training infrastructure[14][15][16] of the district include skill training centers implementing schemes like TNSDC, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and Deen Dayal Upadhyay Grameen Kaushal Yojana (DDU-GKY). Under the PMKVY program, trainings are offered under one sector and one trade. Under the TNSDC funded programs, trainings have been conducted under for 25 trades and 7,300 trainees. The key sectors include Healthcare (24%), Tourism & Hospitality (23%), and Security (16%). It is to be noted that all of the courses under the security sector are listed under a single trade, Defence Service Training. It is also observed that, several trades are entry level job roles.

Table 8 Vocational Training under Short Term Skill Development Programs

S.No.	Scheme.	Sector	Job Role	Number of Training Centers	Intake
1	Deen Dayal Upadhyay Grameen Kaushal Yojana		--	12	1675
2	Pradhan Mantri Kaushal Vikas Yojana	Tourism and Hospitality	Front Office Executive	1	120
3	Tamil Nadu Skill Development Corporation (Completed Trainings)	Agriculture	Processing of Fishes and by products	120	2
		Apparel	Assistant Designer Home Furnishing	20	1
			Sewing Machine Operator	20	1
		Automotive	Welding Technician Level 4	20	1
		Capital Goods	Draughtsman Mechanical	20	1
		Electronics	Disk Duplicator	40	1
			Field Technician Computing and Peripherals	40	1
		Retail	Retail Sales Associates	100	1
		Gems & Jewellery	Hand Sketch Designer (Basic)	20	1
		Handicrafts	Crochet Lace Tailor	20	1

[14] Tamil Nadu Women Development Corporation
[15] PKMVY
[16] TNSDC

S.No.	Scheme.	Sector	Job Role	Number of Training Centers	Intake
		Tourism & Hospitality	Cook (General)	160	3
			Food & beverages Service	20	1
			Multi cuisine Cook	100	2
		BFSI	Accounts Assistant using Tally	20	1
		Healthcare	General Duty Assistant	20	1
			Basic of Anatomy & Physiology	40	2
			Bedside Assistant	80	4
			Dietician Assistant	20	1
			Health Care Multipurpose Worker	20	1
			Medical Record Technician	20	1
			Midwifery Assistant	20	1
			Nursing Aides	40	2
			Pharmacy Assistant	40	2
		Security	Defence Service Training	200	1

The long-term skill development programs are predominantly offered through Industrial Training Institutes, which offer one and two year programs in various sectors and trades. There are 15 ITIs in the district with a stated capacity of more than 1,800 seats across 24 trades. The table below presents the courses offered through ITI, and the number of such institutes offering each trade/ training for job role. Fitter (19%), Welder (17%) and, Electrician (13% are the key trades. Overall, the ITIs have78% utilisation[17]. The pass percentage from the courses is 78%, much higher than the state average of 71%[18].

Table 9 Vocational Training under Long Term Skill Development Programs (ITI)

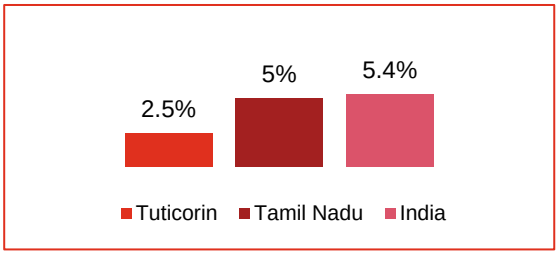
Sector	Job Role	Training Centres	Intake

[17] NCVT
[18] Directorate of Training, GOTN

Automobiles and Auto Components	Mechanic (Motor Vehicle)	5	53
	Draughtsman (Mechanical)	2	21
Chemical and Petrochemical	Instrument Mechanic (Chemical Plant)	2	40
	Maintenance Mechanic (Chemical Plant)	2	34
Engineering	Sheet Metal Worker	3	66
	Welder	7	238
	Welder (GMAW & GTAW)	1	35
	Welder (Pipe)	1	36
	Welder (Structural)	1	35
	Turner	3	62
	Fitter	12	268
Construction	Draughtsman (Civil)	1	7
	Carpenter	1	20
	Electrician	10	186
	Industrial Painter	1	21
Electronics & Hardware	Wireman	4	76
	Mechanic (Refrigeration and Air-Conditioning)	3	70
Infrastructure Equipment	Mechanic Diesel	1	18
Iron and Steel	Machinist	1	15
IT/ ITeS	Computer Operator and Programming Assistant	1	24
Strategic Manufacturing	Marine Engine Fitter	2	65
Textile and Apparel	Tool & Die Maker (Dies & Moulds)	1	20

Figure 14 Population Undergone Vocational Training

2.5% of the district's population aged 15 and above have undergone any vocational training, compared to the average of 5% at the state level.[19].



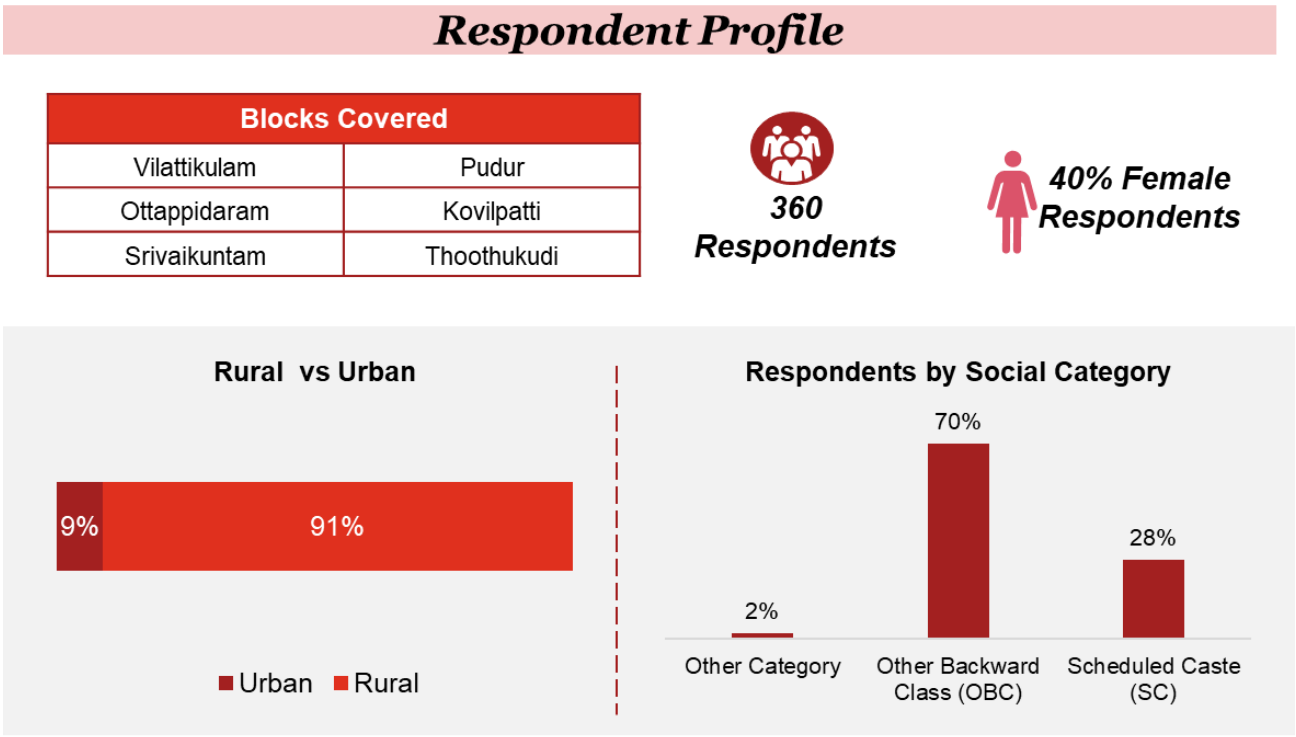
[19] Employment and Unemployment Survey, 2015-16, Ministry of Labour and Employment

2. Youth Perspectives

The structured household survey tool was administered with the 360 youth (young men and women in the age group of 15-34 years) sampled from six blocks Thoothukudi, Kovilpatti, Srivaikuntam, Pudur, Ottadiparam, and Vilattikulam. Of the total respondents, **40%** were **female**. Also, **more than 90 % of the respondents** were from the rural category. The sample has balanced representation of various socioeconomic and demographic characteristics of the population.

2.1. Profile of Respondent Youth

Figure 15 Respondent Profile of Youth Aspiration Survey

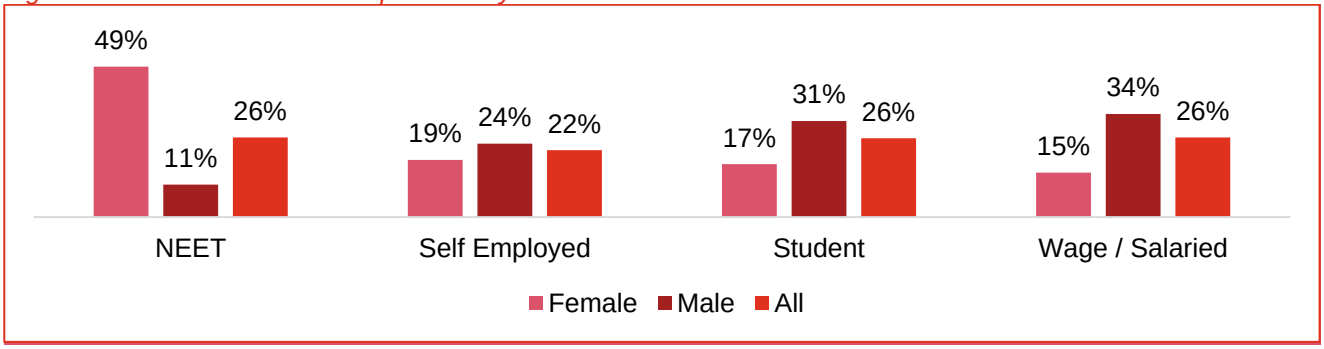


- *94% respondents were from the BPL (below poverty line category*

2.2. Respondents' Current Status

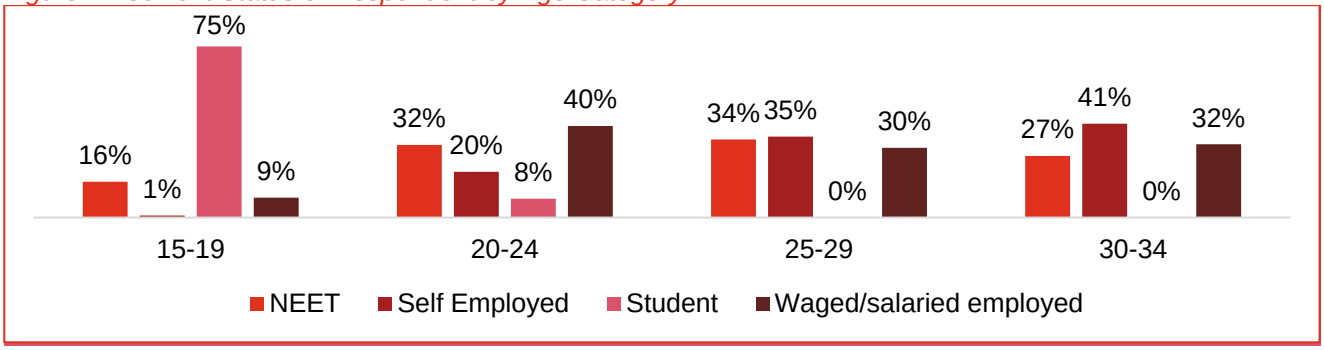
Figure 16Figure 16 illustrates the gender wise classification (current status) of the respondents interviewed during the household survey. While the female respondents were predominantly falling in the NEET (49%) category, the male respondents were largely distributed between Wage and Salaried Employment (34%), and Education / Training (31%). While nearly 60% of the male respondents were engaged in economic activity, just around one-fifth of the respondents fell under the same category.

Figure 16 Current Status of Respondent by Sex



Analysing the sample across age categories(Figure 17), it is seen that most (75%) of the respondents in the 15-19 years age category were students while around the second largest category was in NEET category. In the 20-24 years age category, a large one third of the respondents fell under NEET category. In the 25-29 years age category, the sample was distributed almost equally between NEET and Self Employment with no respondent in Education. Nearly 41% of the respondents in the 30-34 years age category were in Self Employment while another one-third were in Wage Employment.

Figure 17 Current Status of Respondent by Age Category

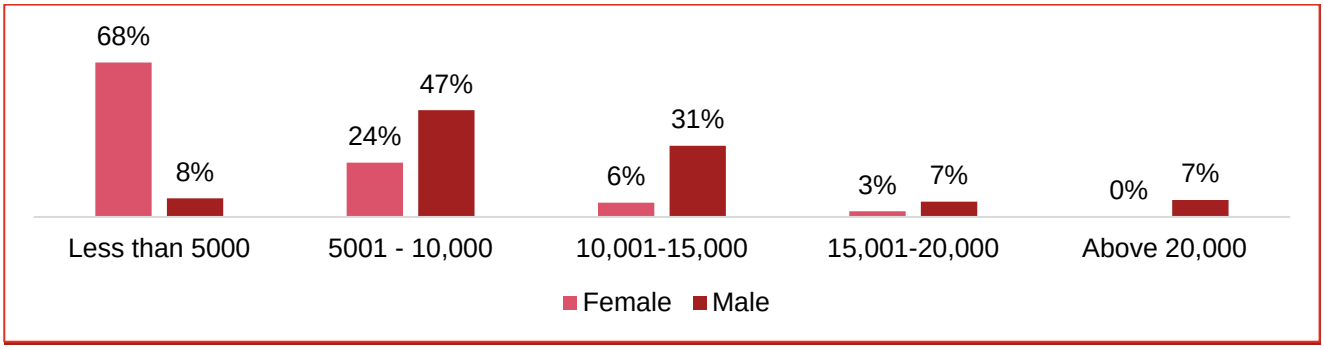


2.3. Economic Engagement of Youth

Nearly sixty percent of the respondents had been engaged in an economic activity of some kind, however, only 48% of the respondents were presently engaged in one. 80% of the respondents who had ever engaged in an economic activity reported that they were employed in a field related to their education / training.

The median income of those who were ever engaged in economic activity was ₹7,632. A wide gender disparity could be observed in the median income. Compared to the median income of ₹3,704 among females, males earned ₹9,438... 91% of female respondents had earned a monthly income of ₹10,000 or lesser. The overall median income was lower than the state level (₹9,968), the females were much worse off earning only half the state level (₹7,912). 16% of the graduates (and above) earned higher than ₹15,000 a month, against a state average of 30%.

Figure 18 Distribution of Respondents across Monthly Income Category across Sex



(n=215)

Table 10 Distribution of respondents across Monthly Income Categories by Education Level

	Upper Primary & Below	Secondary	Higher Secondary	Diploma / ITI	Graduate & Above
10,000 and below	77%	80%	71%	68%	43%
10,001 to 15,000	17%	14%	17%	21%	41%
15,001 to 20,000	2%	2%	13%	5%	9%
20,000 and above	5%	4%	24%	5%	7%
Total (N)	60	49	24	38	44

A large proportion of the respondents ever engaged in economic activity were engaged as a skilled worker in trades like tailoring, masonry, carpentry, welding, engineering etc. It is important to note that, 21% of the respondents who had completed a Diploma or higher levels of education had been engaged in unskilled work, the highest among all categories.

Table 11 Education Qualification of Respondents and Employment Type

	Upper Primary and Below	Secondary	Higher secondary	Diploma and Above
Farm Activities	32%	29%	17%	6%
Unskilled work (MGNREGA, construction	0%	2%	4%	21%
Skilled worker (tailor, mason)	48%	55%	63%	51%
Salaried Employment	0%	0%	0%	1%
Business / Trade / Manufacturing	25%	22%	25%	26%
Number of respondents	60	49	24	38

2.4. Youth under NEET Category

Around one-fourth of the respondents were from the NEET category. 75% of the respondents in the NEET respondents were female. Nearly 60% of the NEET category respondents were in the 20-29 years age category. While 68% of Males been in NEET category for less than 6 months, more than half of the female respondents have been in the NEET category for more than a year. 42% of the respondents in the NEET category are between the ages 20-24 years while 30% are between 25-29 years. **55% of the Female respondents and almost all male respondents, wish to work in the future.** However, only 8% of those female respondents have been actively seeking work. On the other, half the male respondents in this category wishing to work are actively seeking work opportunities. This indicates a lack of appropriate opportunities for youth who have just completed what would have been their tertiary education.

Table 12 NEET Category Respondents

Duration in NEET Category			
	Female	Male	Total
Less than 6 months	14%	26%	17%
6 months- 1 year	8%	52%	19%
1- 2 years	10%	4%	9%
2- 3 years	4%	9%	5%
More than 3 years	63%	9%	50%
Total	71	23	94

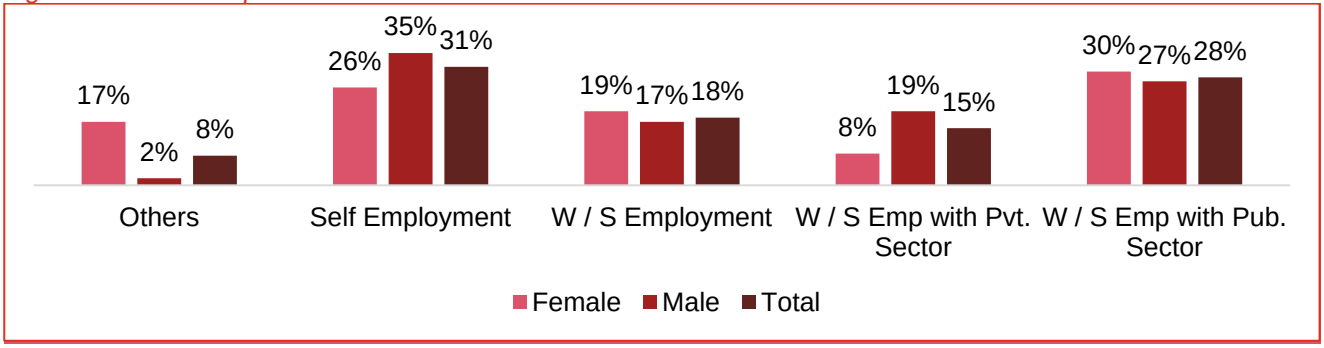
Wish to Work			
	Female	Male	Total
Yes	55%	100%	66%
Total	71	23	94

Actively Seeking Work			
	Female	Male	Total
Yes	8%	52%	24%
Total	39	23	68

2.5. Youth Career Aspiration

The youth in the district expressed preference largely for self-employment (31%) and wage / salaried employment with the public sector (28%). Both females and males have shown similar interest in the pursuit of public sector employment, while males have a substantially higher interest in pursuit of private sector employment and self - employment.

Figure 19 Career Aspiration of Youth



(W/S Employment – Wage / Salaried Employment)

The main factors determining the aspiration of the youth are salary (wages) / income (93%), job security (58%), (59%), proximity to residence (42%) and security / safety of workplace (42%). 69% (of 173) of the youth feel they are largely or completely prepared for requirements for a job while only 9% feel they are unprepared.

Table 13 Career Aspiration - Factors, Preparedness and Availability of Jobs

Factors Determining Aspiration	Responses* (n=360)
Salary (wages) / Income	93%
Job Security	58%
Proximity to Residence	42%
Safety / Security	42%
Flexible work arrangements	9%
Employer provided benefits and perks	7%
Social Status	6%
Opportunities for promotion and career development	4%

Perception of Preparedness for Jobs (n=173)	Responses
Completely Prepared	50%
Largely Prepared	19%
Moderately Prepared	22%
Somewhat prepared	4%
Not Prepared	4%
Availability of Job Opportunities	**Responses**
Very adequate	4%
Somewhat adequate	10%
Neither adequate nor inadequate	1%
Somewhat inadequate	16%
Very Inadequate	68%

**Multiple response question, sum may exceed 100%*

42% of the youth see no particular challenge in pursuing a career. Among the challenges that the youth see in pursuing the careers, the lack of sufficient education qualification emerges as the primary challenge. Other key challenges include lack of availability of jobs locally and low financial strength. Females highlighted lack of local jobs (24%) and lack of educational qualifications (23%) as top most challenges. Males highlighted lack of educational qualifications (30%) and low financial strength (16%) as top challenges. **5% of the youth highlighted the lack of technical and vocational skills as a challenge in pursuing their career aspiration.**

Table 14 Career Aspiration – Challenges in pursuing desired career

Challenges (n=360)	Responses	Challenges (n=360)	Responses
No Challenge	42%	Lack of work experience	3%
Lack of sufficient education qualification	27%	Others	2%
Lack of jobs locally	15%	Unsafe working environment	1%
Low financial strength	13%	Lack of family support / social acceptance of girls being engaged in economic activity	1%
Lack of technical / vocational skills	5%	Pressure related to getting married	1%
Lack of guidance / information on appropriate job available for skill levels	3%		

**Multiple response question, sum may exceed 100%*

According to the respondent, the key factors influencing their employability include years of relevant experience (47%), soft skills (16%) and education attainment (15%). Good Communication Skills (82%), Complex Coordination Skills (62%) were identified as key skills specific to their aspired jobs. Team work (20%) and time management (15%) were other identified areas of skill development. **While 33% respondents had already taken steps to meet these requirements, 31% were intending to take up an apprenticeship / gather work experience**. 6% were looking for vocational / skill training.

Table 15 Key Requirements to enhance employability and steps to achieve aspirations

Key Requirements to enhance employability*			
Requirements	Responses	Requirements	Responses
Years of Relevant Work Experience	47%	References	5%
Soft Skills	16%	Certifications of Technical Skill	3%
Education attainment	15%	Institution of Education / Skill Training	2%
Performance in Interviews	10%		
Key Skills Required for desired job*			
Clear communication	82%	Team work	11%
Complex problem-solving	33%	Leadership	8%
Active listening	31%	Attention to detail	7%
Analytical thinking	27%	Time management	4%
Coordination Skills	13%	Creativity, originality and initiative	1%
New Steps to achieve aspirations			
Steps	Responses	Steps	Responses
Already in Pursuit	33%	Vocational / Skill Training	6%
Apprenticeship / Gathering Work Experience	31%	Others	14%
Continuing Education	28%		

**Multiple response question, sum may exceed 100%, (n=360)*

Female respondents aspired for careers in the food processing, BFSI, Education and Skill Development, and Agro- Business sectors. Males aspired for Furniture and Furnishing, Media & Entertainment, Chemical & Pharma, and Iron, Steel and other Metal sectors

Table 16 Sectors aspired by respondents

Males	Responses	Female	Responses
Food Processing	22%	Furniture and Furnishing	12%
BFSI	12%	Media and Entertainment	12%
Education and Skill Development	8%	Chemical & Pharmaceuticals	12%
Agro-business	8%	Iron, Steel and other Metals.	10%
Building, Construction Industry	6%	Auto and Auto Components	8%
Electronic & IT Hardware	4%	Building, Construction Industry	6%
Domestic Help	3%	Domestic Help	6%
Furniture and Furnishing	3%	Agro-business	5%
Media and Entertainment	3%	Food Processing	4%

Males	Responses	Female	Responses
Other manufacturing	3%	Oil, Gas & Hydrocarbon	4%

(n=360)

The median income expectation from the entry-level job is around ₹18,700. Around 38% of the respondents have expectations of monthly income greater than ₹20,000. Nearly 40% of the NEET category respondents were expecting a salary of below ₹15,000.

Table 17 Aspired monthly salary of respondents

Salary / Category	NEET	Self Employed	Student	Waged/salaried employed
10,000 and below	23%	24%	5%	21%
10,001-15,000	15%	15%	9%	18%
15,001-20,000	15%	19%	33%	26%
20,001-25,000	5%	18%	12%	17%
25,001-30,000	9%	6%	12%	9%
Above 30,000	10%	18%	29%	10%
Total respondents (N)	94	79	93	73

Female respondents were largely reluctant to migrate outside of their hometown for the purpose of employment. However, 48% of the male respondents were willing to other places within the state for the employment.

Table 18 Preference for Work Location

	Female	Male
Within Hometown	85%	43%
Within District	35%	45%
Outside District but within Tamil Nadu	10%	48%
Outside Tamil Nadu but within India	0%	8%
Outside India	0%	3%

**Multiple response question, sum may exceed 100%*

Figure 20 Sources for Job Information

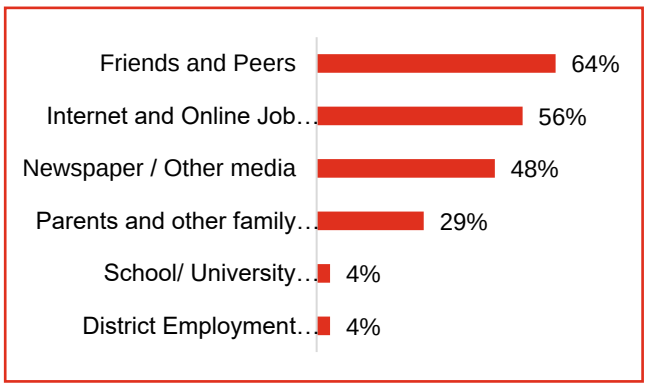
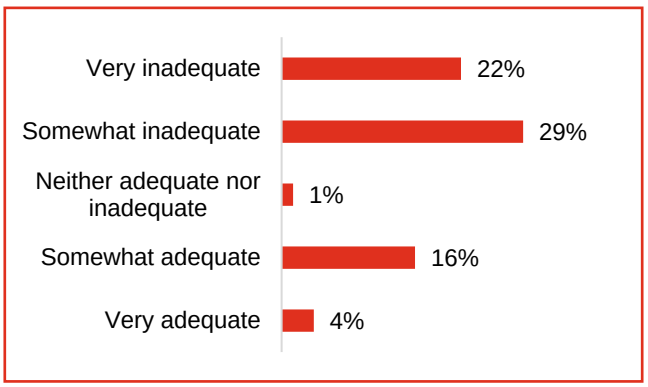


Figure 21 Perception on Counselling Services

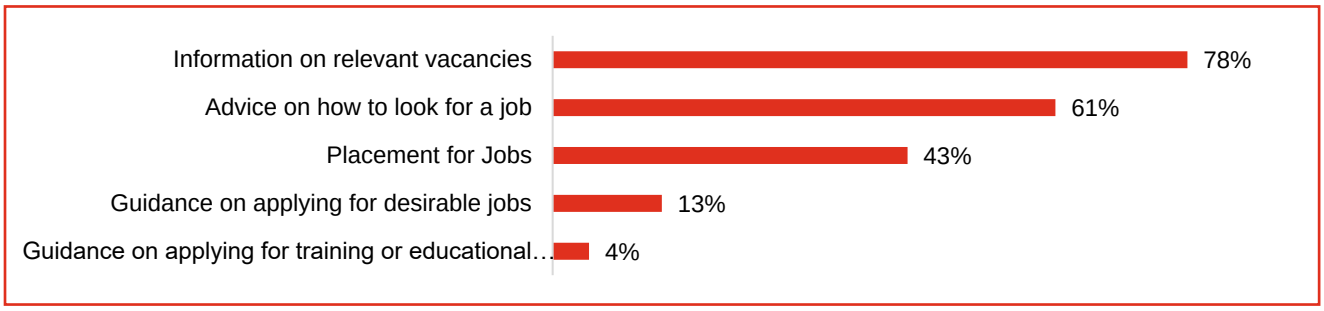


Multiple response question, sum may exceed 100%, n=360)

The most important source for Job related information was friends and peers (64%) followed by internet and other online portals (56%) newspapers and other media (42%).The District employment office was identified as a source by only 4% of the respondents. 51% of the respondents felt that the counselling services were not adequate in meeting their requirements. The key inputs requested by the respondents from career counselling

services include Information on relevant vacancies (78%), advice on seeking jobs (61%) and placement support (43%)

Figure 22 Key requirements from career counselling



Multiple response question, sum may exceed 100%, n=360)

2.6. Skill Training Preferences of Youth

About 13% of the respondents had any awareness of Govt. run vocational programs while only 1% had undergone any vocational training previously. 35% of the respondents were interested in undertaking any vocational training. Of these respondents, 75% wanted the trainings to be short term certificate courses and 78% wanted the courses to be part time in nature. Though the respondents weighed most aspects of a training program as being important, they were mostly concerned with the reputation and recognition of the certifying authority. Training Content followed by practical exposure were the other identified as being most important.

Table 19 Importance of different aspects of Skill Development

Factors	Very Important	Important	Somewhat Important	Unimportant
Training Content	74%	25%	1%	0%
Reputation of the training service provider	84%	15%	1%	0%
Reputation of the certifying body	80%	20%	0%	0%
Quality of training	66%	31%	2%	0%
Practical Exposure	67%	31%	2%	1%
Internship/apprenticeship quality	44%	55%	1%	0%
N	127			

3. Employer's and Other Stakeholders' Perspectives

3.1. Quantitative Employer Survey

The study covered employers, industrial associations and other key stakeholders to understand the demand side perspectives of skills. The information was collected through both quantitative survey and qualitative approaches including In-Depth interviews and focus group discussions.

The survey covered 45 Industries from 14 sectors, with major respondents belonging to the Chemical & Pharmaceutical, Textile & Apparel, and Tourism & Hospitality sectors, which are among the highest contributors to the local economy. 63% of the industries were in operations for more than 10 years. 51% of the industries surveyed reported to be in the Small Industries category while 18% were from the large and micro industries category. The selection of the Industries was also based on the labour intensity of the sectors.

Figure 23 Distribution of Industries by Size

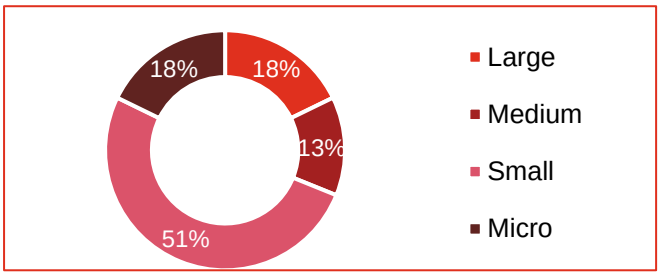


Table 20 Sector wise coverage of Industries in Employer Survey

S.No	Sector	Number of Industries Surveyed	S.No	Sector	Number of Industries Surveyed
1	Chemical & Pharmaceuticals	10	8	Retail	2
2	Textile and Apparel	10	9	Machinery Equipment	2
3	Tourism Travel and Hospitality	5	10	Beauty and Wellness	1
4	Auto and Auto Components	3	11	Electronic and IT Hardware	1
5	Food Processing	3	12	Other Manufacturing	1
6	Iron, Steel and Other Metals	3	13	Plastics	1
7	Agro-business	2	14	Paper and Paper Products	1

98% employers used reference from existing employees or known sources as a mode of recruitment. Local Community (30%) was the next common source of employees, followed by advertisement in newspapers. Campus placements were opted by 7% of the employers. The most common challenge they face are candidate disinterest and attitude (86%) and high local wages (67%).

Table 21 Modes and Challenges in Recruitment Process

Key Modes of Recruitment*		
S.No	Particulars	%
1.	Employee Reference	98%
2.	Local Community	30%
3.	Advertisements in Newspapers	9%
4.	Campus recruitment in arts/science/commerce colleges	7%
5.	Campus recruitment in ITIs/Polytechnic	7%
6.	Campus recruitment in Engineering Colleges	2%
7.	People registered with Employment Exchange	2%
8.	Web Portals	2%
9.	Job Melas	2%
10.	Others	2%
11.	Employee Reference	98%

Key Challenges faced in Recruitment*		
S.No	Particulars	%
1.	Candidate Disinterest and Attitude	86%
2.	High local wages	67%
3.	Nature of work requires strenuous physical labour	17%
4.	Lack of requisite core skills	10%
5.	Attrition/Uncertainty due to marriage and children	7%
6.	Lack of Prior Experience	5%
7.	Lack of social acceptance of girls to work in the Community	5%
8.	Work hours	5%
9.	Lack of requisite soft skills	2%
10.	Resistance by family to allow them to work	2%
11.	Attrition/Uncertainty due to involvement in Household chores	2%

**Multiple response question, sum may exceed 100%*

Figure 24 Average distribution of workers by Sex

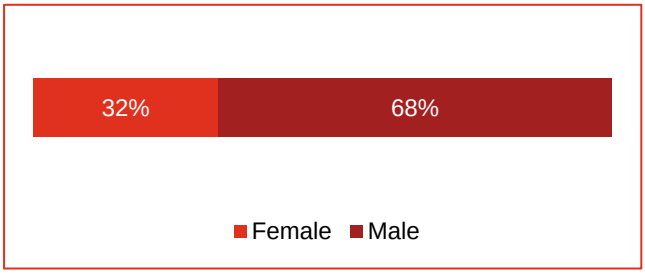
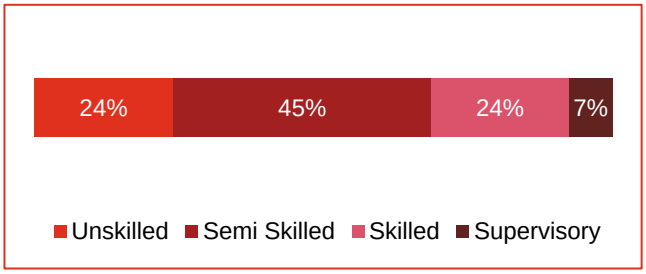


Figure 25 Distribution of workers by Skill Levels



The surveyed industries were largely dominated by the male workers. Textile Industries usually employ a higher proportion of females while the chemical industries are almost entirely dominated by males. Semi-Skilled workers dominated the share of workforce (45%) followed closely by skilled workers and unskilled workers both (24%). Only six industries affirmed the employment of migrant workers. They were either migrants from other parts of Southern Tamil Nadu or Eastern India.

The employers estimate 25-30% attrition annually from their workforce. Workers perception of lower wages was the dominant (88%) cause of attrition. The availability of better job opportunities and the candidate disinterest were other reasons attributed to the high attrition rates. About 28% of the respondents feel there is high growth prospects while 14% of the respondents see high adoption of technology. Among these, 16% of the respondents have already initiated plans in adoption of technology.

Figure 26 Key causes of Attrition

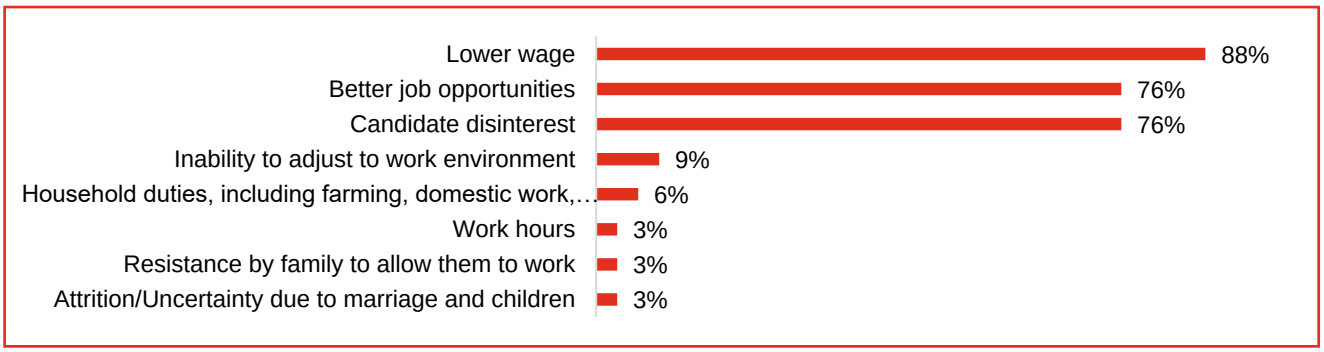


Table 22 Growth Prospects and prospective adoption of technology

Growth Prospects of Industry (n= 42)	%	Level of Technology adoption (n= 43)	%	Plans to adopt Technology	%
High	28%	High	14%	Yes	16%
Medium	58%	Medium	39%		
Low	14%	Low	22%	N=	36
		Can't Stay	25%		

Key Insights on Skill Development / Training

- 12 of the 45 respondents (26%) of the respondents were aware of any vocational programs run by the Govt.
- The highest awareness was about TNSDC (19%). There was low awareness about other schemes.
- Only 13 organizations had recruited from a vocational / skill training program in the previous 3 years
- Lack of experience of working in factory set up has been one of the major challenges in recruiting from vocational/skill development programme.
- 16% of the respondents were very interested in working with the Govt. on Skill Development Programs

Figure 27 Interest in working with the Govt. on Skill Development

3.2. Qualitative Inputs from Stakeholders

The study also included in-depth interviews of more than 30 stakeholders including the line departments involved in the Skill Development, Livelihood and Employment and Industrial development related activities, Industrial Associations, Vocational Education and Skill Development institutions among others. Focus group discussion under the aegis of the Joint Director of Training, Tirunelveli and the District Collector were held in Tirunelveli and Thoothukudi respectively. The key areas of discussions are listed below

S.NO	Topic	Responses
1.	Industrial Growth	• The southern districts have witnessed industrial slow down and drying up of new investments owing to recent policy issues including the shutdown of a large industry like Sterilite copper. • This has had ripple effects with the traffic at the VOC port reducing by 7% and affecting the ancillary and logistic operations associated with it. • Similarly the match factories of Kovilpatti have faced severe attrition owing to health concerns of the workers. • However, there is demand emerging from a service sector economy in terms of retail, travel and tourism. Industries in textile and apparel are moving into the southern districts owing to the high labour costs in Western Tamil Nadu. • Food Processing and Chemicals and Petrochemicals hold a good potential in the coming years. • There is considerable potential in education sector especially in as Trainers and Teachers in Soft Skills and English language.
2.	Labour Supply	• The Southern Districts of Tirunelveli, Thoothukudi, Kanyakumari and Virudhunagar have a fluid labour force, even commuting daily for the purpose of work across districts. This movement is channelled largely through the city of Tirunelveli. • The relative lack of industrialisation in the southern districts of Tamil Nadu has made a source for cheaper migrant workers for industries and establishments in major cities like Chennai and Coimbatore. The Tirunelveli region is said to contribute to maximum number of Tamil migrants in Mumbai. • This has caused a shortage of workers for the local industry, especially in the skilled worker category including students from ITIs. • The youth in the southern districts attain higher levels of education when compared to the rest of the state. This also results in overwhelming aspiration for white collared or public sector job, especially among graduates. • The manufacturing or food processing sectors often lose out on workers to retail or trade. • The youth are also unwilling to undertake physically strenuous activities.
3.	Women Employment	• Female employment is largely focussed in the apparel & textile sector among Industries especially in Puthiamputhur cluster. The Apparel Industries in Thoothukudi outsource job work to women collectives in rural areas of Tirunelveli. The young women often see employment in the textile & apparel sector as temporary. The industry not only gives them a life skill in tailoring, it also provides them an income to support their families or save up for their weddings. Though they might drop out of the labour force in the immediacy of their wedding, they often re -join in times of economic need. Hence there is a constant churn of the workforce in the sector's female employees. • This is being adopted in engineering trades, retail as well. Large Industries often on board females as trainees, provide training, accommodation and employment for 3-4 years. Many females tend to drop out after this period and the Industries recruit a fresh batch of workers. These were hitherto considered male dominated trades. • There is interest in agro-business and food processing sectors among the women in the district, especially in Fisheries and dairy related roles. Which can be tapped into through targeted programs.
4.	Youth Aspirations	• The aspirations of the youth are largely oriented towards white collared jobs, especially in the IT-ITES, Media & Entertainment & BFSI sectors.

		• However, even in these sectors, there is low preference for the jobs with field work like Insurance agents. There is an aspiration to live in the bigger cities among the youth, and hence there is considerable migration to cities like Chennai, Bangalore, and Coimbatore. • There is negative perception in the community about blue-collared jobs.
5.	Training & Skill Development	• The awareness about Skill Development programs was moderate, with CTS and ATS schemes being popularly known. There is lower awareness about other short term skilling programs like PMKVY and TNSDC run programs. • However, there are niche programs available in Chemical & Petrochemicals and Boat repair. The capacity in these courses are very low compared to the Industrial demand. • There is also a trend of institutes tying up with larger companies in the larger cities. Timely payment of stipends would improve the completion rate of training programs. • The quality of students from vocational training institutions does not meet industry standards and need to be retrained. This is especially true in private sector institutions. • The Industries are keen to take on Apprenticeships, however, they would require better operational support from the Dept. of Training in terms of mobilisation, reimbursements and incentivising the students to stay on their job for longer duration.
6.	Automation	Though technological upgradation is seen across sectors, labour saving automation is largely in the Chemicals Sector. However, it replaces unskilled workers. The demand for skilled workers will continue to be in requirement.

Skill Gaps

Soft Skills especially communication skills, professionalism, flexibility and interpersonal skills were found to be wanting among the existing workers by most of the stakeholders. In the services sector, the conversation skills and entrepreneurial skills in English were found wanting in the BFSI sectors. There are increased investments collaborations by national and international companies in the industrial sector which value work ethics, professionalism and timeliness among other things. This is a major challenge to inculcate during employment. The industrial sector would also require greater tenacity, ability to innovate.

Specific Skill Requirements include

- Supervisory & design roles in the Food Processing units, Salt Making Units, Chemical and Petrochemical Sectors especially for quality assurance
- Supervisory roles in the textile mills to manage entry level skilled workers in the apparel units in Puthiamputhur.
- Motor Vehicle Mechanics especially focussing on the Heavy vehicle segment with computer aided servicing with the adoption of BS-VI
- Adequate English Communication Skills in Education sector.
- Receptionists, Tour Guides, Adventure Sports, Cab Drivers among others in the Tourism & Hospitality sector. There is a requirement to learn multiple languages especially, English and Indian regional languages.
- Insurance Agents & GST Accountants are needed across sectors owing to the recent reforms.

4. Skill Gap Analysis

The district of Thoothukudi is witnessing increased industrialization and urbanization. These are affecting the incremental demand[20] for skilled workforce in the district, where as per our methodology, Manufacturing, Education, Health & Social Work, Construction and Trade are the leading sub sectors for employment. However, given the present trends in the supply of skilled workers, there is an expected gap of 41,505 workers by 2025.

Table 23 Sector wise Incremental Demand for Skilled and Semi-Skilled Workers between 2019 and 2025

Sector	Incremental Demand for Skilled Workers			Incremental Demand for Semi Skilled Workers			Total Demand
	2019-21	2022-25	Total	2019-21	2022-25	Total	Total
Agriculture	(195)	(258)	(453)	(1,366)	(1,803)	(3,168)	(3,621)
Allied Activities	(2)	(2)	(4)	(12)	(16)	(28)	(31)
Mining and quarrying	(144)	(185)	(329)	(240)	(308)	(548)	(878)
Manufacturing	2,453	3,580	6,033	4,906	7,160	12,066	18,099
Utilities (Electricity / Gas)	74	103	177	147	206	353	530
Construction	730	1,083	1,813	1,825	2,708	4,533	6,346
Trade	518	728	1,246	1,794	2,518	4,312	5,557
Tourism & Hospitality	268	376	644	519	729	1,247	1,891
Logistics	137	186	323	330	446	776	1,100
Communication (IT /ITES)	759	1,191	1,950	380	595	975	2,925
BFSI	964	1,496	2,461	482	748	1,230	3,691
Real estate and business services	149	220	370	374	550	924	1,293
Public Administration	73	100	173	59	80	138	311
Education, Health & Social Work Activities	2,424	3,671	6,096	1,939	2,937	4,876	10,972
Arts, entertainment and recreation	612	899	1,511	489	719	1,209	2,720
Other Services	3,022	4,444	7,466	2,417	3,555	5,973	13,438
Skill Demand[21]	12,184	18,077	30,261	15,660	22,953	38,613	68,874
Skill Supply	4,218	5,624	9,842	7,512	10,016	17,527	27,369
Skill Gap	7,966	12,453	20,419	8,149	12,937	21,086	41,505

[20] Incremental Demand Estimates the additional stock of workforce that are to be created given the expected Economic Conditions in the period of study. This may help in estimating requirement for fresh trainings.
[21] Includes only sectors with a positive incremental demand

5. Key Study Findings and Recommendations

5.1. District Action Plan

The district level training projects below suggests the potential areas for skill development interventions and job opportunities in the future. It identifies the potential job roles mapped with NSQF linked QPs and the potential of employment opportunities over the next five years with a focus on youth. The job roles have been shortlisted based on the analysis of findings from the skill gap analysis, secondary research, youth aspiration survey, enterprise survey, district level consultations and discussions with industry associations

S.No	Sector	Trades	Target (People)	Budget (₹)
1.	Textile & Apparel	• Cutting Supervisor • Knitting Machine Operator • Fabric Checker • Quality Checker • Industrial Sewing Machine Operator	3,000	₹5.3 Crores
2.	Ports and Logistics	• Truck and heavy vehicle operators • Crane operators • Truck Drivers-cum-Hazardous Materials Handler, • Surveyors	2,200	₹4.07 Crores
3.	Construction	• Draughtsman • Supervisor - Roads & Runways • Quality Technician • Fabricator • Construction Welder • Construction Electrician • Green Jobs – Rainwater Harvesting • Supervisor – Fabrication	2,700	₹7.26 Crores
4.	Food Processing	• Food Dehydration Technician, • Quality assurance Manager/Lab Technician • Food microbiologist • Food Processing Worker • Fish Value Added Products • Processed Food Entrepreneur	3,600	₹4.7 Crores
5.	Agriculture & Food Processing	• Sustainability , Modern Fishing & Safety Training • Boat & Ship Repair • Export based training for fisherman cooperative	3,500	₹4.97 Crores
6.	Training for Travel and Tourism	• Tour Guides • Life Guard • Boat Jetty In-charge • Counter Sales Executives • Adventure sports • Tour Guide/Manager • Travel Consultant, Counter Sales Executive, Tour Vehicle Drivers	1,350	₹2.36 Crores
7.	(i) IT/ ITES (ii) Tourism & Hospitality	• Training for Soft Skills and in spoken Language including English	4,000	₹3.51 Crores

S.No	Sector	Trades	Target (People)	Budget (₹)
	(iii)Trade			
8.	Education & Skill Development	• Training of Trainers Soft Skills and English for Students • Training of Trainers for in Apparel / Textile And other key sectors	2,000	₹2.31 Crores
9.	Chemical, Petrochemical	• Chemical Quality Assurance • Lab Technician • Machine Operator – Tool Room	1,000	₹2.6 Crores
Total			**23,350**	**₹ 37.04 Crores**

Note:

1. The intended target groups are different from the eligibility criteria prescribed as part of the Qualification Pack. Target Group refers to the preferred set of youth who stakeholders have identified are most likely to benefit from the training. This could come from the Aspirations expressed in the Quantitative Survey, feedback from Industry and Govt. Stakeholders. For instance, though a training in handicrafts might require only 5th grade as an eligibility- criteria, the target group would be rural women in a cluster. TNSDC and the TSPs can continue to use the minimum criteria as mentioned in the Qualification Pack; however, qualifications that may constrain an interest-group may appropriately considered on a case-to-case basis (as approved by TNSDC).
2. The QP NOS reference numbers and the training hours have been taken as per the latest QP NOS compilation (as on 17th October 2019). However, in the same compilation, some job roles do not have training hours mentioned. **In such cases, we have taken the average training hours for the sector and NSQF level within the sector and applied those as notional hours.** We have also used insights from field consultations to arrive at training hour estimates which to reflect the market requirements.
3. An attempt was made to map each proposed job role with a QP NOS reference number. **In the cases where accurate mapping has not been possible, we have mapped the job role with the nearest QP NOS reference number.** In cases where we have proposed new job roles, we have indicated that a QP NOS reference is to be designed for the same.
4. The Cost of Training has been calculated using the following method: Each job role has training hours, training target (persons), and a cost category. The cost category has been determined by the National Skills Qualification Framework (NSQF) with respect to the level of capital expenditure and operational expenditure for imparting the course aligned to that specific job role. Therefore, each cost category corresponds to a particular cost norm calculated per trainee per hour. The calculations have been done as per the Government order (H-22011/2/2014-SDE-III) issued by MSDE on 4th January 2019. The categories are defined as follows:
   - INR 42.40 for Category-I
   - INR 36.30 for Category -II
   - INR 30.30 for Category-III

   The Cost of training in the project shelves represents the calculation of: (training target × training hours × per hour cost) + (training target × number of days of training × INR 100).

   Where:
   Number of days of training = training hours / 8
   Transportation costs per trainee per day = INR 100

To the figures arising from the above formula, the training and assessment costs (INR 1,000 per trainee × training target for the whole project) has also been added. The total training cost for each project arrived through such a process has been added to the summary table above.

Training Project 1:

Name of the Project: Training in Textile and Apparel sector							
Key Economic Drivers: • Expected investments through GIM – of Rs. 200 Crores • Second highest sector by Credit Offtake doubling between 2015-16 and 2016-17 indicating investments • 2nd highest contributor for GVA in 2104-15 and one of the largest employer							
Key Partners: Textile & Apparel SSCs, Puthiamputhur Cluster							
Job Roles:	**NSQF Level**	**NSQF Code**	**Cost Category**	**Duration of Training**	**Target Group**	**Training Target (People)**	**Cost of Training (₹ Crores)**
Cutting Supervisor	5	AMH/Q0610	1	320 hours	10th – 12th Class Pass outs Women oriented	250	₹0.44 Crores
Knitting Machine Operator	4	TSC/Q4101[22]	1	320 hours		1,000	₹1.76 Crores
Fabric Checker	4	TSC/Q 2301	1	320 hours		250	₹0.44 Crores
Quality / Packing Checker	4	TSC/ Q 0501	1	320 hours		250	₹0.44 Crores
Industrial Sewing Machine Operator	4	AMH/Q0301	1	280 hours		1,250	₹1.92 Crores
Total Training Costs						3,000	₹5.00 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.30 Crores
Total							₹5.30 Crores
Key Considerations: A key requirement would be to provide adequate on the job training in the various mills around the district. These job roles are particularly open to women and a supervisory role may cater to their aspiration.							

[22] Closest QP used, training to be for overall knitting operations

Training Project 2:

Name of the Project: Training Program in Logistics Sector							
Key Economic Drivers:							
• Skilled Heavy vehicle drivers are in huge demand for shipping and logistics agencies. Truckers are in short supply to move the containers and goods to and from the port site. Over 80-90% of truckers are unskilled in handling large vehicles and are chosen only based on experience							
Key Partners: VOC Port, Logistics Sector Skill Council							
Job Roles:	**NSQF Level**	**NSQF Code**	**Cost Category**	**Duration of Training (Hours)**	**Target Group**	**Training Target (People)**	**Cost of Training (₹ Crores)**
Truck and heavy vehicle operators	4	ASC/Q9703	1	400 Hours	Class VIII / X Pass outs	500	₹1.1 Crores
Crane operators	4	IES/Q0108	1	200 Hours		300	₹0.33 Crores
Truck Drivers-cum-Hazardous Materials Handler	4	LSC/Q0401	1	340 Hours		1200	₹2.25 Crores
Surveyors	3	LSC/Q2313	3	200 Hours		200	₹0.17 Crores
Total Training Costs						2,200	₹3.84 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.22 Crores
Total							₹4.06 Crores

Training Project 3:

Name of the Project: Training Program in Construction							
Key Economic Drivers: • Infrastructure thrust in the form of Airport Expansion, Port Expansion and Highways Expansion in the District • Smart City Program • 32% Urbanisation in the previous decade. This is going to drive the demand for housing in the urban areas.							
Key Partners: Engineering Colleges ,Polytechnics, Green Jobs SSC, Construction SSC							
Job Roles:	**NSQF Level**	**NSQF Code**	**Cost Category**	**Duration of Training (Hours)**	**Target Group**	**Training Target (People)**	**Cost of Training (₹ Crores)**
Draughtsman	4	CON/Q1301	1	600	ITI Graduates	500	₹1.38 Crores
Supervisor - Roads & Runways	6	CON/Q1004	1	560	ITI Graduates	100	₹0.06 Crores
Quality Technician	6	CON/Q0403	1	560	Class X / XII Pass outs	100	₹0.06 Crores
Fabricator	4	CON/Q01206	1	560		500	₹1.38 Crores
Construction Welder	6	CON/Q1252	1	560		500	₹1.38 Crores
Construction Electrician	4	CON/Q0603	1	600		500	₹1.38 Crores
Green Jobs – Rainwater Harvesting	3	QP to be developed in addition to PSC/Q0104	1	400		500	₹1.38 Crores
Total Training Costs						2,700	₹6.99 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.27 Crores
Total							₹7.26 Crores

Training Project 4:

Name of the Project: Training Program in Food Processing

Key Economic Drivers:

- Prominence of marine fishing (one of the largest in the state)
- Purse fishing activities produce large amounts of by-catch (unintentionally caught fish)
- Destruction of corals due to unsustainable fishing practices in the Bio-Reserve
- Around 27,000 people are involved in fishing and allied activities[23], which is the 4th highest in the state. This provides a sizable population to conduct short term trainings for value addition.
- Investments worth
- Investments of More than ₹2,000 Crores Investment in the Southern Districts for Food Processing Parks on the anvil

Key Partners: Fisheries College

Job Roles:	NSQF Level	NSQF Code	Cost Category	Duration of Training (Hours)	Target Group	Training Target (People)	Cost of Training (₹ Crores)
Food Dehydration Technician	4	FIC/Q0105	1	240	Class X Pass	200	₹0.26 Crores
Quality assurance Manager/Lab Technician	6	FIC/Q7602	3	240[24]	Graduates	200	₹0.21 Crores
Food microbiologist	6	FIC/Q7603	3	240	Graduates	200	₹0.21 Crores
Food Processing Worker	2	FIC/Q9005[25]	1	240	Class X Pass	1,000	₹1.32 Crores
Fish Value Added Products	4	FIC/Q4001[26]	1	240	Class X Pass	1,000	₹1.32 Crores
Processed Food Entrepreneur	5	FIC/Q9001	3	240	Class X Pass	1,000	₹1.03 Crores
Total Training Costs						3,600	₹4.34 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.36 Crores
Total							₹4.70 Crores

[23] Fisheries census , 2010
[24] Sector Average used
[25] Closest QP - Industrial Production Worker – Food Processing to be updated
[26] Closest QP- Fish and Sea Food Processing Technician to be updated

Training Project 5:

Name of the Project: Training Program in Fishing and Allied

Key Economic Drivers:

- Prominence of marine fishing (one of the largest in the state)
- Purse fishing activities produce large amounts of by-catch (unintentionally caught fish)
- Destruction of corals due to unsustainable fishing practices in the Bio-Reserve
- Around 27,000 people are involved in fishing and allied activities[27], which is the 4th highest in the state. This provides a sizable population to conduct short term trainings for value addition.

Key Partners: Fisheries College

Job Roles:	NSQF Level	NSQF Code	Cost Category	Duration of Training (Hours)	Target Group	Training Target (People)	Cost of Training (₹ Crores)
Sustainability , Modern Fishing & Safety Training[28]	4	AGR/Q5106	1	240	Class V/ VIII Pass	3,500	₹4.61 Crores
Boat & Ship Repair[29]	4	AGR/Q5103	1	240			
Export based training for fisherman cooperative	-	QP Not available; to be developed	1	240[30]			
Total Training Costs						3,500	₹4.61 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.35 Crores
Total							₹4.96 Crores

Key Considerations:

The intention to catch large quantities of fish, often results in following of unsustainable and destructive methods of fishing. Fishermen need to be trained to move from a capture-based approach to a culture-based one, thereby resulting in an increase in fish population as well. Training can be given on spotting fish, safety mechanisms to be followed including basic navigation, reading the VPS (Vehicle Positioning systems) and basic health and hygiene training on handling the fish post-harvest. In addition, boat repair, both on-shore and off shore repair can support the requirements of more than 3000 boats in the district. Threats of crossing international boundaries and borders are a constant issue in the northern blocks of the district. Training can include these aspect as well.

[27] Fisheries census , 2010
[28] Closest QP - Fishing Equipment Technician (Electronics) used
[29] Closest QP - Fishing boat mechanic used
[30] Based on Sector average

Training Project 6:

Name of the Project: Training Program in Tourism							
Key Economic Drivers:							
• Thoothukudi has plans on the anvil for the development of tourism circuit through the Swadeshi Darshan Scheme. Apart from upgrading facilities to the ever increasing tourist inflows at the Thiruchendur Murugan temple, Manapad, dotted with beaches and steeples, the district is planned to be developed as "Little Goa" while temple circuits are planned in Nava Tirupati and Nava Kailayam around Sri Vaikuntam.							
Key Partners: Industry Association, T&H SSC							
Job Roles:	**NSQF Level**	**NSQF Code**	**Cost Category**	**Duration of Training (Hours)**	**Target Group**	**Training Target (People)**	**Cost of Training (₹ Crores)**
Tour Guides	4	THC/Q4502	3	420	Class XII	200	₹0.35 Crores
Life Guard-Pool & Beach	4	SPF/Q1104	2	250	Class VIII	100	₹0.12 Crores
Boat Jetty In-charge	5	THC/Q7601	3	280	Class XII	100	₹0.12 Crores
Counter Sales Executives	4	THC/Q2903	2	240		100	₹0.12 Crores
Adventure sports[31]	5	THC/Q4517	3	250		100	₹0.12 Crores
Tour Vehicle Drivers	4	ASC/Q 9714 ASC/Q 9702 THC/Q4202	3	360	Class VIII	400	₹1.38 Crores
Total Training Costs						1,000	₹2.22 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.10 Crores
Total							₹3.32 Crores

[31] Closest QP-NOS – Bunjee Jumping Selected, requires modification and upskilling

Training Project 7:

Name of the Project: Training for Soft Skills and English Communication							
Key Economic Drivers: • Lack of communication skills has been identified as a major contributor towards unemployment of the youth in District							
Key Partners: Manonmaniam Sundaranar University, British Council							
Job Roles:	**NSQF Level**	**NSQF Code**	**Cost Category**	**Duration of Training (Hours)**	**Target Group**	**Training Target (People)**	**Cost of Training (₹ Crores)**
Training for Soft Skills and in spoken English	4	₹3.1 Crores	3	180 hours[32]	Graduates who have completed courses from Degree Colleges, Engineering Colleges	4,000	₹3.1 Crores
Total Training Costs						4,000	₹3.1 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.4 Crores
Total							₹3.5 Crores
Key Considerations: Soft skills especially, communication skills, interpersonal skills, work ethics etc. has been identified as a major contributor towards the low employability for the youth. In addition, the IT-ITES Sector / Tourism & Hospitality sectors have highlighted the requirement for good communication skills in English. Kerala's Additional Skill Acquisition Program and Andhra Pradesh's Employability Skill Centers are models that have similar components of Soft Skill and English Communication							

[32] Hours based on addition of QPs - MEP/ N9995. & MEP/ N9993, and feedback from Industry

Training Project 8:

Name of the Project: Training for Chemical Sector (and Capital Goods)							
Key Economic Drivers:							
• Largest organized Industry in the District as per ASI • Investments more than Rs 1,000 Crores awaited in the Southern Districts in Chemical & .Petrochemicals in the District. • Though workforce of many companies has considerable share (50%) of immigrant workers, there is shortage in the skilled worker / supervisor category with understanding of machines							
Key Partners: Manonmaniam Sundaranar University, British Council							
Job Roles:	**NSQF Level**	**NSQF Code**	**Cost Category**	**Duration of Training**	**Target Group**	**Training Target (People)**	**Cost of Training**
Maintenance of Machinery – Technician	4	CPC[33]/Q 3004		Classroom Training 320 Hours OJT 480 Hours	Graduates who have completed courses from Degree Colleges, Engineering Colleges	500	₹1.10 Crores
Machine Operator – Tool Room	4	CSC/ Q 0502				500	₹1.10 Crores
Total Training Costs						1,000	₹2.20 Crores
Assessment Costs (₹1,000 per Assessment)							₹.0.1 Crores
Total							₹2.30 Crores
Key Considerations: The sector faces severe challenge in finding the sufficient skilled workers on advanced machinery required by international clients in the manufacturing sector, especially as CNC operators. There is an urgent requirement to upgrade the infrastructure as well as the curriculum of ITIs/ Polytechnics to meet the industry requirement. This can be prepared in consultation with CIPET, Chennai. The lack of experience in work environment is a major drawback in the hiring of students from such programs. The classroom training can be a general course, later customized to industry requirements during the OJT phase. Though the companies in the cluster are willing to take up OJT, it will be necessary to support the companies with a stipend pay to the student barring, which he/ she could drop out of the apprenticeship process							

[33] Due to a lack of a dedicated Sector Skill Council, relevant courses have been mapped with the NSQF aligned program in CIPET and

Training Project 9:

Name of the Project: Training of Trainers Center							
Key Economic Drivers: • The southern district have the potential to become Education hub of the state with the concentration of school and higher education institutions and vocational training centres in the state outside of Chennai Metropolitan area. • Lack of quality trainers have been highlighted for skill trainers as well as the lack of soft skills among students passing out of education institutions across the district and its vicinity.							
Key Partners: Manonmaniam Sundaranar University, British Council							
Job Roles:	**NSQF Level**	**NSQF Code**	**Cost Category**	**Duration of Training**	**Target Group**	**Training Target (People)**	**Cost of Training**
Training of Trainers Soft Skills and English for Students[34]	6	ASAP-CET	3	160 hours	Graduates who have completed courses from Degree Colleges, Engineering Colleges	2,000	₹2.4 Crores[35]
Total Training Costs						2,000	₹2.4 Crores
Assessment Costs (₹1,000 per Assessment)							₹0.12 Crores
Total							₹2.52 Crores
Key Considerations: Soft skills especially, communication skills, interpersonal skills, work ethics etc. has been identified as a major contributor towards the low employability for the youth. In addition, the IT-ITES Sector / Tourism & Hospitality sectors have highlighted the requirement for good communication skills in English. Kerala's Additional Skill Acquisition Program has developed a training curriculum for Soft Skills and English. This could be used as a draft for the curriculum. The Center would cater to the requirements of other neighbouring districts.							

[34] Based on Communicative English Trainer Q File - https://www.nqr.gov.in/qualification-title?nid=3223
[35] Cost Calculated as ₹12,000 per training as per average ToT Trainings by SSCs

5.2. Key Recommendations

Recommendation on key interventions that needs to be taken up in order to foster the participation of youth in the economy are as follows:

Convergence:

There is an urgent need for several departments in the state engaged in Education, Vocational Education, Industrial Development, Agriculture and Allied activities, among others to converge their efforts. The parallel implementation of Skill trainings by several departments lead to the following (i) Misallocation of training capacity with multiple programs offering the same trades. (ii) Duplication of Beneficiaries without a de-duplicating mechanism like Aadhaar (iii) Dip in Quality Assurance owing to varied standards, target groups and monitoring frameworks. The interactions further revealed that, there is a coordination would be required at a larger scale across ecosystem across the Southern Districts of Tirunelveli, Thoothukudi, Kanyakumari and Virudhunagar, owing to the fluid labour force actively commuting between towns for the purpose of work. Efforts like collaborations with Tamil Nadu Fisheries University need to be fostered further.

The Focus Group Discussions revealed that, there is a requirement for better interface between Industry and the Skill Development ecosystem in the district. The Institute Management Committees (IMCs) should be further strengthened apart from constituting necessary district and regional forums to dynamically adapt curriculum through Industrial feedback.

The Directorate of Employment has taken initiatives to provide counselling to students in colleges and schools. However, there is a requirement for greater support from other stakeholders including the Dept. of Education to make a systematic approach towards providing such counselling services in formal education.

The District Administration has launched the Thoothukudi Employment Assistance Program or 'TEAP', a virtual meeting place for potential employees and employers of the district. This is a localised Labour Market Information System (LMIS), which can be further strengthened through concentrated participation of stakeholders including Govt. Departments and Employers.

Awareness generation:

The youth aspire towards Public Sector and white collared jobs. The aspired monthly income amongst youth was much higher than the prevailing wages youth engaged in economic activity presently earn. There is mismatch in perception and aspirations of youth about the salaries/wages, working conditions, career growth prospects, etc. Hence, there is a requirement for initiating career and market related counselling at the secondary levels of education, continuing through higher levels of education.

Industry Experience:

It is seen that the earning potential among graduates does not vary significantly from Diploma / ITI holders over their career path. To enhance the value of the programs at the graduate level, it is necessary to strengthen the exposure to work environments among both technical and non-technical programs through mandatory hands-on training at appropriate organizations in the industrial and services sectors.

Augmenting Labour at MSMEs:

MSMEs have highlighted the unavailability of local labour due to large scale migrations of skilled workers from the Southern Districts. The Apprenticeship scheme or wage subsidies on the lines of MGNREGA could be designed for supporting the local Industry to channelize labour towards them. Enhancement in the stipends or a hybrid model (based on the period of deployment or Government financial support or any other) to improve participation of MSMEs and balance the deployment at large units. The MSMEs have also faced operational constraints with attrition rates. It is suggested, that a Direct Benefit Transfer system, with direct incentives to the trainee to complete the training at the MSMEs be brought in as part of the design.

Market linked Trainings:

There is a requirement for diversity in sectors as well as training in higher levels of the NSQF including at supervisory roles and those with higher technological requirements. It is seen that, even in ITIs and polytechnics, the exposure to advanced machinery or content is less than sufficient to make the candidates job ready. Chemicals, Food Processing, and Education sectors are key areas of requirement.

5.3. Case Studies

TEAP - A Local Labour Market Information System.

Background:

The closure of the Sterilite Copper plant owing environmental issues, rendered several workers contractual and employed in the ancillary units without a job. The District Collectorate was faced with an urgency to support these workers in finding new jobs to support their families. However, the major challenge faced by the collectorate was a augmenting a database for information on both vacancies in industries and the details of the workforce seeking employment including their experience and skillsets.

The Initiative:

The Collectorate commissioned the Thoothukudi Employment Assistance Program (TEAP), whereby it initiated drives for recruitment through both online and offline modes of displaced workers. A dedicated portal[36] was created on the internet with systematically engaging the youth and the Industries. TEAP was soon thrown open to all public and all Industries to access the labour market. It captures specific information from job seekers including Education Qualifications, Skill Sets, and work experience. This in turn matches the youth with suitable roles in the market posted by employers. Employers have access to the data base of aspiring youth. The data can be customized as per educational qualifications, experience levels and industry verticals. In addition it also has a list of available Skill Development trainings in the district for youth to connect with. The local Industry has also supported this initiative by using this platform for the purpose of recruitment.

Figure 28 Home Page of TEAP

Innovation:

A Labour Market information system (or LMIS) is a common platform bringing employers, job seekers, educational and vocational education institutions on a common platform. Efforts are on in India, to develop a comprehensive LMIS by the NSDA, Govt. of India. However, one of the most crucial aspects in the functioning of the LMIS is the active participation of the stakeholders, especially the employers. It is necessary for grassroots level mobilization of all stake holders. TEAP is a mini model of a functional LMIS. The successful on boarding of local employers onto the TEAP platform is an example that can help the building of larger LMIS at a state / national level.

[36] http://www.thoothukudi.online/landing.html

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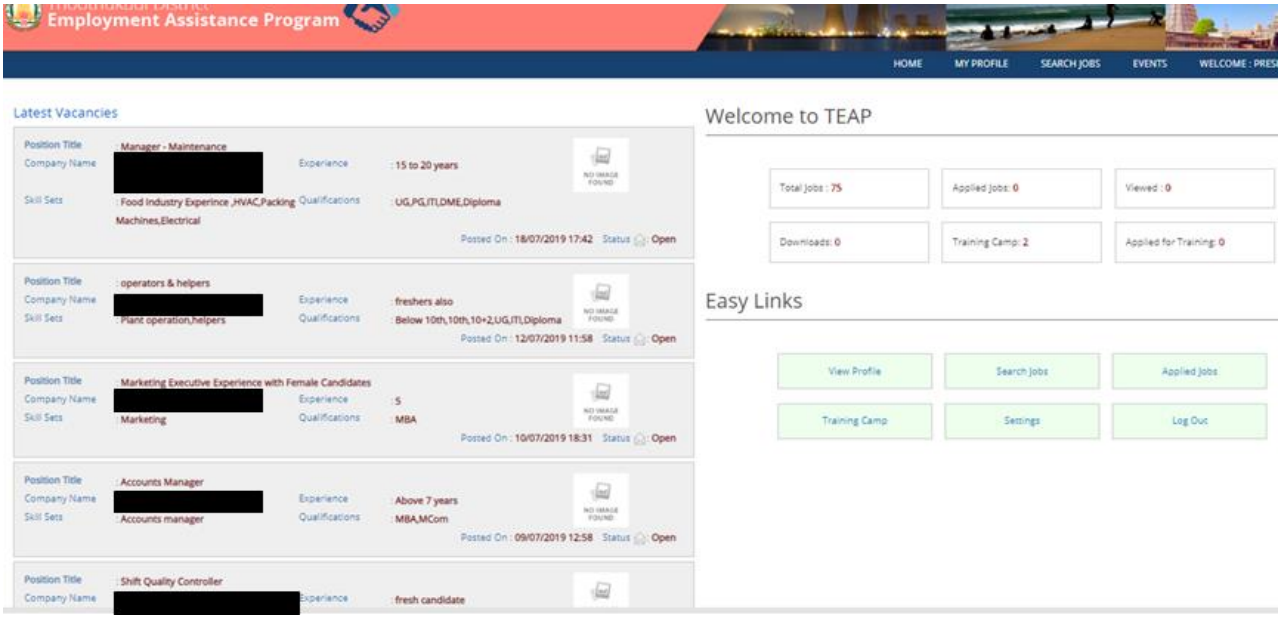
Figure 29 Job Seeker Dashboard - TEAP



Appendix -1

A1. Methodology for Block Selection for Youth Aspiration survey

Sampling Design for Youth Survey

A total of 360 youth was surveyed in the district, which included youth in both self-employment and wage-employment, unemployed youth, youth on education system, and youth under NEET category to get a balanced representation of various socioeconomic and demographic characteristics of the population.

1. Students from educational and training institutions:
The list of General arts/science/commerce colleges, engineering colleges, polytechnic colleges and Industrial Training Institutions was obtained. A list of educational institutions was randomly sampled from the list. Of the selected institutions, a list of randomly selected students were interviewed.

2. Household Level Survey:
In the selected blocks, few villages and wards were randomly selected. After consultation with the head of the village/ward, a sample of households was selected.

3. Self – Employed Youth:
To cover self – Employed Youth in the sample, a roster of beneficiaries from the Pradhan Mantri Employment Generation Programme (PMEGP) shall be randomly selected from the list which will be obtained from the concerned authority at the district level.

4. Employed in the informal sector:
The youth from unorganized sector were identified at the cluster-level after obtaining and examining the list of enterprises that are not registered and those workers were doing job-work type of activities.

Selection of Block

The block selection methodology involved the identification of blocks by categorizing them into High development, Medium development and Low development. The adjacent picture shows the blocks in Ariyalur selected for the survey. The methodology is explained below:

To categorize blocks, the following data points were used.
- Count of MSME Clusters (based on DC-MSME Report)
- Number of SIDCO Industrial Estates
- Number of SIPCOT Industrial Estates
- Credit Outstanding, 2017-18 at Centre-level (Annual Data published by the Reserve Bank of India)

The following weights were assigned post award of marks:
- MSME Cluster – 25%
- SIDCO Cluster – 25%
- SIPCOT Industrial Estate – 5%
- Annual Centre-level Credit Data – 45%

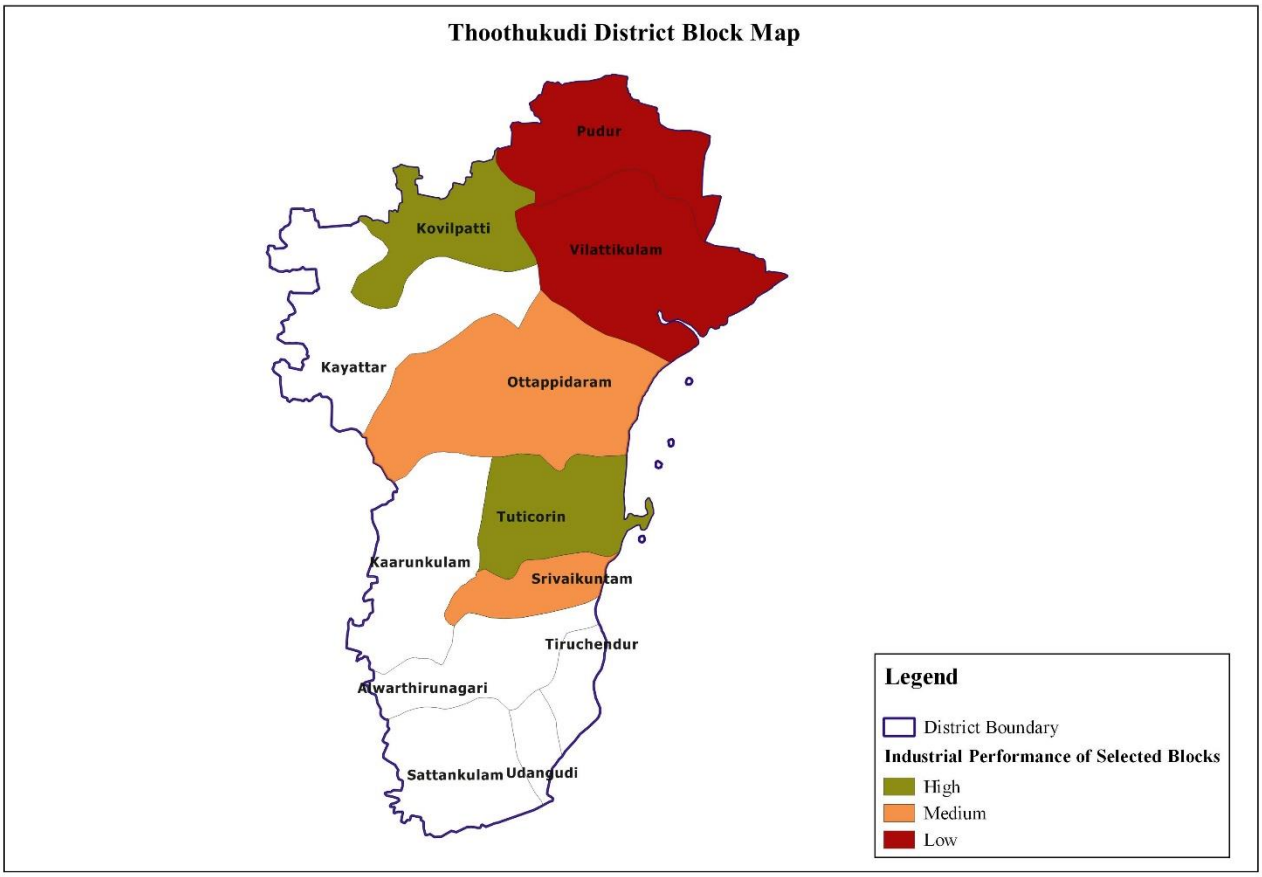
Based on the above weights, the total score of each block was calculated. The total score was capped at 100. To classify the block as High/Medium/Low, the total score was converted into percentile values and categorized into three groups – 0-33.33th percentile values, 33.33 to 66.67 percentile value and 66.67 to 100 percentile values. The percentile values are calculated with respect to each district as the base.
Based on the percentile classification obtained, blocks were classified as follows:
- **0 to 33.33 percentile value: Low**
- **33.33 to 66.67 percentile value: Medium**
- **66.67 to 100 percentile values: High**

After deriving the above values for the blocks, **t**wo blocks are randomly selected from each category.

Following this, two blocks were randomly selected from each of the category, as per the mentioned classification. Based on this, the following blocks were selected in Thoothukudi

- Low- Pudur, Vilattikulam
- Medium- Ottappidaram, Srivaikuntam
- High- Kovilpatti, Thoothukudi

Figure 30 Map of Selected Blocks

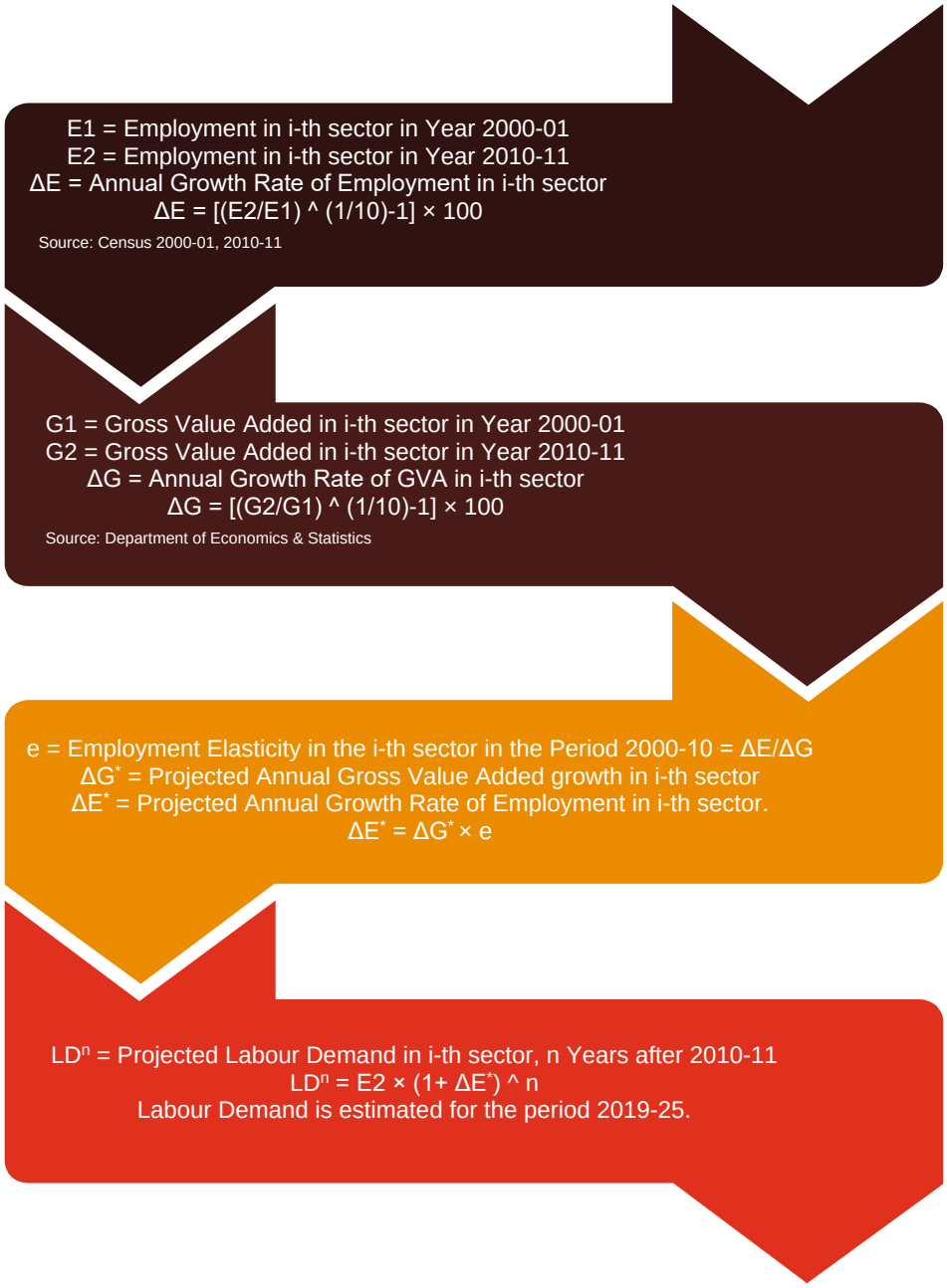


A2. Methodology for Present and Future Labour Demand – Supply and Gap Estimation

Demand Estimation:

We adopted employment elasticity approach to forecast the labour demand. Employment elasticity is the measure of percentage change in employment associated with one percentage change in economic growth. The employment elasticity approach indicates the ability of an economy to generate employment opportunities. We estimated sector specific employment elasticity using historical data and assumed it to remain constant in the near future. If the estimated sector specific elasticities at district level varied significantly with national and state level estimates, we rationalized the estimated elasticities based on national and state level trends. Automation is another factor that is considered before arriving at the final labour demand estimates in different sectors. While some jobs may become obsolete with the technological advancement, new opportunities will arise for professionals who understand technology. Therefore, demand estimates were further revised based on employer consultation. The flowchart below explains the step involved:

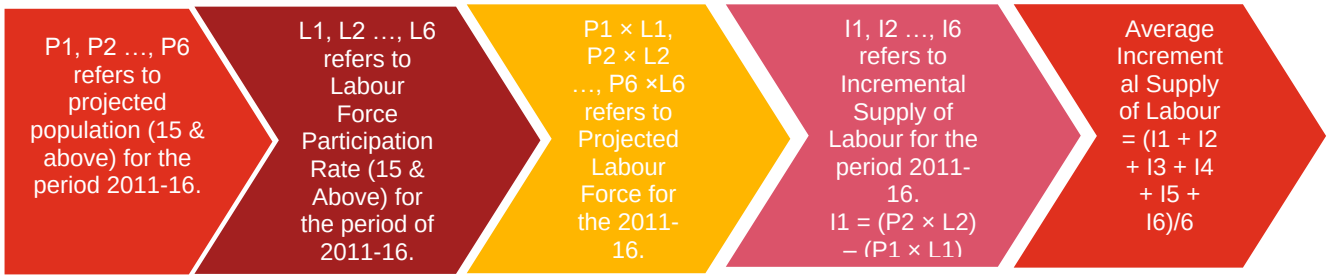
Figure 31 Steps for Demand Estimation



Supply Estimation

We estimated the average incremental supply of labour for the period 2011-16 and assume it to remain constant for the period of 2019-25. Although the population (15 & above) is increasing, the labour force participation is decreasing in the state[37]. The labour force participation rate may continue to follow the decreasing trend, especially for the age category 15-29 years, primarily because of increasing economic well-being, high educational aspiration and higher salary expectations. The flowchart below explains the step involved in supply estimation:

Figure 32 Steps for Supply Estimation



[37] Report on Employment-Unemployment Survey, 2011-12, 2012-13, 2013-14, 2015-16 & 2017-18.

A3. Credit Outstanding by Occupation - Thoothukudi

The Credit Outstanding in each sector as measured by the Reserve Bank of India, indicates the key economic drivers by both size and growth rates. The occupation wise data is presented below:

Sector	Credit Outstanding				CAGR between 2013-14 and 2016-17
	2013-14	2014-15	2015-16	2016-17	
Retail Trade	498	483	632	675	11%
Textiles	123	131	154	385	46%
Wholesale Trade	648	568	464	368	-17%
Transport Operators	272	282	279	318	5%
Food Manufacturing & Processing	379	405	309	305	-7%
Chemicals & Chemical Products	261	282	307	284	3%
Basic Metals & Metal Products	101	296	33	230	31%
Construction	87	66	85	111	8%
Gems and Jewellery	83	120	98	103	8%
Other Industries	73	64	87	95	9%
Electricity, Gas & Water	585	577	546	70	-51%
Engineering	99	92	86	64	-14%
Mining & Quarrying	370	262	56	52	-48%
Woods and Wood Products	15	37	26	33	31%
Tourism, Hotel & Restaurants	17	14	25	29	19%
Manufacture of Cement & Cement Products	21	27	27	29	12%
Rubber & Plastic Products	39	41	41	29	-10%
Paper, Paper Products & Printing	14	14	15	14	1%
Vehicles, Vehicle Parts & Transport Equipment	8	7	10	10	8%
Beverage & Tobacco	3	3	4	7	27%
Recreation services	1	1	2	4	49%
Petroleum, Coal Products & Nuclear Fuels	10	2	2	2	-40%
Leather & Leather Products	1	1	0	1	7%

A4. List of Stakeholders Consulted

S.No	Stakeholder	Category
1.	District Collector	Govt. official
2.	Joint Director Training (Tirunelveli)	Govt. official
3.	District Skill Development Officer	Govt. official
4.	District Employment Officer	Govt. official
5.	District Industries Center General Manager	Govt. official
6.	Assistant Director, Industries	Govt. official
7.	Airports Authority of India – Tuticorin Airport	Govt. official
8.	Confederation of Indian Industries	Industry Association
9.	Thoothukudi District Tiny and Small-Scale Industries Association	Industry Association
10.	VVJ Industrial School	Training Service Provider
11.	Nettur Technical Training Foundation	Training Service Provider
12.	Vetri Trust	Training Service Provider
13.	Govt. ITI, Thoothukudi	Training Service Provider
14.	Best Trainng and Placement	Training Service Provider
15.	Edify Solutions	Training Service Provider
16.	VVD	Industry
17.	Velavan Hypermarket	Industry
18.	Royal Textiles	Industry
19.	Kalimark	Industry
20.		Industry
21.	Abirami Services	Industry
22.	Abirami Stocknitte Exports	Industry
23.	Aishwaryam Family Restrant [Veg & Non Veg]	Industry
24.	Amarnath Enterprises	Industry
25.	Balaji Enterprises	Industry
26.	Classic Fine Arts Printers	Industry
27.	DCW Ltd	Industry
28.	Golden Chemicals	Industry
29.	Golden Textile	Industry
30.	Jai Sakthi Enterprises	Industry
31.	Jaya Garments	Industry
32.	Jega Jothi Sweet & Bakery	Industry
33.	K R Exports (P) Ptd	Industry
34.	Kombakonam Degree Filter Coffee	Industry
35.	Ktv Health Foods Pvt Ltd	Industry
36.	Lakshmi Mills Company Ltd	Industry
37.	Life Insurance Corporation	Industry
38.	Loyal Textile Mills	Industry
39.	Mahalakshmi Tower--1.2 & 3	Industry
40.	Maris Associate Pvt Ltd	Industry
41.	Priyadharshini Poly Sackes	Industry
42.	PVR Enterprises	Industry
43.	Ramesh Flowers Pvt. Ltd.	Industry
44.	Rathna Match Works	Industry
45.	Ratnalakshmi Industries	Industry
46.	Rewa Plaza	Industry
47.	Shanthi Match Works	Industry
48.	Shanthi Sweets And Bakery	Industry
49.	SPIC	Industry
50.	Sri Amutha Hotels	Industry
51.	Sri Annai Engineering Works	Industry
52.	Sri Balaji Industries	Industry
53.	Sri Balaji Wood And Screening Works	Industry

S.No	Stakeholder	Category
54.	Sri Dhanalakshmi Match Works Unit--1	Industry
55.	Sri Dhanalakshmi Match Works Unit---2	Industry
56.	Sri Kumar Lathe Works	Industry
57.	Sri Lakshmi Industries	Industry
58.	Sri Ram Industries	Industry
59.	Sri Ramajayam Textiles	Industry
60.	Sri Saravana Bhavan Hotel	Industry
61.	Ssv Salt	Industry
62.	Standard Fire Works Private Limited [Tube Division]	Industry
63.	Suntharam Associates	Industry
64.	Surya Industries	Industry
65.	Susea Auto Ltd	Industry
66.	TVS & Sons Pvt Ltd	Industry
67.	Venus Home Appliances	Industry
68.	Venus Textiles	Industry