



# Skilling for the Future

Skill Gap Assessment & Action Plan for Tamil Nadu

## District Skill Development Plan Ariyalur

November 2019



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# *List of Abbreviations*

S.No	Abbreviation	Meaning
1.	TNSDC	Tamil Nadu Skill Development Corporation
2.	PMKVY	Pradhan Mantri Kaushal Vikas Yojana
3.	ITI	Industrial Training Institute
4.	NSDC	National Skill Development Corporation
5.	DDU-GKY	Deen Dhayal Upadhyaya Grameen Kaushalya Yojana
6.	NULM	National Urban Livelihood Mission
7.	DES	Directorate of Economics and Statistics
8.	BFSI	Banking Financial Services and Insurance Sector
9.	LFPR	Labour Force Participation Rate
10.	NEET	Not in Employment, Education or Training
11.	TN-GIM	Tamil Nadu Global Investors Meet
12.	GDDP	Gross District Domestic Product
13.	GSDP	Gross State Domestic Product
14.	NSQF	National Skills Qualification Framework
15.	QP-NOS	Qualification Pack – National Occupational Standards
16.	SSC	Sector Skill Council
17.	Tr. & Tou.	Trade and Tourism Sectors
18.	Manuf.	Manufacturing
19.	Pub. Admin.	Public Administration
20.	IT-ITES	Information Technology and Information Technology Enabled Services
21.	DIC	District Industries Center
22.		

# 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<sup>1</sup>.

Tamil Nadu currently has the highest Gross Enrolment Ratio in Higher Education (48.6)<sup>2</sup>, 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, 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 Skill Development 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 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 next five 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 youth across the following groups - employed (self-employed, wage-employed, employed in formal and informal sectors), students in formal education (higher secondary schools and colleges), vocational and skill training institutions (Polytechnics, ITI), and those who fall under the Not in Education, Employment or Training (NEET)

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<sup>1</sup> Tamil Nadu Skill Development Corporation [<https://www.tnskill.tn.gov.in/index.php/link/abouttnsdc>]




<sup>2</sup> All India Survey on Higher Education 2017-18

category. Six blocks in the district were covered: Ariyalur, Thirumanur, Sendurai, Jayankondam, Andimadam and T.Palur

2. **Quantitative employer survey:** covering 45 units in each District with adequate representation from Large, Medium, Small and Micro Industries across the key sectors defining the District economy.
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 credible sources such as, the Census of India, State and District Income 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<sup>3</sup>.

Key findings of the study are presented hereunder:-

 <p><b>Demographic Analysis</b></p>	<ul style="list-style-type: none"> <li>At 29 years, the median age of Ariyalur is at par with the state median age. It is higher than the national average of 26 years. It is estimated to increase further to 34 years by 2026 indicating a much older population. Thus, the state needs to invest in skill development immediately to reap benefits of the demographic dividend.</li> <li>The sex ratio in the district is 1,015, higher than the State sex ratio of 996.</li> <li>Ariyalur's Workforce population ratio is 60 percent, which is higher than the state's average (57 percent).</li> </ul>
 <p><b>Economic Analysis</b></p>	<ul style="list-style-type: none"> <li>Ariyalur grew at a CAGR of 6% between 2011-12 and 2016-17.</li> <li>It ranks 25<sup>th</sup> in terms of GDDP per Capita, at ₹84,192 (2016-17).</li> </ul> <p><b>Agriculture Sector:</b></p> <ul style="list-style-type: none"> <li>Crop cultivation has been adversely affected by vagaries of weather conditions in the past decade. The share of agriculture and allied has fallen from 25% to 17% of the district GDDP.</li> <li>Increased urbanisation and unreliable weather conditions are making the sector less aspirational. Innovation and technology infusion into the sector may enhance the appetite of the youth, while also improving sector's contribution to the economy.</li> </ul> <p><b>Industrial Sector</b></p> <ul style="list-style-type: none"> <li>Industrial sector grew at 10% CAGR between 2011-12 and 2017-18. Ariyalur is famous for its cement industries which is main economic driver in the district.</li> <li>It accounted for 58% of the total output of the district in 2016-17.</li> <li>Most of the Industries are labour intensive and provide employment opportunity for unskilled. More skilling intervention are required in this sector.</li> </ul> <p><b>Services Sector</b></p> <ul style="list-style-type: none"> <li>Services sector contributed to 25% of the GDDP of Ariyalur 2016-17. The sector grew at a CAGR of 3% between 2011-12 and 2017-18.</li> <li>The key sub-sectors within the service sector in the state include BFSI, Repair, and Real Estate; which have a growing demand.</li> </ul>
 <p><b>Labour Market Analysis</b></p>	<ul style="list-style-type: none"> <li>Ariyalur has a higher labour force participation (63%) than the state average (59%) owing to the larger share of working age population.</li> <li>Manufacturing is the major sector in terms of employment share. Most of the worker working in industries are involved in non-metallic mineral manufacturing.</li> </ul>

<sup>3</sup> Common Cost Norms <http://www.minorityaffairs.gov.in/sites/default/files/common%20norms.pdf>

 <p><b>Education &amp; Skill Development</b></p>	<ul style="list-style-type: none"> <li>• Only 3.6% of the district's population have undergone any kind of vocational training.</li> <li>• Apprenticeship scheme is largely been driven by Public sector institutions</li> <li>• These do not convert into long-term employment prospects for the individuals.</li> </ul>
<b>Findings from Primary Survey</b>	
 <p><b>Youth Profile and Aspirations</b></p>	<ul style="list-style-type: none"> <li>• 20% of the youth respondents engaged in economic activity were working in a field unrelated to their education / training.</li> <li>• 67% of the respondents, currently Not in Education Employment or Training (NEET) wished to work at some point in the future. A third of the respondents highlighted the lack of jobs locally as a reason for being in NEET category. 25% of females in the NEET category highlighted lack of family support as a reason for the same.</li> <li>• Over 16% of the youth aspire for employment in the Public Sector.</li> <li>• Salary (wages) / Income, Social Status, Job Security were key determinants of selection of work.</li> <li>• Relevant work experience, soft skills, and certified technical skills were reported to be the key factors that determine employability and employment.</li> <li>• Female respondents aspired for chemical, food processing, BFSI, and textiles and apparels, while Males aspired for construction, IT-TES, automotive and auto-components, and agro business sectors.</li> <li>• Median Income expectation was around ₹12,000 per month among females and ₹17,000 per month among males.</li> </ul>
 <p><b>Employer &amp; Other Key Stakeholders' Perspective</b></p>	<p><b>Quantitative Survey</b></p> <ul style="list-style-type: none"> <li>• 92% of the employers recruit through references; none of the employers recruit directly from vocational courses primarily because of the mismatch between industry requirement and skills of the trained youth.</li> <li>• High local wages, candidates' disinterest, strenuous nature of work and attitude are the major challenges faced by the employers in the recruitment and retention of workforce.</li> <li>• On an average, 23% of the workers were unskilled while the rest were largely divided into semi-skilled (7%), skilled (61%) and supervisors (5%).</li> <li>• 27% of the industries affirmed the deployment of migrant workers.</li> <li>• The prevailing competition on wages is a major driver for attrition. Workers leave their jobs even at a marginal increase in monetary benefits, even at the expense of losing other benefits like Insurance and Provident Fund.</li> <li>• 18% of the respondents were looking to adopt some levels of technology. The industries see a greater role for upskilled / re-skilled labour who can adopt to newer and efficient techniques.</li> </ul> <p><b>Qualitative Inputs</b></p> <ul style="list-style-type: none"> <li>• Manufacturing industries observed that the youth have preference for service sector jobs in Real Estate, IT/ITES and BFSI.</li> <li>• Key challenges in recruiting from vocational programmes was the skills mismatch of the youth and their lack of experience in working environment through internships and apprenticeships.</li> <li>• Training Service Providers, District officials, and Industries highlighted a dearth of good quality trainers for both soft skills and job-specific technical skills. 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 programmes.</li> <li>• Majority of the students are not absorbed in the workforce after the completion of the training. Regular grade-based assessment during apprenticeship training should be done. The students should not be given any degree certificate unless they have not cleared their apprenticeship training. This will incentivize the students to take their training seriously. Government ITI/Polytechnic colleges in Ariyalur can coordinate with TANCEM regarding job role training, which are specific to cement industry.</li> </ul>



### Incremental Demand

- Nearly 16 thousand incremental skilled and semi-skilled workforce are expected to be in demand over the next 6 years.
- Key sub-sectors driving the demand are Cement, Food Processing, Construction, Repair, Healthcare, and BFSI.

### Key Recommendations:

- There are nine major cement industries in Ariyalur. Local ITIs and skill institutes has to coordinate with the local cement industry to update their courses to enhance local employability.
- Workshops can be organized every fortnight between the training service providers operating in Ariyalur and the employers to provide them a platform to interact with each other and identify trades according to demand in the sectors and the training feasibility.
- The apprenticeship training programme should be designed in which frequent monitoring is done and whether placement-level standards are achieved or not for a given job role. This is to ensure that the students do not remain jobless after the completion of their apprenticeship programme. Government ITI/Polytechnic colleges in Ariyalur can coordinate with TANCEM regarding job role training which are specific to cement industry.
- Career Counselling and awareness campaigns are required across the district and especially in educational institutions. Students of Schools, colleges, polytechnics and training institutions should be exposed to the requirement for skills, economic prospects and career options for progression in a systematic manner through the Dept. of Labour Employment and Training.

# 1. District Profile

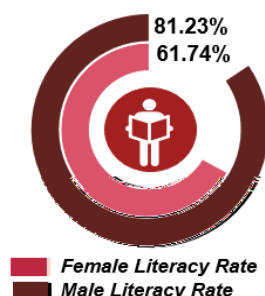
## 1.1. Demographic Profile

Ariyalur district is famous for its cement factories. The District comprises of 3 taluks, 6 Blocks, 2 Municipalities and 2 Town Panchayats. Ariyalur district was formed along with Perambalur district which was trifurcated from Tiruchirappalli in 1995. Till 2007, Perambalur and Ariyalur functioned as one district as Perambalur district. After 2007, Ariyalur has been functioning as a separate district. Udayarpalayam taluk has the highest number of inhabited villages (94) while Sendurai taluk has the lowest number (28) of such villages <sup>4</sup>

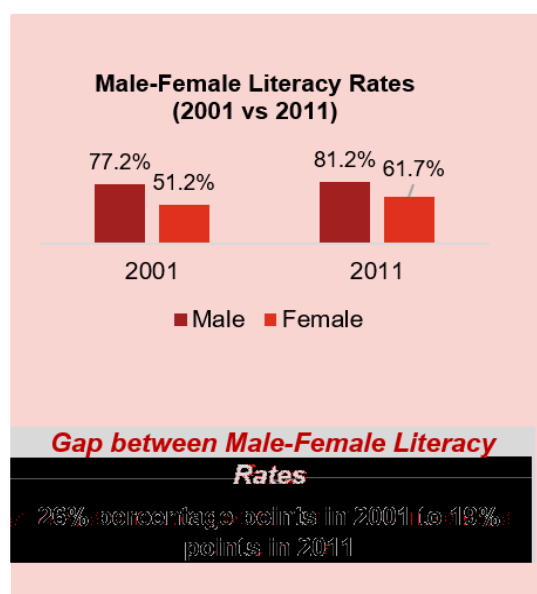
**Table 1: Key Demographic Indicators– Ariyalur vs Tamil Nadu<sup>5</sup>**

SN	Indicator	Ariyalur	Tamil Nadu
1	Total population	7,54,894	7,21,47,030
2	Female population	3,80,191	36,009,055
3	Population Density per sq.km (2011)	389	555
4	Urban Population	11.1%	48.4%
5	SC population (as % of total population)	23.3%	20.0%
6	ST population (as % of total population)	1.4%	1.1%
7	Differently abled population (as % of total population)	2.0%	1.6%
8	Population in age group 15-34 years (as % of total population)	32.5%	34.8%
9	SC population aged 15-34 years (as % of SC population)	33.1%	36.6%
10	ST population aged 15-34 years (as % of ST population)	30.5%	35.0%
11	Literacy rate	71.3%	80.3%

### Snapshot of Ariyalur's Demography



State 995  
Ariyalur 1015



### Key Highlights from the analysis of Census Data:

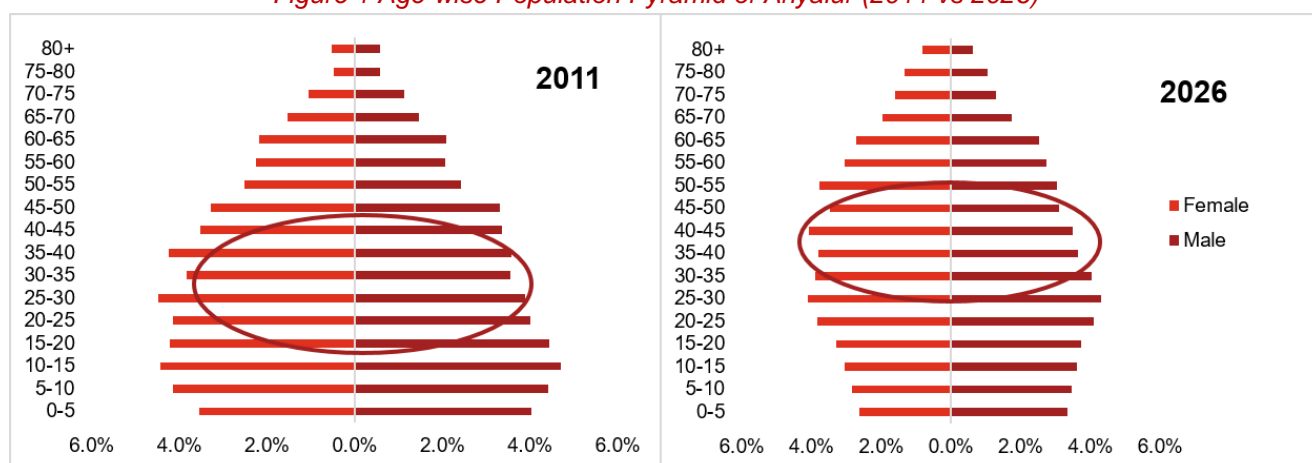
<sup>4</sup> Census 2011

<sup>5</sup> Census 2011



- **Population Growth and Urbanization:** The Decadal growth rate of the population in the district was **8.5%** between 2001 and 2011, compared to **15.6%** at the State level.
- **Literacy:** The district had a female literacy rate of 61.7% while the male literacy rate of 81.2%. These are lower than the corresponding literacy rates at the state level. The literacy rates among males increased by 4% while among females it increased by 10%, reducing the gap between them from a 26% in 2001 to 19% in 2011. The reducing gap between the male and female literacy rates indicates a higher level of participation of females in education and probably higher education attainment among females too.
- **Youth Demography:** More than **one-third** of the population was between 15-34 years in 2011. The median age during this period was **29 years**, which is equal to the median age of the state (29 years in 2011), indicating a progressively aging population in the district. The population is set to get older with median age in 2026 expected to be around 34 years. The dependency ratio for 2026 is set to increase from 59% in 2011 to 53% in 2026, thus decreasing the share of dependent population as illustrated in the age-specific population pyramid of the district.

*Figure 1 Age-wise Population Pyramid of Ariyalur (2011 vs 2026)<sup>6</sup>*



## 1.2. Economic Profile

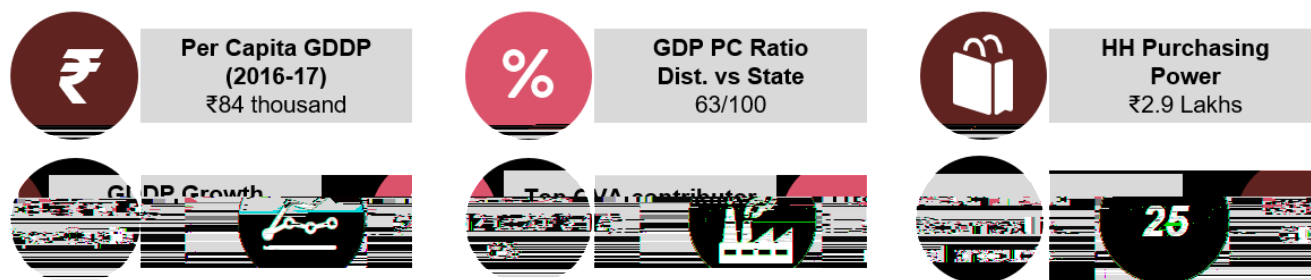
Ariyalur is famous for its cement industries. The establishment of Cement industrial base has contributed significantly to the economic growth of the district, which has grown at CAGR of 6 percent during 2011-12 to 2016-17. The district ranks **25<sup>th</sup>** in terms of **Per Capita Income** and **32<sup>nd</sup>** in terms of **Purchasing Power**, **lowest in the state**.<sup>7</sup>

<sup>6</sup> Age wise Population projected for 2026 based on age group wise life expectancy, birth and death rates

<sup>7</sup> 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- distritmetrics.com



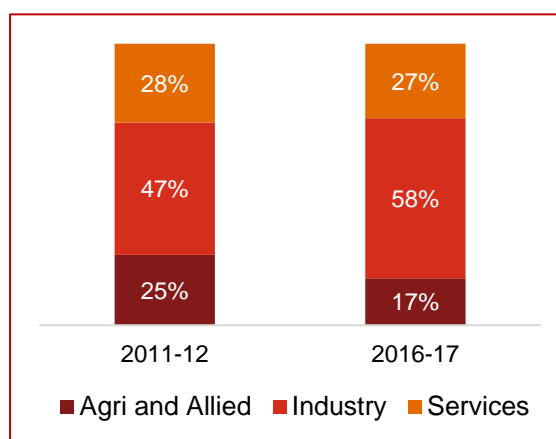
Figure 2 Key Economic Indicators of Ariyalur District



### 1.2.1. Sector Analysis<sup>8</sup>

Accounting for about 58% of the district output in 2016-2017, the industry sector dominates the economy of the district. . Ariyalur is one of the less prosperous districts with a per capita GDDP lower than the State average. This district has seen a decrease in share of agriculture and allied sector since 2011. The drop in share in this sector has been from 25% in 2011-12 to 17% in 2016-17. The services sector has witnessed a slowdown in growth from 7% in 2011-12 to 3% in 2016-2017. The share of service sector has gone down by one percentage points between 2011-2012 and 2016-2017 indicating a slowdown in the sector. At sector level, Manufacturing and Construction, agriculture, and real estate are the major contributors to the district's economy.

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



Source: Directorate of Economics and Statistics, TN

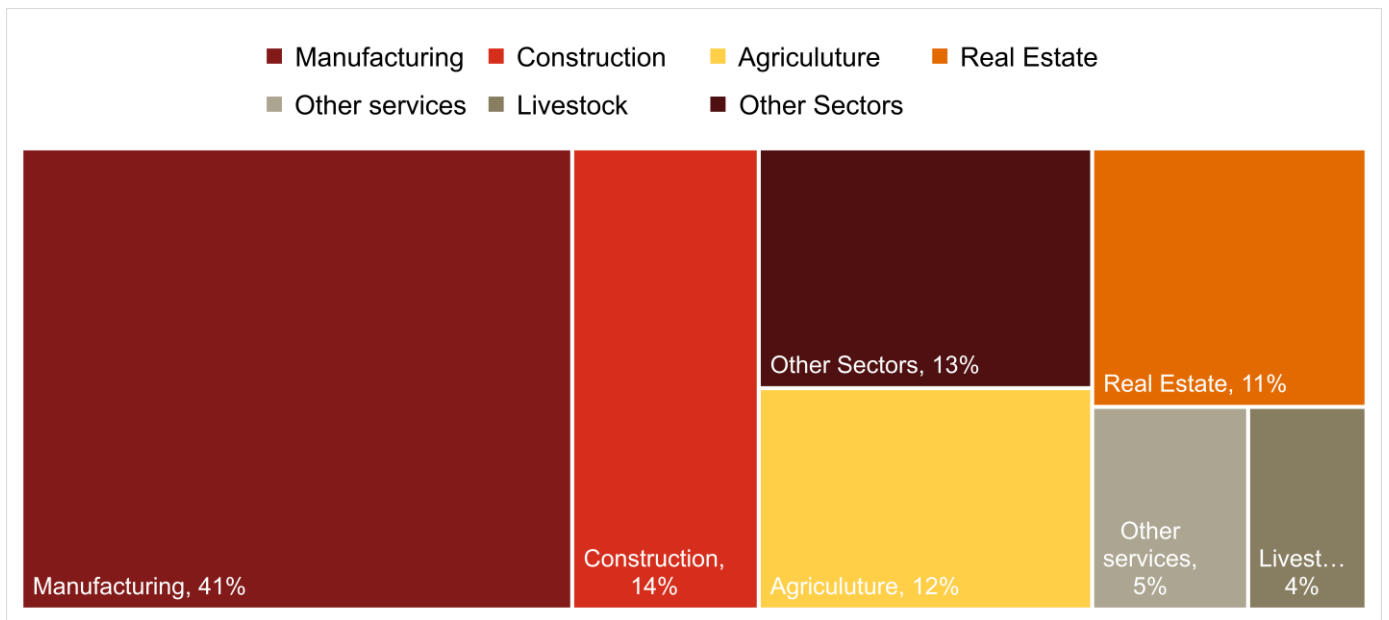
Industry sector grew at a CAGR of 10 percent from 2011-12 to 2016-17.

Table 2: Sector wise- Annual Growth Rate in Ariyalur (Directorate of Economics and Statistics, TN)

Sector	2013	2014	2015	2016	2017	CAGR
Agri & Allied	-36%	63%	12%	-19%	-6%	-2%
Industry	12%	9%	4%	20%	6%	10%
Services	7%	5%	6%	-8%	4%	3%

Figure 4 Share of GVA by Industry of Origin (2016-2017)

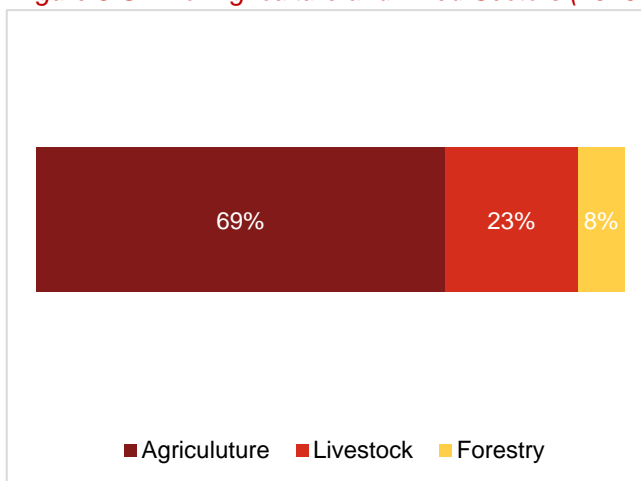
<sup>8</sup> Directorate of Economics and Statistics, Tamil Nadu



### 1.2.1.1. Agriculture and Allied Sector

Agriculture and allied sector has seen a fall in growth at a CAGR of 9% between 2011-2012 and 2016-2017, due to poor monsoon and low ground water level over the years. The cost of agricultural labour has also increased due to the shortage of agricultural labour. Cultivation is consistently practiced at T. Palur block due to its nearness to the Kollidam river, a reliable water source. The groundwater level is good in this area.<sup>9</sup> Major agricultural crops cultivated in the district are Paddy, Corn and Drumstick and Sugarcane. Horticulture crops cultivated include, Cashew, mango, banana, tapioca, tomato, brinjal, bhendi, onion, turmeric and chillies. There is one State Horticulture Farm in the district in Keelapalavur. Over 23% of the total share of agriculture and allied sector consists of livestock in 2016-17. Eight percent comprised of forestry while the rest comprised of agriculture.

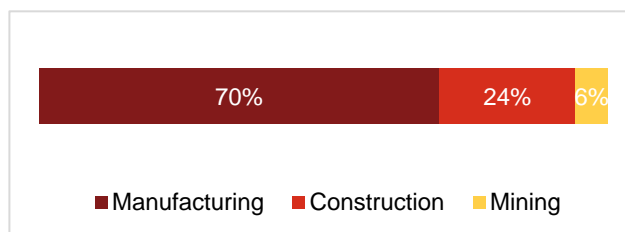
Figure 5 GVA of Agriculture and Allied Sectors (2016-



### 1.2.1.2. Industrial Sector

Construction and manufacturing sectors account for more than 90 percent of the industrial sector output. The sector experienced good growth in output and has grown at a CAGR of 10% during 2011-2012 to 2016-2017. The key manufacturing sectors by output include cement, and food and dairy products.

Figure 6 Industrial Sector GVA (2016-2017)



**Major emerging sectors: Cement, food and dairy products.**

Source: Directorate of Economics and Statistics, TN

The Ariyalur industrial complex is home to a number of food processing and cement companies. A total of 9 cement industries are present in the district. The various cement companies operating in the District are Dalmia Cements, Ultratech Cements, Chettinad Cements, Madras Cements, India Cements and Ramco Cements. Tamil Nadu Cements Corporation Limited (TANCEM), a wholly owned Government of Tamil Nadu undertaking, has a cement plant as well. Traditional silk and brass units are found in the district. There are two private sugar factories (Grasim and Kothari Sugar) in Ariyalur and Sathamangalam village. These factories not only produce sugar but also generate rectified spirit and ethanol. TANCEM has planned to triple its capacity (5 Lakh tonne per annum to 15 lakhs tonne per annum<sup>10</sup>) at a cost of ₹ 750 crores. Ramco Cements has plans to invest ₹ 3,500 crores in its plants all over India starting from Ariyalur.<sup>11</sup> For this purpose, 25 acres has been allotted to SIDCO Mallur in 2014. This estate will grow in the coming years as it is still in the development stage. There are 66 farmers in sericulture in a cultivated area of around 1,998 acres.<sup>12</sup> Other traditional industries like silk handloom and silk-weaving is done in the district. The Comprehensive Development Plan for development of CKIC (Chennai Kanyakumari Industrial Corridor) has been proposed for which Ariyalur-Perambalur have been selected.<sup>13</sup>

#### Key Clusters and Traditional Industries

SIDCO, Mallur.

<sup>10</sup> [https://www.business-standard.com/article/pti-stories/tancem-to-triple-capacity-of-ariyalur-factory-117062300926\\_1.html](https://www.business-standard.com/article/pti-stories/tancem-to-triple-capacity-of-ariyalur-factory-117062300926_1.html)

<sup>11</sup> <https://www.thehindu.com/business/Industry/ramco-cements-to-boost-production-capacity/article27357102.ece>

<sup>12</sup> [http://cms.tn.gov.in/sites/default/files/documents/kvih\\_e\\_pn\\_2018\\_19.pdf](http://cms.tn.gov.in/sites/default/files/documents/kvih_e_pn_2018_19.pdf)

<sup>13</sup> [http://cms.tn.gov.in/sites/default/files/documents/ind\\_major\\_e\\_pn\\_2019\\_20.pdf](http://cms.tn.gov.in/sites/default/files/documents/ind_major_e_pn_2019_20.pdf)

Silk Handloom and weaving, Udayarpalayam.

**Table 3 Profile of Manufacturing Sector from ASI**

Industry	No. of Units	No. of Employee	Gross Value Added (share in total GVA)	Share of Employment	Average workers per unit
Non-metallic mineral products	11	3,028	99.3%	85.1%	275
Other food products	9	510	0.7%	14.3%	56
Others	3	19	0%	0.6%	6
<b>TOTAL</b>	<b>23</b>	<b>3,557</b>	<b>100%</b>	<b>100%</b>	<b>111</b>

Source: Annual Survey of Industries 2014-15

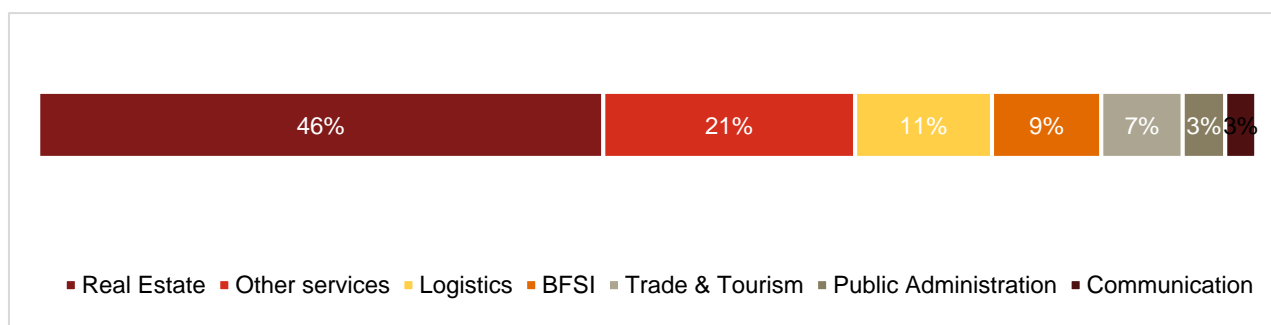
According to the Annual Survey of Industries (ASI) 2014-15, 23 Industrial units were present in the district, directly employing 3,557 workers. These industries contributed to 99% of the GVA of the district. Food products and non-metallic mineral products were the two key industries in terms of employment generation. Average workers per unit is maximum in non-metallic mineral products given the presence of large cement plants.

### 1.2.1.3. Services Sector

Real Estate, Logistics and BFSI contribute to two-thirds of the total service sector GVA in the district. The sector experienced fall in share in the district's output between 2011-12 and 2016-17 and has grown at a CAGR of 3% during 2011-2012 to 2016-2017. Tourism accounted for seven percent of the service sector output during 2016-17. Two of the famous tourist spots are Gangaikonda Cholapuram and the Karaivetti Bird sanctuary. Ariyalur has temples like Sri Kaliuga Varatharaja Perumaal Temple, which attracts tourists as well.

The district has four government hospitals, 30 Primary Health Centers, 61 Private hospital, and clinics that provide healthcare services in the district. The MMR (Maternal Mortality Rate) in the district is 89.6 which is above the state level (85). In Ariyalur, Sendurai and T.Palur blocks, the MMR are as high as 122.6, 120.5 and 120.3 respectively. The district administration will require additional hospital facilities to reduce the mortality rate for which skilled labour will be required over time for both private and government hospital.

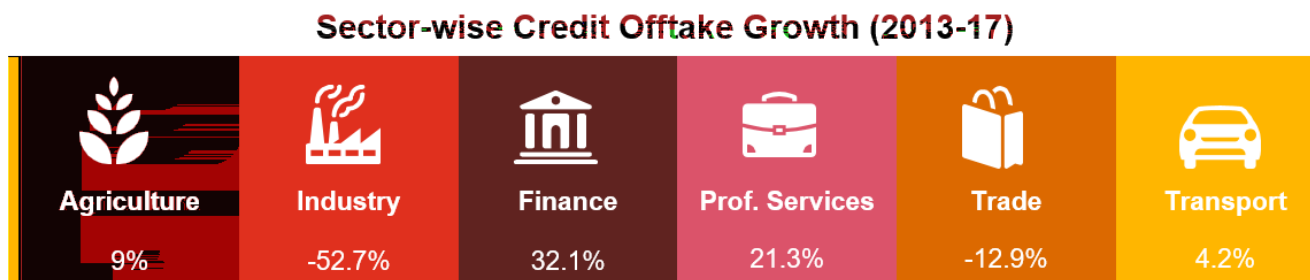
**Figure 7 GVA of Services Sector (2016-2017)**



Source: Directorate of Economics and Statistics, TN

### 1.2.2. Investments and key economic drivers

Figure 8 Sector-specific growth of Credit off Take<sup>14</sup> (2013-17) - RBI



According to the RBI data, the district has seen recent growth in credit offtake across Financial, Trade, Transport and Professional Services sectors. This fact is reaffirmed as we see growth in BFSI, Logistics and Real estate sectors which registered CAGR of 11, 5 and 7 percent respectively between 2011-12 and 2016-17.

Other key investments and sectors include:

- Proposed Investment by Ramco Cements to the tune of 3,500 crores which will start with the expansion of the Ariyalur plant.
- Ariyalur has been selected for the CKIC (Chennai Kanyakumari Industrial Corridor). This district will be developed according to the comprehensive development plan that was developed by ADB to boost manufacturing growth. This will come under the Ariyalur-Perambalur node<sup>15</sup>. ADB has agreed to grant 550 million dollars (approximately 3,330 crore rupees) for the CKIC corridor.<sup>16</sup>
- TANCEM has plans to triple its output from 5 lakh metric tonnes to 15 lakh metric tonnes by 2022 for which 750 crores is proposed to be invested.

<sup>14</sup> Credit offtake is defined as an increase in credit growth, which happens when lenders mobilize funds to commercial sector in order to earn better returns compared to government bonds and securities.

<sup>15</sup> A node is an agglomeration of existing and planned special economic zones and industrial parks.

<sup>16</sup> <https://timesofindia.indiatimes.com/city/chennai/chennai-kanyakumari-industrial-corridor-gets-rs-3300-crore-boost/articleshow/62226941.cms>

### 1.3. Labour Market Profile<sup>17</sup>

The overall labour force participation and worker participation ratio are higher at the district level compared to the state level. Close to two-thirds of the workers in the district are in casual labour as against the state average of 44%. Youth Unemployment Rate (among persons aged 15-29 years) in the district is more than double the state average.

Figure 9 Key Labour Market Indicators<sup>18</sup>

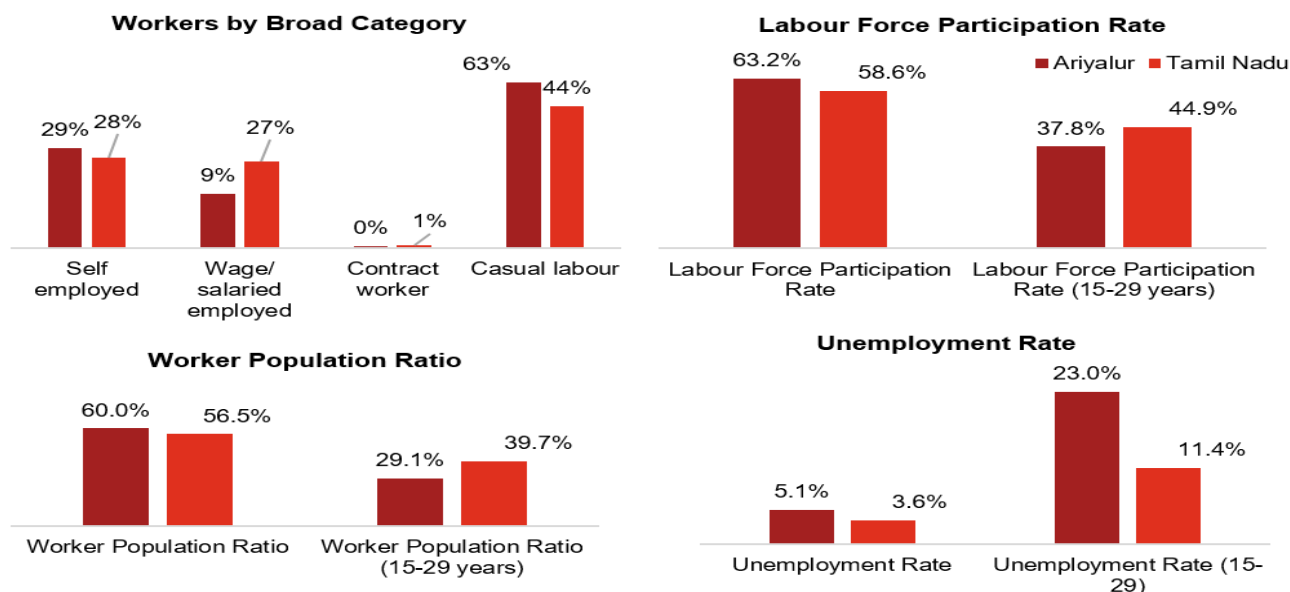
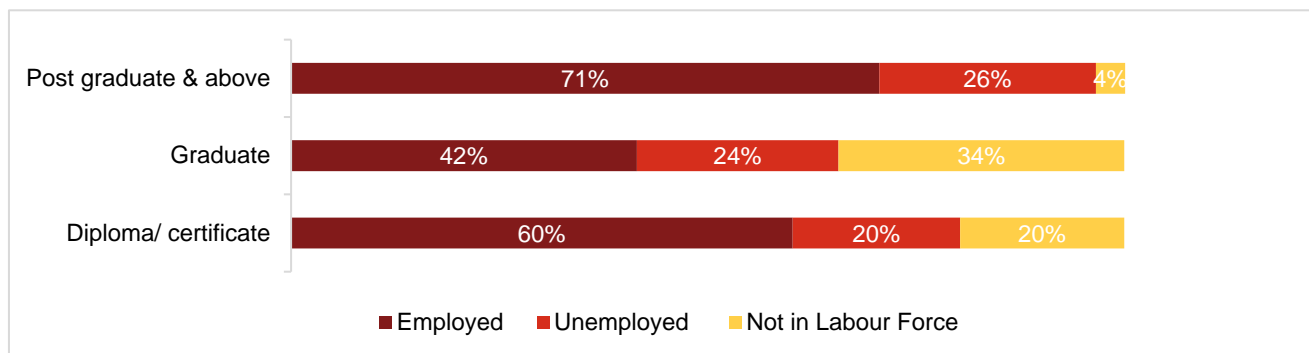


Figure 10 Distribution of Working status by Qualification: District Level Estimates



The education-level classification of the district population reveals that the unemployment rate among youth increased with higher education. One-fourth respondents with graduate or postgraduate and above level of education are unemployed. The overall trend suggests positive correlation between unemployment levels and level of education, pointing towards mismatch between industry demand and supply from the educational institutions in the district.

Table 4: LFPR and Unemployment Rate by gender & Location

Sex	LFPR		Unemployment Rate	
	Rural	Urban	Rural	Urban

<sup>17</sup> Analysis in this section are based on the District Level Estimates, EUS, 2013-14, Labour Bureau

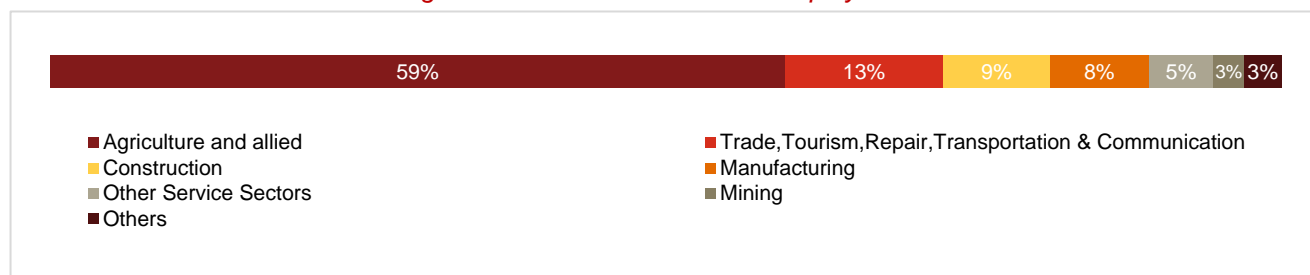
<sup>18</sup> District Level Estimates, EUS, 2013-14, Labour Bureau

Male	82.8%	72.8%	2.8%	3.3%
Female	46.7%	37.0%	9.3%	4.0%

Analysing the labour market indicators by gender and across rural-urban areas, it is found that the Labour Force Participation Rate (LFPR) is higher across gender in the rural areas.

The rural male LFPR is 10% points higher than the urban male LFPR, while the rural female LFPR is 9.7% points higher than the urban female LFPR. Further, a huge difference in female unemployment rate could be observed between rural and urban areas. The rural female unemployment rate is about 5.3% points higher than the urban female unemployment rate. Such a gap is not seen among the males, indicating that urban women face lack of employment.

*Figure 11 Sector-wise share of Employment*



Source: District Level Estimates, EUS, 2013-14, Labour Bureau

Over 59 percent of the workforce in the district is employed in the agriculture and allied sector, 9 percent in construction sector, 13 percent Trade, Tourism and Communication and 8 percent in manufacturing but the overall contribution from the Industrial sector is 53% of the GDDP. Trade, Tourism and Communication is the second most important sector in terms of employment followed by agriculture.

**17 percent of the workers are engaged in manufacturing and construction sectors, which form the base of industrial sector. However, the productivity is very high as Industry sector contributes to 53% of the GDDP in 2016-17. In addition, unemployment among those with college education is a concern.**

## 1.4. Education and Skill Development Profile

### 1.4.1. Education Profile

The district has educational institutions such as University College of Engineering, Meenakshi Ramasamy Polytechnic College, KKC College of Engineering & Technology, P A C Ramasamy Raja Private Industrial Training Institute among others. According to Unified District Information System for Education (U-DISE), there were 149 elementary/middle schools (out of which 77 percent were government schools in 2016-17) and 38 secondary/higher secondary schools in the district (of which, 65 percent were government schools). Increase in dropout rate in upper primary and secondary level of education is the major concern in the district. The enrollment ratio for primary schools was 99.9 while for upper primary, it was 98.9 in 2014-15.

In Ariyalur district, there are four Arts and Science colleges. This includes government, government aided and a private institution. There are 5 engineering colleges, one being government engineering college and the remaining are private colleges, the total student strength being 3,424. Besides, this district has 4 polytechnic colleges with the strength of 2,581 students.<sup>19</sup>

## 1.5. Vocational Education and Skill Development Profile

The skill training infrastructure 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).

<sup>19</sup> <http://www.spc.tn.gov.in/DHDR/Ariyalur.pdf>

Under the PMKVY scheme, four training institutes offered courses on sewing machine operator and self-employed tailor. Media and Entertainment is the most prominent sector under PMKVY.

*Table 5 Vocational Training under Short Term Skill Development Programs<sup>20</sup>*

Scheme	Sector	Job Role	No. of Training Centres	Intake
Deen Dayal Upadhyay Grameen Kaushal Yojana	Construction	-	6	475
	Healthcare			
	Electrical			
	Tourism			
	IT/ITeS			
	Retail			
	Apparel			
	Electronics			
	Automotive			
	Security			
Pradhan Mantri Kaushal Vikas Yojana	Apparel	Sewing Machine Operator	2	180
	Leather	Cutter-Goods & Garments	1	60
	Media and Entertainment	Character Designer	1	240
Tamil Nadu Skill Development Programs	Apparel	Sewing Machine Operator	3	120
		Self Employed Tailoring	1	20
	Automotive Repair	Welding Assistant	2	60
	Construction	Assistant Electrician	1	40
	Fabrication	Arc and Gas Welder	2	60
	BFSI	Accounts Assistant Using Tally	1	90
	Information And Communication Technology	Computer Hardware Assistant	1	80
	IT/ITeS	Associate Desktop Publishing(DTP)	1	60
	Medical And Nursing	Nursing Aides	1	20
		Bedside Assistant	1	20
	Media and Entertainment	Animator	1	140

The table below presents the courses offered through ITI, and the number of such institutes offering each trade/ training for job role.

<sup>20</sup> 2017-2018 training year report.

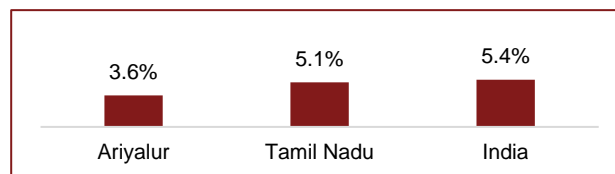


**Table 6 Vocational Training under Long Term Skill Development Programs (ITI)**

Scheme	Sector	Job Role	No. of Training Centres	Intake
Industrial Training Institutes  (Craftsmen Training Scheme)	Automobiles and Auto Components	Mechanic (Motor Vehicle)	4	168
	Capital Goods	Draughtsman (Mechanical)	1	52
		Instrument Mechanic	1	52
		Sheet Metal Worker	1	42
		Welder	5	294
		Turner	1	64
	Construction	Electrician	7	336
	Electronics & Hardware	Wireman	1	42
	Instrumentation, Automation, Surveillance and Communication	Mechanic Mechatronics	1	42
	IT/ ITeS	Computer Operator and Programming Assistant	1	52
	Mining	Fitter	4	252

**Figure 12 Proportion Undergone Vocational training 2015-16, MoLE<sup>21</sup>**

With respect to vocational training in the district, 3.6% had received training in the district, when compared to 5.1% in the state as per Employment and unemployment survey 2015-16. This is lower than the state and country average.



<sup>21</sup> Employment and Unemployment Survey 2015-16, Ministry of Labour and Employment

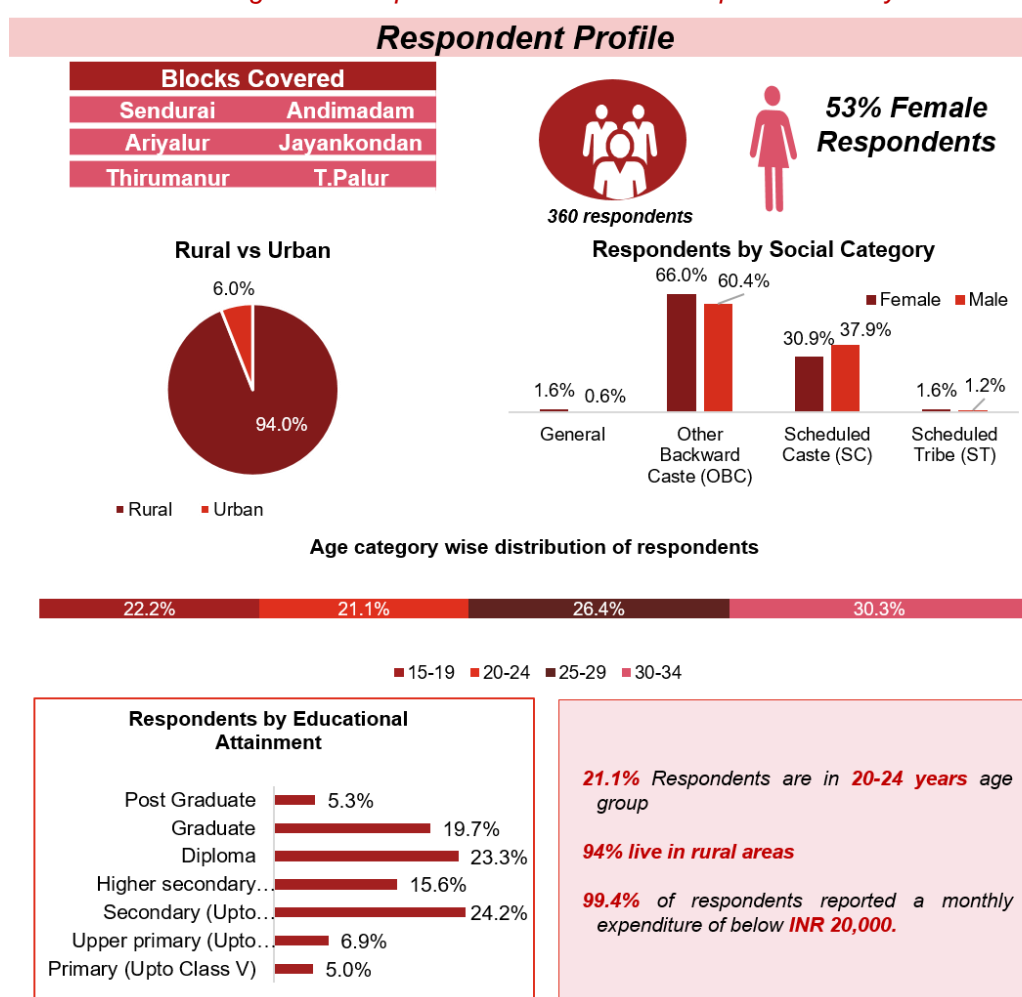
## 2. Youth Perspective

The study covered youth in the age category 15-34 years to understand the demand and supply side perspectives of skill ecosystem in the district. The information was collected through quantitative surveys through a structured quantitative tool.

### 2.1. Profile of Respondent Youth

The structured household survey tool was administered across 360 youth (young men and women in the age group of 15-34 years) sampled from six blocks Sendurai, Andimadam, Ariyalur, Jayankondan, Thirumanur and T.Palur<sup>22</sup>. Of the total respondents, 53% were female. Majority (almost four fifth) of the respondents were from the rural category. The sample has balanced representation of various socioeconomic and demographic characteristics of the population.

Figure 13 Respondent Profile of Youth Aspiration Survey

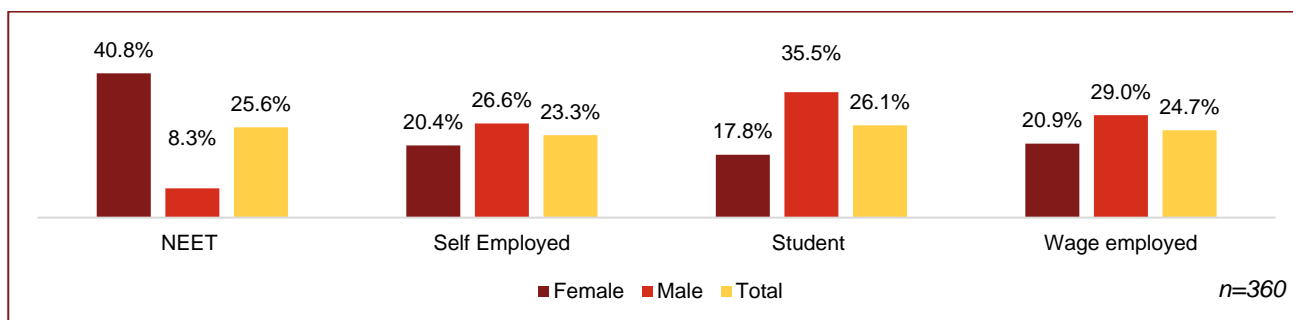


#### 2.1.1. Youth's Educational and Economic Engagement Status

The figure below illustrates the gender wise classification (current status) of the respondents interviewed during the household survey. While the female respondents were predominantly falling under the NEET (31.6%) category, the male respondents were largely distributed between Wage / Salaried Employment (29%), and in Education system (36%).

<sup>22</sup> Detailed methodology of selection of blocks is described in Appendix 1 of the report.

Figure 14 Current Status of Respondent by gender



## 2.1.2. Economic Engagement of the Youth

48.3% of the total respondents are currently engaged in economic activities.

79.1% of the respondents reported that they were employed in a field related to their education/ training.

Figure 16 Distribution of Respondents across Monthly Income Category across gender

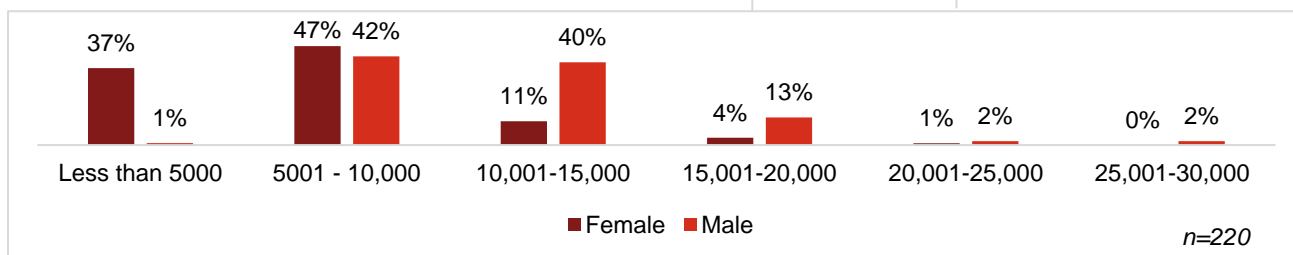
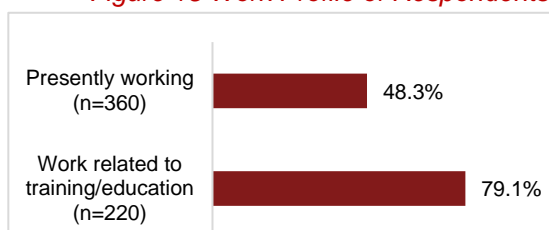


Figure 15 Work Profile of Respondents



95 percent of the male respondents while 99 percent of female respondents earned less than ₹ 20,000 per month.

37% of the female respondents reported that they receive less than ₹ 5,000 monthly. 43 percent of the male respondents reported that their monthly income is less than ₹ 10,000. Lower wages have been a major reason for out migration amongst locals in the district. In addition, lower wages demotivate females to take up any form of economic activity. Around 61.4% of the respondents were dissatisfied with their jobs (n=220).

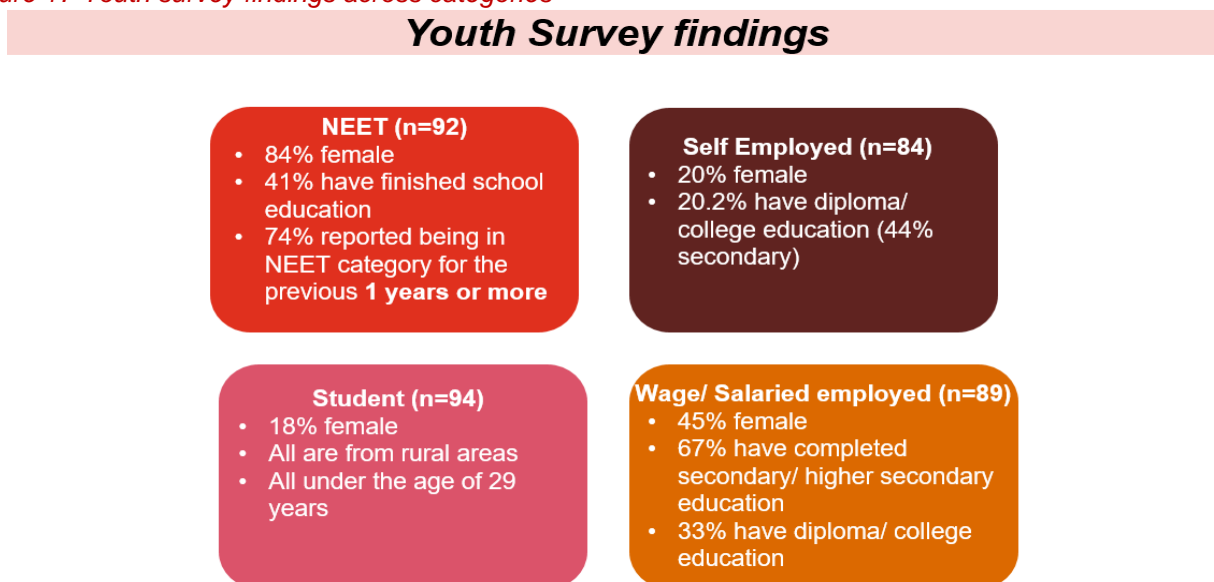
Among those with education of higher secondary and below, skilled work like tailor, mason were the most common form of economic activity.

Table 7 Education Qualification of Respondents and Employment Type

	Secondary	Higher secondary	Diploma	Graduate	Post Graduate
Livestock	5.3%	4.0%	7.5%	0.0%	8.3%
Unskilled worker	61.3%	52.0%	30.0%	19.2%	8.3%
Salaried Employment (teacher, government official, etc.)	1.3%	4.0%	2.5%	3.8%	8.3%
Skilled worker (tailor, mason, electrician, plumber etc.)	57.3%	44.0%	87.5%	76.9%	75.0%
Petty Business/Trade/ Manufacturing	4.0%	4.0%	0.0%	3.8%	0.0%
Number of respondents	75	25	40	26	12

\*multiple response question

Figure 17 Youth survey findings across categories



### 2.1.3. Youth under NEET Category

25.6% of the total respondents were neither in employment, nor in education nor in any training.

84% of the NEET category respondents were females. Majority of the NEET respondents (37%) were between the age group of 25-29 years, while 29.3% were between 20-24 years. 36.6% of the NEET respondents reported to have completed their Diploma course and 30% had completed their graduation. This shows that there is high level of educated unemployment in the district.

While most of the respondents in NEET category have been in it for more 1 year (74%). **Almost 82 percent of the female respondents in the NEET category have been in the category for more than a year.**

**21.8% of the female NEET respondents and 71.4% of the male NEET respondents wish to work in the future.** All the male respondents and 88% of the female respondents in the NEET category are actively seeking work opportunities.

Table 8 NEET Category Respondents

Duration in NEET Category (n=92)				Wish to Work (n=92)			
	Female	Male	Total		Female	Male	Total
Less than 6 months	9.0%	28.6%	12.0%	Yes	21.8%	71.4%	67.3%
6 months- 1 year	9.0%	42.9%	14.1%	Total	78	14	92
1- 2 years	16.7%	21.4%	17.4%	<b>Actively Seeking Work (n=27)</b>			
2- 3 years	12.8%	7.1%	12.0%				
3 - 4 years	16.7%	0.0%	14.1%		Female	Male	Total
4 - 5 years	19.2%	0.0%	16.3%	Yes	88.2%	100%	97%
More than 5 years	16.7%	0.0%	14.1%	Total	17	10	66

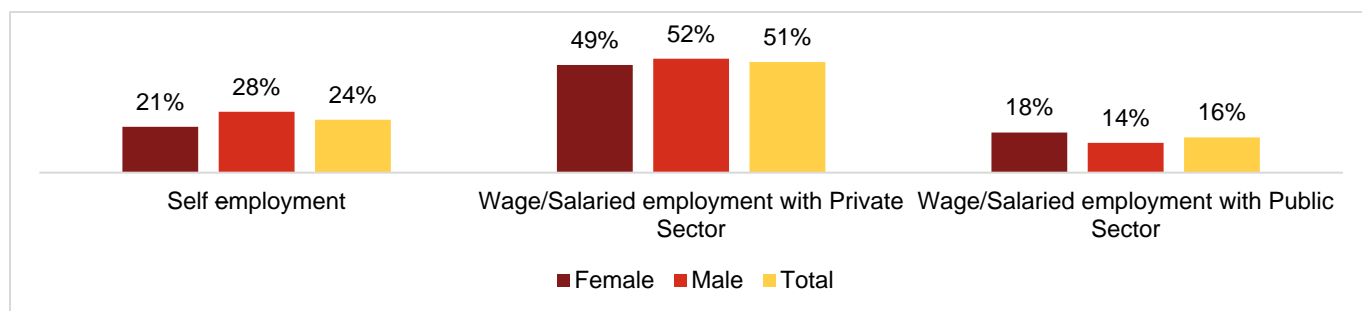
## 2.1.4. Vocational Training Awareness and Experience of Youth

Only 0.6% of the total respondents have reported to have undergone any sort of vocational trainings. Three-fourth of these respondents received trainings under govt. scheme. Out of the 3 respondents who have undergone training, all of them received job offers.

## 2.1.5. Youth Career Aspiration

The youth in the district have preference for wage / salaried employment with private sector (51%) and with the public sector (16%). Almost 24% of the youth also chose for self-employment<sup>23</sup>. Both female and male respondents have shown similar interest in the pursuit of wage employment, males have a higher interest in pursuit of private sector employment. Female respondents aspired for self-employment (20%) as it gives them more flexibility towards working hours and balancing their household activities.

Figure 18 Career Aspiration of Youth



n=360

89 percent of the youth feel there is lack of adequate employment opportunities available within the district.

The main factors determining the aspiration of the youth are Salary (wages) / Income (96%), Job Security (51%) and Social Status (39%).

About 74% of the respondents (all excluding NEET and students) perceive that they are largely prepared for requirements for a job while only one fourth of the respondents perceive that they are moderately prepared for jobs. The main reason for these respondents' perception on their preparedness to jobs, is that they have the required work experience relevant to the job (66%).

Table 9 Career Aspiration - Factors, Preparedness and Availability of Jobs

Factors Determining Aspiration*	Responses	Perception of Preparedness for Jobs (n=174)	Responses
Salary (wages) / Income	95.8%	Completely Prepared	73.6%
Job Security	50.6%	Moderately Prepared	24.7%
Social Status	39.2%	Somewhat prepared	1.1%
Safety / Security	5.6%	Not Prepared	0.3%
Retirement Plans	0.6%	<b>Availability of Job Opportunities (n=360)</b>	
Closeness to Residence	1.7%	Very adequate	0.3%
Traditionally Acquired Skills / Family Business	3.6%	Somewhat adequate	0.3%
		Neither adequate nor inadequate	10.0%
Gender suitable role	0.6%	Inadequate	89.4%

<sup>23</sup> Traditionally Self Employment includes both Enterprises and engaging in a profession / trade on own account. However in this study, it has emerged that, the youth prefer to be engaged in independently in a trade or profession in their own account more than setting up an Enterprise as such.

Employer provided benefits and perks	0.3%		
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\*Multiple response question

Most of the students (96%) responded that they didn't face any challenges to pursue their career. **11% of the youth highlighted the lack of technical and vocational skills as a challenge in pursuing their career aspiration.**

*Table 10 Career Aspiration – Challenges in pursuing desired career \**

Challenges	Responses	Challenges	Responses
Lack of sufficient education qualification	0.3%	Lack of work experience	0.8%
Lack of family support / social acceptance of girls being engaged in economic activity	0.8%	Lack of guidance / information on appropriate job available for skill levels	1.9%
Lack of vocational skills	1.4%	Pressure related to getting married	0.3%
Lack of jobs locally	0.6%	No Challenge	95.8%

\*Multiple response question, responses may add up to more than 100%

The key factors determining their employability, according to the respondents, were level of education attainment (43.3%), years of relevant work experience (50%) and certifications in technical skills (3.1%). Team work (27.2%), Clear Communication Skills (43.1%) and Creativity, originality and initiative (63.1%) were identified as key skills specific to their aspired jobs. While 38% respondents had already taken steps to meet these requirements, 26% respondents were looking to continue education, 55% were intending to take up a vocational / skill training program while 14% were considering apprenticeships.

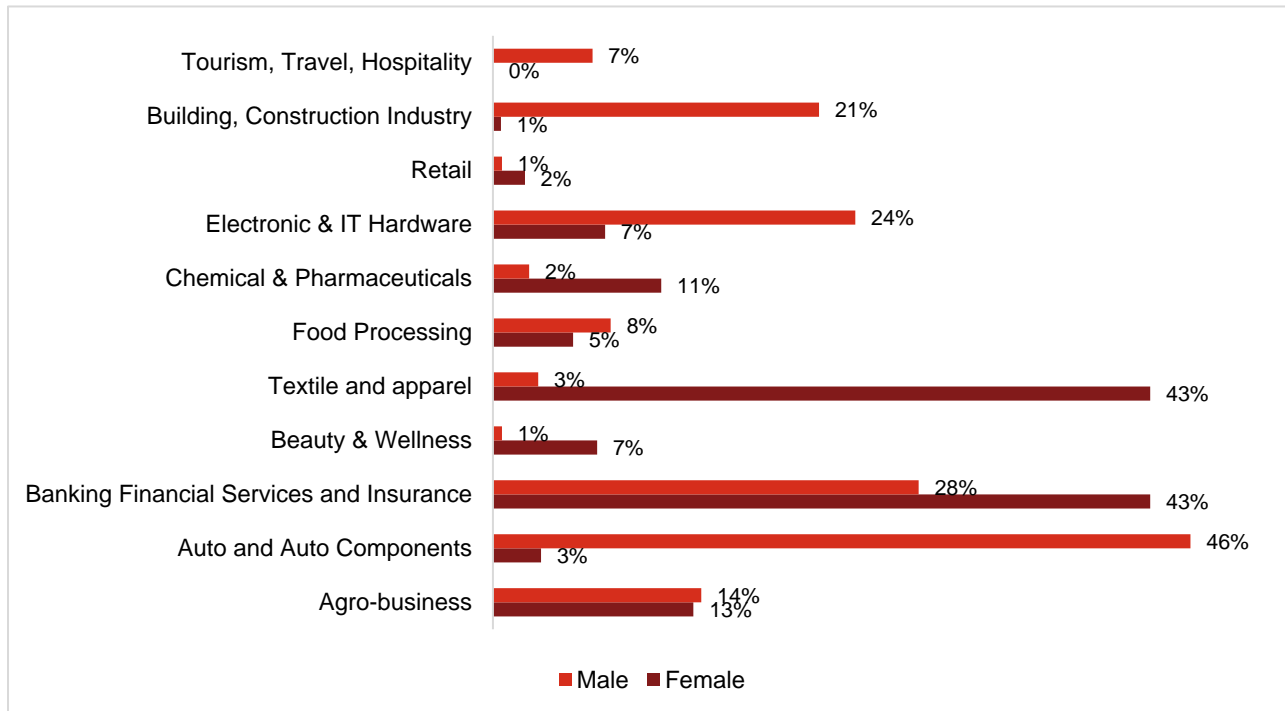
*Table 11 Key Requirements to enhance employability and steps to achieve aspirations*

Key Requirements to enhance employability				
Requirements		Responses	Requirements	Responses
Education attainment (level of education)		43.3%	Years of Relevant Work Experience	50.0%
Certifications of Technical Skill		3.1%	Relevant work experience in similar position or field	3.1%
References		0.6%		
Key Skills Required for desired job*				
Clear communication		43.1%	Active listening	26.9%
Coordination Skills		8.9%	Leadership	26.4%
Team work		27.2%	Creativity, originality and initiative	63.1%
Time management		3.3%	Complex problem-solving	1.7%
Analytical thinking		47.8%	Attention to detail	0.8%
New Steps to achieve aspirations*				
Steps		Responses	Steps	Responses
Already in Pursuit		37.8%	Apprenticeship / Gathering Work Experience	14.2%
Vocational/ Skill Training		55.8%	Others	0%
Continuing Education		25.8%		

\*Multiple response question

We observe that the 'career aspiration' and 'preference of sectors' varied across the gender group, we find that BFSI (43%), Textiles (43%) and Healthcare (11%) were the most preferred sectors among the female respondents (n=193) while the male respondents (n=169) preferred sectors like Auto and auto components (46%), Construction (21%), BFSI (10.2%) and Electronic and IT hardware (24%). The figure below details out the gender wise career aspiration for the youth. Over 98% of the total respondents stated that they were not interested to take up any gig work.

*Figure 19 Sectors aspired by respondents\**



\*multiple choice question

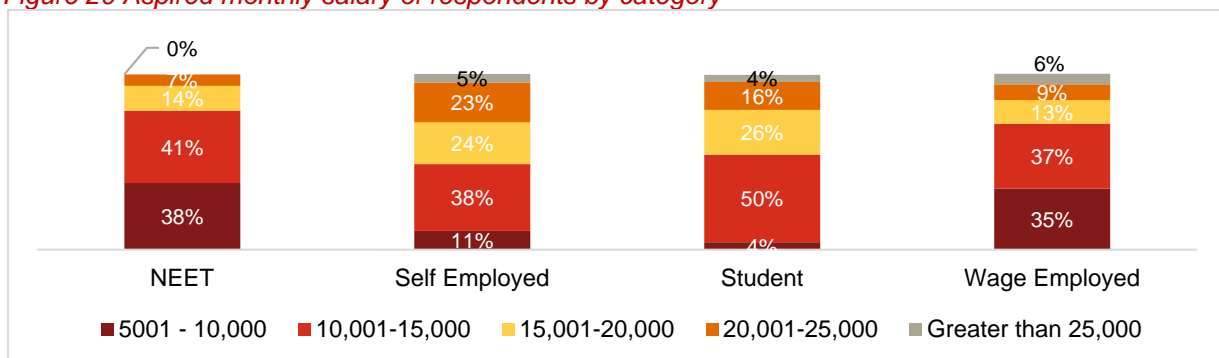
N=360

*98% of the total respondents stated that they were not interested to take up any gig work.*

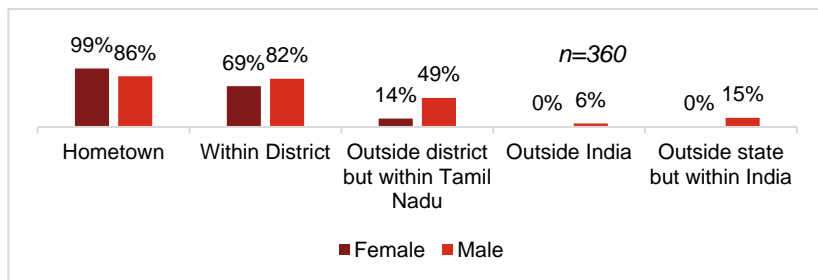
The median wage expectation is around ₹ 12,000 per month approximately. Around 17% of the respondents have expectations of monthly income greater than ₹ 20,000. Male respondents aspired for higher salaries compared to their female counterparts. More than half of the respondents (55%) in the NEET category aspired for a monthly salary ranging between ₹ 10,001 to ₹ 20,000.

Compared to respondents with 'self-employment' as aspiration (where 88% aspired for income above ₹ 10,001), more than (65%) respondents in wage employment aspired for the same.

*Figure 20 Aspired monthly salary of respondents by category*



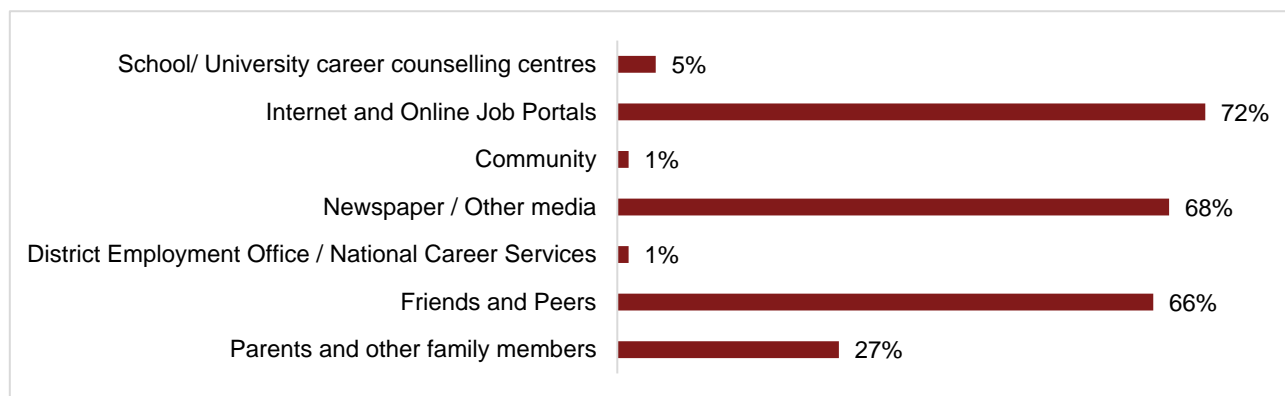
**Figure 21 Preference for Work Location\***



\*Multiple response question

Almost all of the respondents preferred jobs within their hometown. The respondents were reluctant to migrate outside of their hometown / district for employment. Male respondents were ready to move outside their hometown; however, the female respondents preferred their work locations to be situated within their hometown.

**Figure 22 Sources for Job Information\***



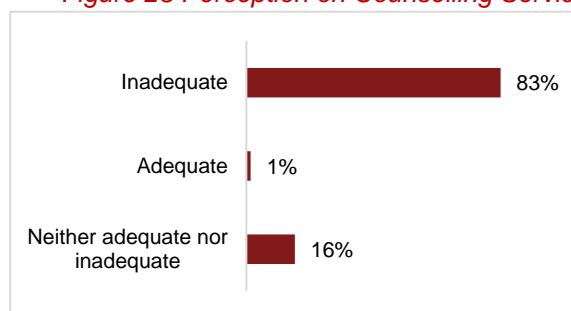
\*Multiple response question

The most important source for the job-related information was internet and online job portals (72%), newspaper media (68%) friends and peers (66%). The community, parents and family played a secondary role (27%).

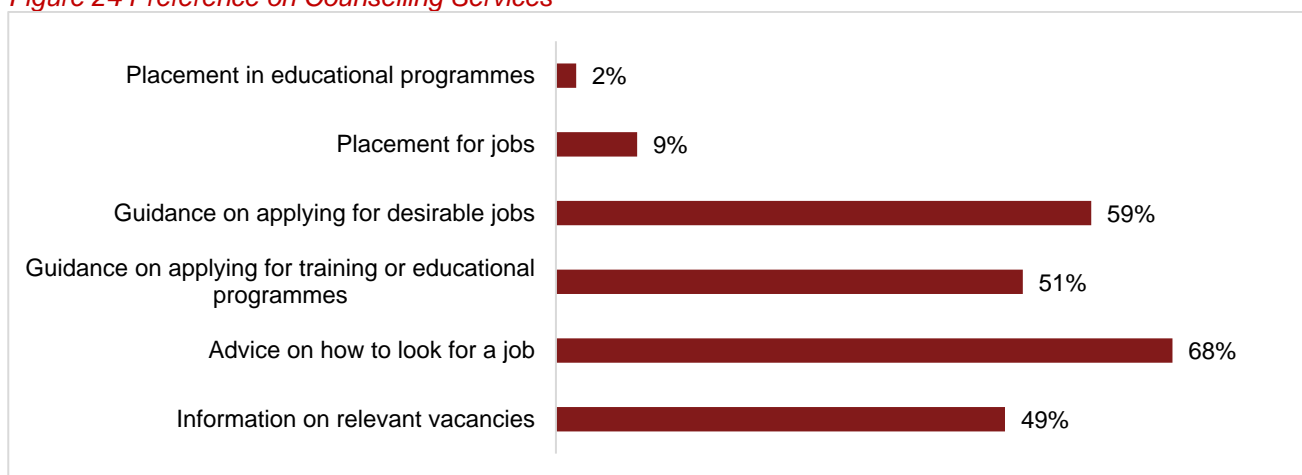
**83% of the respondents felt that the counselling services were not adequate in meeting their requirements.**

The key inputs requested by the respondents from career counselling services include Advice on seeking jobs (68%) and placement support (51%) Information on Relevant vacancies (49%).

**Figure 23 Perception on Counselling Services**



**Figure 24 Preference on Counselling Services\***



\*Multiple response question



2.1.6. Skill Training Preferences of the Youth

Over 10% of the total respondents had any awareness of Government run vocational programmes while around 1% had undergone any vocational training previously. Of these respondents 94% wanted the trainings to be short term certificate courses and 6% wanted the courses to be part time in nature. Though the respondents weighed most aspects of a training programme as being important, they were mostly concerned with favorable economic policies by the government (75%), career counselling (74%) and hiring by private sector (64%).

Figure 25 Skill Training type interested in

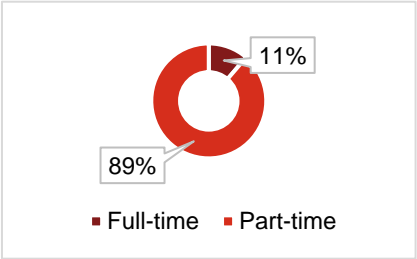
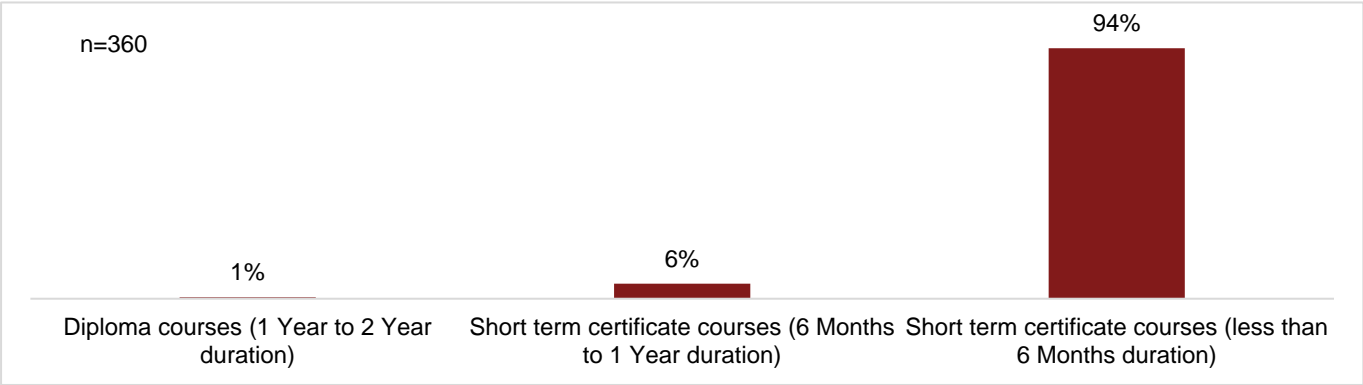


Figure 26 Skill Training type interested in



## 3. Employers' and Other Stakeholders' Perspective

### 3.1. Employers' Perspective

The study covered employers, industrial associations and other key stakeholders to understand the demand side perspectives of skills. The information was collected through quantitative survey.

The survey covered 45 Industries from primarily twelve sectors, with highest representations from the manufacturing and construction which are highest contributors to the local economy. 35% of the industries were in operations for more than 10 years. 87% of the industries surveyed reported to be in the micro industries category.

Figure 27 Distribution of Industries by Size

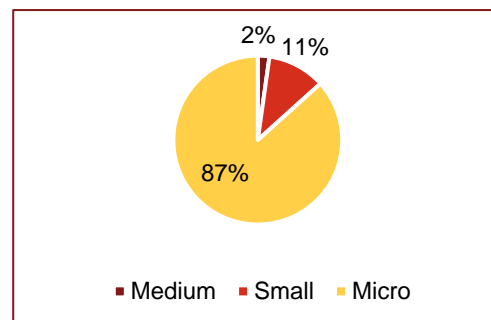


Table 12 Sector wise coverage of Industries in Employer Survey

S.No	Sector	Number of Industries Surveyed	S.No	Sector	Number of Industries Surveyed
1.	Auto and Auto Components	17	2.	Food Processing	1
3.	Beauty and Wellness	1	4.	Furniture and Furnishings	3
5.	Building Construction Painting Industry	12	6.	Healthcare Services	1
7.	Capital Goods	1	8.	Iron, Steel and Other Metals	4
9.	Electronic and IT Hardware	1	10.	Retail	1
11.	Tourism Travel and Hospitality	2	12.	Machinery Equipment	1

*Majority of the employers (93%) recruited through employee reference, from either existing employees or known sources as a mode of recruitment.*

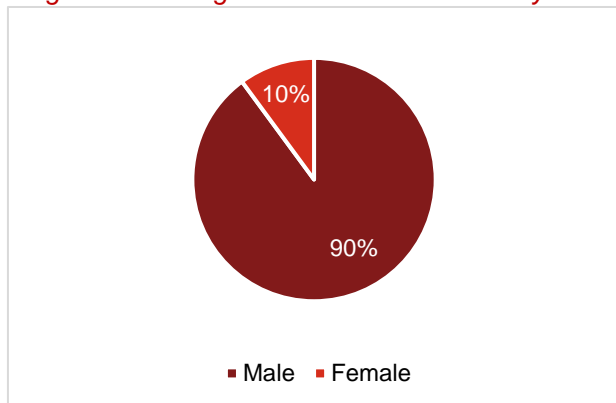
There has been slower uptake of recruitments from Job Melas and Campus recruitment, media or web portals. The most common challenge faced by employers include high local wage (38%), strenuous labor (35%) and lack of experience and core skills (20% each).

Table 13 Modes and Challenges in Recruitment Process\*

Key Modes of Recruitment			Key Challenges faced in Recruitment		
S.No	Particulars	%	S.No	Particulars	%
1.	Employee Reference	92.7%	1.	Candidate Disinterest and Attitude	15%
2.	Local Community	68.3%	2.	High local wages	38%
			3.	Lack of basic education requirement	5%
			4.	Lack of requisite core skills	20%
			5.	Lack of Prior Experience	20%
3.	Social Networks	2.4%	6.	Lack of social acceptance of girls to work in the Community	3%
			7.	Nature of work requires strenuous physical labour	35%
			8.	Work hours	10%
			9.	Attrition/Uncertainty due to marriage and children	3%
			10.	Attrition/Uncertainty due to involvement in Household chores	3%
			11.	Requirement of safe working conditions/toilets for Women	5%
			12.	Candidate Disinterest and Attitude	15%

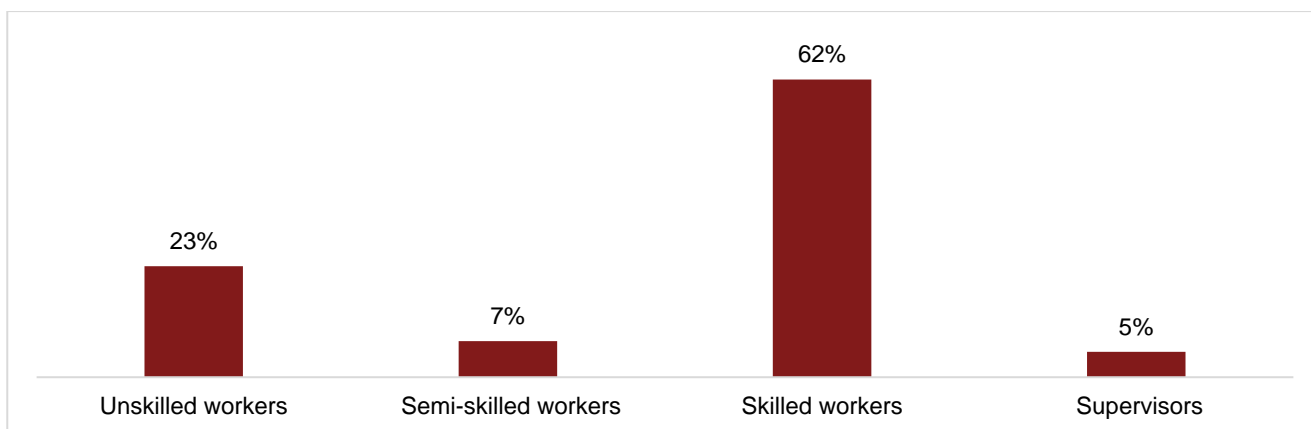
\*Multiple response question

Figure 28 Average distribution of workers by Sex

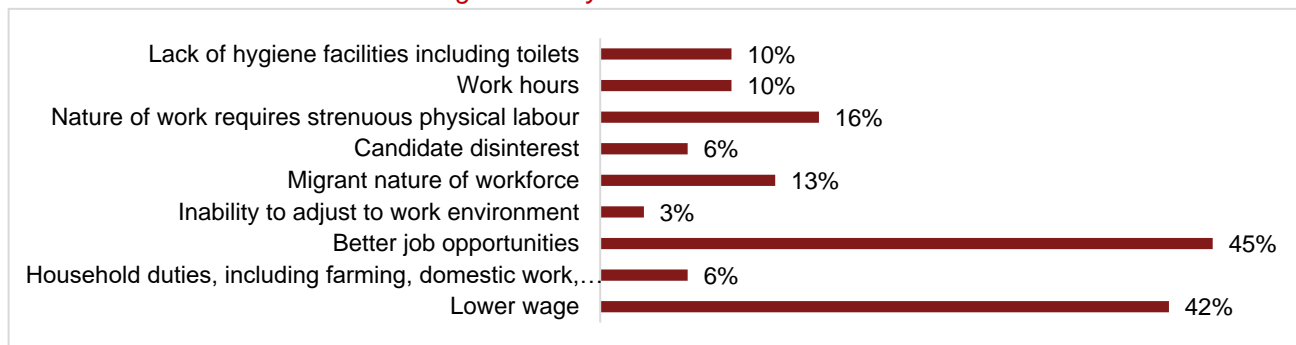


Most of the workers who worked in the industry were male (90%). Skilled workers dominated the share of workforce (62%) followed by unskilled workers (23%). Most of the female employees were employed in the unskilled workers category as daily wage labourers for doing manual work. While 3% respondents affirmed sourcing migrant workers from other districts of Tamil Nadu, 95% of the respondents sourced their workers from the district itself. Only 2% had workers from other states of India.

Figure 29 Distribution of workers-Skill Levels



**Figure 30 Key causes of Attrition\***



\*Multiple response question

Better job opportunities (45%) and lower wage (42%) were the dominant cause of attrition. Nature of work being of strenuous nature, migrant nature of workforce were the other causes of attrition in the enterprises. The employers stated that domain skill upgradation of the workers needs the most focus. 36.1% of the employers feel there is high growth prospects in the industries, while only 3.8% of the respondents see high adoption of technology in the future. Among these, only 4% of the respondents have already initiated plans in adoption of technology.

**Table 14 Growth Prospects and prospective adoption of technology**

Growth Prospects of Industry	%	Level of Technology adoption	%	Plans to adopt Technology	%
High	7.7%	High	3.8%	Yes	4%
Medium	11.5%	Medium	15.4%		
Low	50.0%	Low	42.3%	No	78%
Not sure	30.8%	Not sure	38.5%	Not sure	18%

## 3.2. Other Stakeholders' Perspectives

The study also included in-depth interviews of more than 50 stakeholders including District Collector and other line departments involved in the Skill Development, Livelihood and Employment generation and Industrial development related activities, Industrial Associations, Vocational Education and Skill Development institutions among others. A focus group discussion was conducted with stakeholders from various organizations in sectors such as cement and metal works.

The following were the key findings from the stakeholder consultations and FGD:

**Table 15: Qualitative findings Ariyalur**

S No	Topic	Responses
1.	Awareness of government skill training programs/ jobs/ job melas	<ul style="list-style-type: none"> <li>The candidates do not know where to search for jobs.</li> <li>Low level of awareness regarding job fairs that are being conducted locally.</li> <li>Inadequate awareness of government skill training programs.</li> </ul>
2.	Education- schools, ITI/ Polytechnics/ Engineering colleges in the district	<ul style="list-style-type: none"> <li>Most ITI/Polytechnic college students go to Chennai, Coimabtoe and Tiruchirappalli for jobs. Private ITIs and Polytechnic Colleges provide good placements as they have tie-ups with various industries in these places. The students who get placed usually get paid anything between ₹ 8,000 to ₹ 15,000. Polytechnic graduates are paid more and are in great demand.</li> <li>Students going through their apprenticeship training often end up doing work which is not related to their training. Hence, students do not learn the required</li> </ul>

S No	Topic	Responses
		<p>skills which they have to under the apprenticeship training. Very few end up getting a permanent job post the completion of their apprenticeship training. Candidate's disinterest is also a major obstacle.</p> <ul style="list-style-type: none"> <li>• Examination and evaluation patterns to be designed such that it can effectively assess the skill competencies of the students. This should be done for theoretical exams as well as during apprenticeship training.</li> <li>• Training institutions do not emphasize practical application of knowledge.</li> <li>• Engineering students lack practical knowledge and are generally paid lesser than Polytechnic graduates. They are not given proper technical training required in the job market.</li> <li>• Unemployed youth who join short-term training programmes are more willing to work in private companies.</li> <li>• Courses to be aligned to industry needs. Polytechnic colleges near TANCEM does not offer Chemical diploma course or training focusing towards cement industry. There is disconnect in the district, between what is being trained and what is being demanded.</li> <li>• Female students aspire to work in sectors such as BFSI, garment making, Chemist, IT, hospitality, etc. provided the employers provide accommodation and transport and they do not have to move out of the district. There is a growing local demand for these sectors.</li> </ul>
3.	Candidate Attitudes/ Abilities	<ul style="list-style-type: none"> <li>• Local youth do not prefer shop-floor roles and prefer white-collar jobs.</li> <li>• Local youth also do not prefer to work in smaller industries/ enterprises and are keen to migrate to Chennai and/or other bigger cities.</li> <li>• Candidate disinterest leads to attrition.</li> <li>• However, women workers are more willing to work on the shop-floor and have lower attrition rates (especially in textiles and BFSI).</li> <li>• Candidates recruited through job fairs also tend to aspire to desk-based jobs over shop-floor roles, while the latter has more demand.</li> </ul>
4.	Migrant workers	<ul style="list-style-type: none"> <li>• Very few workers in the district are migrants from other states.</li> <li>• Most of the workers in the district are migrants from other districts in the state. These people usually work at TANCEM and other private cement factories that are there in the district.</li> <li>• These labourers are employed in jobs which require skill such as supervisors and machine operators. Local people are less skilled compared to people who migrate. Casual work is done by local people.</li> </ul>
5.	Technological Transformation/ Automation	<ul style="list-style-type: none"> <li>• Most of the labor in the district are casual laborers.</li> <li>• Most of the cement industries in the district is technology driven</li> </ul>
6.	Industry Engagement	<ul style="list-style-type: none"> <li>• Industry has to engage to employ local labour force for skilled jobs. Local demand for skilled labor is very low because they are not trained up to the industry's standards.</li> <li>• Improved co-ordination between the skill institutes, ITIs and industries in the district will help industry to hire local labor force for skilled jobs. Local ITIs and skill institutes for instance, has to coordinate with the local cement industry.</li> </ul>

S No	Topic	Responses
		<ul style="list-style-type: none"> <li>ITIs/ Polytechnics/Skill training institutes have to update its courses to train the students in response to the industries' demand. This will help the local candidates get higher wages for skilled jobs.</li> <li>Introduction of GST related courses as the BFSI sector in the district is growing.</li> <li>Though Industries have expressed willingness to tie up with the Skill Development programmes, they are severely constrained (especially small-scale industries) by some of the programme guidelines and operational requirements.</li> <li>Small scale industries should provide certification</li> <li>Local institutions do not reach out to local firms for apprenticeships or on the job training.</li> </ul>
7.	Industrial Scenario	<ul style="list-style-type: none"> <li>The district has a growing cement, BFSI and construction sector.</li> <li>There are investments that have lined up as part of both public and private proposals. For instance, RAMCO and TANCEM have expansion plans which is going to boost demand in the cement sector. Ariyalur falls under CKIC (Chennai Kanyakumari Industrial Corridor) which will boost demand in construction sector.</li> </ul>
8.	Labour Requirements	<ul style="list-style-type: none"> <li>Job opportunities for the unskilled category present.</li> <li>The industries perceive a preference for jobs among youths in the services sector, especially in retail, and repair services over a fixed employment in manufacturing sector. Jobs in manufacturing sector are strenuous as well as less paying in nature which the youth do not prefer.</li> </ul>
9.	Women Employment	<ul style="list-style-type: none"> <li>Female employment is largely focused in the agrarian, food processing, BFSI, textiles and apparels.</li> <li>There is greater acceptance of females in the food processing units.</li> </ul>
10.	Skill Gaps	<ul style="list-style-type: none"> <li>Students lack quality training which in turn results in skills gap. There are many reasons. Firstly, students that are being trained, are trained under general courses such as fitter, welder among others. The existing course curriculum should have add-on courses so that the students are 'skill ready' for the local industries. This needs to be done as the industries in general do not want to bear the cost of training a fresher.</li> <li>Industries will have a local supply for labor which will be adequately trained up to their standards. Local labors will get a higher wage because of the skilled nature of the job thus resulting in a win-win situation for both the employers and the aspirants.</li> </ul>

#### Specific Skill Requirements include:

- Job roles pertaining to cement sector needs to be identified in consultation with the local cement industry by the local training service providers. This will help them to align their courses so that there will be more employment opportunities for the local youth. This will make searching of jobs easier for the local youth.
- GST Accountants are needed across sectors owing to the recent tax reforms and boom in the BFSI sector overall.
- In general, the government has to ensure the awareness about the schemes on skill development should reach the last mile.

- Internship programmes should be spread throughout the course duration and not limited only with last semester.

## 4. Skill Gap Analysis

### 4.1. Skill Gap Assessment - Incremental Demand<sup>24</sup> for Skilled & Semi Skilled Workforce

The district of Ariyalur is witnessing increased urbanization and increase in both industrial and service sector.

For estimating demand and supply, it can be seen that **manufacturing, construction, BFSI, repair** show high levels of demand for both skilled and semi-skilled workers. This is described under Appendix 7.2. The table below illustrates the sector wise demand and skill gap for skilled and semi-skilled workers for time period 2019-21 and 2022-25.

*Table 16 Sector wise Incremental Demand for Skilled and Semi-Skilled Workers between 2019 and 2025*

Sectors	Demand for Skilled Workers			Demand for Semi Skilled Workers			Incremental Total Demand
	2019-21	2022-25	Total	2019-21	2022-25	Total	Total
Allied Activities	8	11	20	58	79	137	156
Mining	5	7	11	8	11	19	30
Manufacturing	1,203	1,899	3,102	2,406	3,798	6,204	9,306
Construction	54	78	132	135	195	330	462
Logistics	58	81	140	140	195	336	475
Communication	25	36	61	13	18	30	91
BFSI	308	525	833	154	263	417	1,250
Real estate	60	93	153	150	233	383	536
Healthcare	300	426	726	240	341	581	1,307
Arts, entertainment and recreation	109	155	264	87	124	211	475
Repair	366	520	885	292	416	708	1,594
Other Services	173	246	419	139	197	336	755
<b>Total Supply</b>	1,342	1,789	3,131	3,187	4,249	7,437	10,568
<b>Total Demand</b>	2,669	4,078	6,748	3,822	5,870	9,692	16,440
<b>Total Skill Gap</b>	1,327	2,289	3,616	635	1,621	2,255	5,872

In the above table, we see that manufacturing, construction, BFSI, repair, health, logistics and entertainment sectors show that the demand for semi-skilled and skilled labour is increasing. In the short-term between 2019 to 2022, the overall demand for skilled and semi-skilled labor is 6,491.

<sup>24</sup> 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.





## 5. District Skilling Action Plan

### 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. The table below presents the summary of training projects for Ariyalur:

*Table 17 Summary of Trainings*

S No	Sector	Trades	Target (Persons)	Budget (₹)
1.	Cement	<ul style="list-style-type: none"> <li>• Cement Mixing Operator</li> <li>• Machine Operator</li> <li>• Chemist</li> <li>• Technician Instrumentation</li> <li>• Fitter</li> </ul>	3,500	₹6.53 Crores
2.	Food Processing	<ul style="list-style-type: none"> <li>• Packaging Technician</li> <li>• Industrial Production Worker – Food Processing</li> <li>• Quality Assurance Manager</li> <li>• Traditional Snack and Savoury Maker</li> <li>• Cold Storage Technician</li> </ul>	500	₹0.68 Crores
3.	Construction	<ul style="list-style-type: none"> <li>• Draughtsman</li> <li>• Supervisor - Roads &amp; Runways</li> <li>• Construction Welder</li> <li>• Construction Electrician</li> </ul>	600	₹1.96 Crores
4.	Domestic appliances repair and services	<ul style="list-style-type: none"> <li>• Helper Electrician</li> <li>• Plumber (General)</li> <li>• Field Technician – AC</li> <li>• Field Technician – Refrigerator</li> <li>• Field Technician - Washing Machine</li> <li>• Field Technician - Other Home Appliances</li> </ul>	1,000	₹1.85 Crores
5.	Healthcare	<ul style="list-style-type: none"> <li>• General Duty Assistant</li> <li>• Blood Bank Technician</li> <li>• Cardiac Care Technician</li> <li>• Diabetes Educator</li> <li>• Emergency Medical Technician - Basic</li> <li>• Medical Records &amp; health Information Technician</li> </ul>	1,000	₹3.81 Crores
6.	BFSI	<ul style="list-style-type: none"> <li>• Marketing and Social Media manager</li> <li>• GST Accounts Assistant</li> <li>• Export Assistant</li> <li>• Mutual Fund Agent</li> <li>• Life Insurance Agent</li> </ul>	500	₹0.71 Crores
<b>Total</b>			7,100	₹ 15.52 Crore

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 x training hours x per hour cost) + (training target x number of days of training x 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 x 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.

The training projects are described below:

*Table 18 Training in Cement industry*

Name of the Project: Training in Cement industry.							
Key Economic Drivers:							
<ul style="list-style-type: none"> <li>Cement industry over the years has seen growth with future investments lined up by TANCEM and RAMCO cements.</li> </ul>							
Key Partners: TANCEM							
Job Roles:	NSQF Level	NSQF Code	Duration of Training	Cost category	Target Group	Training Target	Cost of Training (₹)
Cement Mixing* Operator	4	CON/Q0103	350 Hours	1	10 <sup>th</sup> Class	1,000	₹1.93 Crores
Machine Operator*	4	CON/Q0103	250 Hours	2	ITI Students, Polytechnic graduates	1,000	₹1.23 Crores
Chemist*	4	CON/Q0103	300 Hours	1	B Sc. Chem	1,000	₹1.66 Crores
Technician Instrumentation	4	IES/Q1105	500 Hours	1	ITI Students, Polytechnic graduates	500	₹1.38 Crores

	Total training cost	3,500	~6.18 crores
	Total Assessment and Certification cost (₹ 1,000 per candidate)		0.35 crores
	Total cost		₹6.53 Crores

Table 19 Training in Food Processing

Name of the Project: Training in Food Processing							
Key Economic Drivers:							
• Expected growth and investment potential in Food processing Sector based on stakeholder consultation							
	Key Partners: APEDA (Agricultural and Processed Food Products Export Development Authority), ITIs						
Job Roles:	NSQF Level	NSQF Code	Duration of Training	Cost category	Target Group	Training Target (People)	Cost of Training (₹)
Packaging Technician	5	FIC/Q7001	240 hours	1	12th Class Pass	100	₹0.14 Crores
Industrial Production Worker – Food Processing	2	FIC/Q9005	240 hours	1	5th class Pass	100	₹0.14 Crores
Quality Assurance Manager	6	FIC/Q7602	240 hours	1	M.Sc.	100	₹0.14 Crores
Traditional Snack and Savoury Maker	4	FIC/Q8501	240 hours	1	8th Class Pass	100	₹0.14 Crores
Cold Storage Technician	4	FIC/Q7004	240 hours	3	ITI/Diploma	100	₹0.11 Crores
	Total training cost					500	0.63 Crores
	Total Assessment and Certification cost (₹ 1,000 per candidate)						0.05 crores
	Total cost						₹0.68 Crores
Key Considerations:							
This sector is most suited to absorb workers shifting out of agriculture. It is also a favorable Industry for the employment of women.							

Table 20 Training for Construction sector

Name of the Project: Training for Construction sector							
<b>Key Economic Drivers:</b>							
<ul style="list-style-type: none"> <li>Construction is one of the identified sectors with high skill demand in the next five years</li> <li>The most preferred sector for undergoing training/ pursuing career during youth aspiration survey amongst male respondents</li> </ul>							
<b>Key Partners:</b> ITI, Polytechnics							
Job Roles:	NSQF Level	NSQF Code	Duration of Training	Cost category	Target Group	Training Target (People)	Cost of Training
Draughtsman	4	CON/Q1301	600 hours	1	ITI/ Diploma in Civil	100	₹0.33 Crores
Supervisor - Roads & Runways	6	CON/Q1004	550 hours	1	Graduate/ ITI	300	₹0.91 Crores

Construction Welder	4	CON/Q1252	600* hours	1	Class 10 <sup>th</sup> pass	100	₹0.33 Crores
Construction Electrician	4	CON/Q0603	636 hours	1	Class 10 <sup>th</sup> pass	100	₹0.35 Crores
Total training cost						600	~ 1.92 crores
Total Assessment and Certification cost (₹ 1,000 per candidate)							0.04 crores
Total cost							₹1.96 Crores

**Key Considerations:**

- Tie up with upcoming investment sites to understand the need of manpower in construction sector

*Table 21 Training in Domestic appliances repair and services*

Name of the Project: Training in Domestic appliances repair and services							
<b>Key Economic Drivers:</b>							
<ul style="list-style-type: none"> <li>• Service sector contributes to 27% of the GDP in the district</li> <li>• Repair and service of domestic appliances and personal goods has an incremental demand of around 1500 in the district in next six years</li> </ul>							
<b>Key Partners: ITI</b>							
Job Roles:	NSQF Level	NSQF Code	Duration of Training	Cost category	Target Group	Training Target (People)	Cost of Training (₹)
Helper Electrician	2	CON/Q0601	350 hours	1	10 <sup>th</sup> pass	200	₹0.39 Crores
Plumber (General)	3	PSC/Q0104	410 hours	1	5 <sup>th</sup> pass	200	₹0.46 Crores
Field Technician – AC	4	ELE/Q3102	300 hours	2	8 <sup>th</sup> pass	300	₹0.45 Crores
Field Technician – Refrigerator	4	ELE/Q3103	300 hours*	2	8 <sup>th</sup> pass	100	₹0.15 Crores
Field Technician - Washing Machine	4	ELE/Q3106	300 hours*	2	8 <sup>th</sup> pass	100	₹0.15 Crores
Field Technician - Other Home Appliances	4	ELE/Q3104	360 hours	2	8 <sup>th</sup> pass	100	₹0.18 Crores
Total training cost						<b>1,000</b>	<b>1.75 crores</b>
Total Assessment and Certification cost (₹ 1,000 per candidate)							<b>0.10 crores</b>
Total cost							<b>₹1.85 Crores</b>
<b>Key Considerations:</b>							
Youth can be trained to provide services for repair of domestic appliances. ITI and Diploma graduates can also be given in this sector.							

*Table 22 Training in Healthcare Sector*

Name of the Project: Training in Healthcare Sector							
<b>Key Economic Drivers:</b>							
<ul style="list-style-type: none"> <li>• Ariyalur is growing and urbanizing, and hence would require an expanded healthcare system</li> <li>• Healthcare sector has scope for young men and women, and career mobility as well</li> </ul>							
<b>Key Partners:</b> Hospitals, Nursing Colleges.							
Job Roles:	NSQF Level	NSQF Code	Duration of Training (hours)	Cost category	Target Group	Training Target	Cost of Training

General Duty Assistant	4	HSS/ Q5101	600	1	8 <sup>th</sup> pass/10 <sup>th</sup> pass	200	₹0.66 Crores
Blood Bank Technician	4	HSS/ Q2801	1,000	1	12 <sup>th</sup> pass	200	₹1.1 Crores
Cardiac Care Technician	4	HSS/ Q0101	840	1	12 <sup>th</sup> pass	200	₹0.93 Crores
Diabetes Educator	4	HSS/ Q8701	360	1	12 <sup>th</sup> pass	200	₹0.4 Crores
Emergency Medical Technician - Basic	4	HSS/ Q2301	240	1	12 <sup>th</sup> pass	100	₹0.14 Crores
Medical Records & health Information Technician	4	HSS/ Q5501	900	1	12 <sup>th</sup> pass	100	₹0.5 Crores
Total training cost							₹3.70 Crore
Total Assessment and Certification cost (₹ 1,000 per candidate)							₹0.10 Crore
Total cost							₹3.81 Crores
<b>Key Considerations:</b>							
<ul style="list-style-type: none"> <li>Residential training and part-time training modes should be explored to allow women of all backgrounds to attend</li> </ul>							

*Table 23 Training in Banking, Digital marketing and finance*

Name of the Project: Training in Banking, Digital marketing and finance							
Key Economic Drivers:							
<ul style="list-style-type: none"> <li>The large number of MSME units and have potential for better marketing and financial management of their enterprises</li> <li>High credit offtake in BFSI sector</li> <li>Marketing of traditional handicrafts is important to boost its growth</li> <li>These skill training programs would also benefit the traditional sector artisans in the district</li> </ul>							
Key Partners: <b>BFSI SSC</b>							
Job Roles:	NSQF Level	NSQF Code	Duration of Training*	Cost category	Target Group	Training Target (People)	Cost of Training (₹)
Marketing and Social Media manager	7	ASC/Q1110	100	3	Diploma/ Graduation	100	₹0.16 Crores
GST Accounts Assistant	4	BSC/Q0910	100	3	Diploma/ Graduation	100	₹0.13 Crores
Export Assistant	4	Can be in line with AMH/Q1601	270	2	Diploma/ Graduation	100	₹0.13 Crores
Mutual Fund Agent	4	BSC/Q3802	100	3	Class 12th pass	100	₹0.13 Crores
Life Insurance Agent	4	BSC/Q30101	225	3	Class 12th pass	100	₹0.13 Crores
Total training cost						<b>500</b>	<b>0.66 Crores</b>
Total Assessment and Certification cost (₹ 1,000 per candidate)							<b>0.05 crores</b>
Total cost							<b>₹0.71 Crores</b>
<b>Key Considerations:</b>							
With the growth in BFSI sector and introduction of GSTs, there is a need to skilled workforce to work in the sector. Youth, especially woman can be trained and provided meaningful employment in this sector.							

## **5.2. Key Recommendations**

Study findings reveal that there are several investments lined up within the district. However, access to skills, livelihoods and wages, high-wage employment is less across the district. Technical skills, high income aspirations has emerged as barriers in the economic engagement of youth. However, we also find out that especially in sectors like cement, food processing, BFSI, construction and real estate, there is growth.

Following are the recommendations for key interventions that needs to be taken for increased participation of youth in the district:

### **Industry engagements:**

There are nine major cement industries in Ariyalur. Training centres and institutions need to tie-up with local industries, understand the requirement in the sectors, and accordingly develop the curriculum. In addition, industry visits and hands-on training will provide better exposure to the students. Industry has to engage to employ local labour force for skilled jobs. Local demand for skilled labor is very low because they are not trained up to the industry's standards. Improved co-ordination between the skill institutes, ITIs and industries in the district will help industry to hire local labor force for skilled jobs. Local ITIs and skill institutes also, for instance, has to coordinate with the local cement industry.

### **Conducting Workshops:**

Workshops can be organized every fortnight between the training service providers operating in Ariyalur and the employers to provide them a platform to interact with each other and identify trades according to demand in the sectors and the training feasibility. These workshops should be conducted every fortnight (sector wise). Small-scale organizations should also be motivated to participate in such events.

### **Training of trainers:**

The Training Service Providers should have adequate qualified trainers and upskilling trainings should be given to the trainers about the current industry and technology. There is a need to active professional development intervention for the trainers and a certifying or licensing mechanism should be introduced to ensure that they are adequately updated on the market expertise on a regular basis made compulsory for both private and government trainers.

### **Alignment of courses:**

The apprenticeship training programme should be designed in which frequent monitoring whether placement-level standards are achieved or not for a given job role. This is to ensure that the students do not remain jobless after the completion of their apprenticeship programme. Majority of the students are not absorbed in the workforce after the completion of the training. Regular grade-based assessment during apprenticeship training should be done. The students should not be given any degree certificate unless they have not cleared their apprenticeship training. This will incentivize the students to take their training seriously. Government ITI/Polytechnic colleges in Ariyalur can coordinate with TANCEM regarding job role training which are specific to cement industry.

### **Creating Awareness and conducting counselling sessions:**

As per youth aspiration survey, only ten percent of the youth are aware about government run programs and courses. The youth rely on internet, job portals, their family and friends for getting information on upcoming job opportunities in the district. Youth are not aware of the industrial estates and the type of sectors employing workforce in the district. We need to introduce more meaningful awareness drives to bridge this gap.

Career Counselling and awareness campaigns are required across the district and especially in educational institutions. Students of Schools, colleges, polytechnics and training institutions should be exposed to the requirement for skills, economic prospects and career options for progression in a systematic manner through the Dept. of Labour Employment and Training.

### **Convergence and coordination:**

Convergence and coordination is required between various departments of the Government especially between the Training & Employment wings of the Dept. of Labour, Employment and Training, the District industries Centre,

other line Departments implementing skill development including the RURBAN Mission which is implementing both the DDU-GKY and the NULM scheme in the state.

Government-support in terms of wage subsidies or stipends would also allow small firms to recruit locally, and strengthen the skills ecosystem. Fostering such linkages would help both manufacturers and services providers along with vocational training institutions.

**Strengthening the local Skilling Eco-system:**

As per our demand-supply estimation, there is total requirement of ten thousand workforce in the next five years with an existing gap of close to six thousand workers including both skilled and semi-skilled. Strengthening the skilling eco-system will bridge this gap. In order to bridge the gap between vocational training programs and industry, apprenticeship scheme must be popularized further. The training institutes should tie-up with local firms too. This will not only increase the pool of employers during placements but also, help the small-scale industries to train and employ required workforce. Youth shall get the benefit of choosing a more suitable job for himself through this.



# Appendix

## A.1 Methodology for Block Selection in Youth Aspiration Survey

### Sampling Design for Youth Survey

A total of 360 youth were 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.

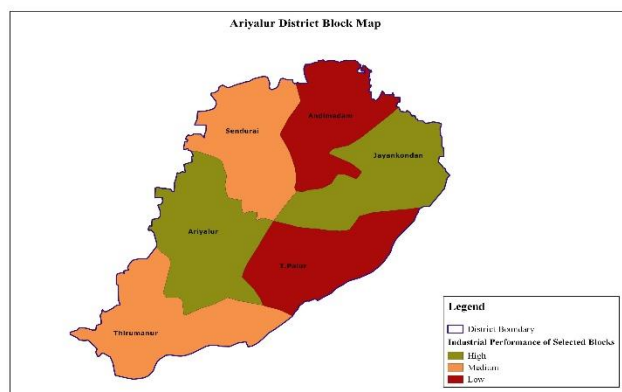
- Count of MSME Clusters (based on DC-MSME Report)
- Number of SIDCO Industrial Estates
- Number of SIPCOT Industrial Estates
- Credit Outstanding, 2017-18 at Centre-level (Annual Data published by the Reserve Bank of India)

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

Figure 31: Blocks Selected for Survey in Ariyalur



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, two blocks are randomly selected from each category.

**High-Ariyalur, Jayakondam**

**Medium- Sendurai, Thirumanur**

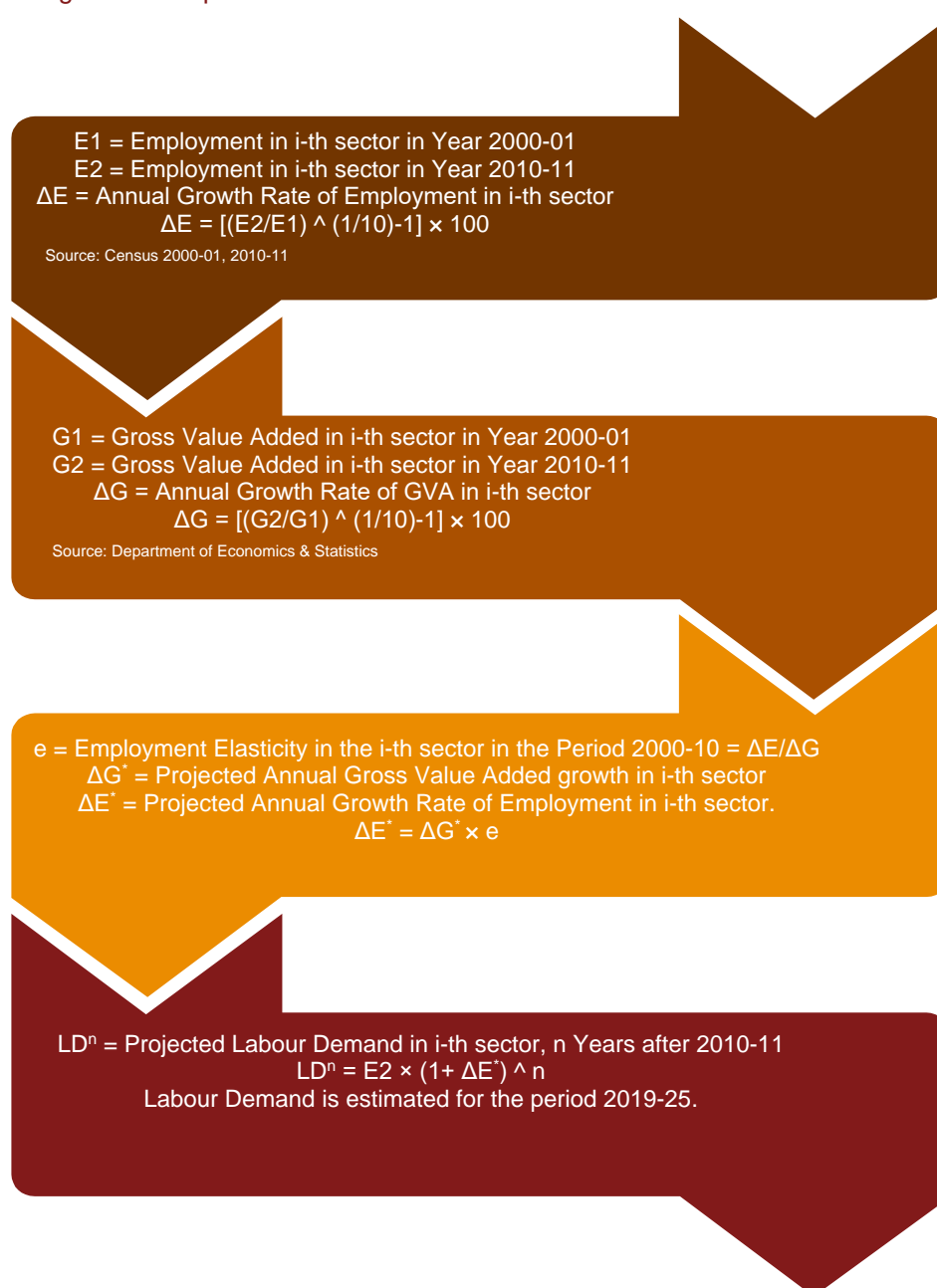
**Low- T. Palur, Aadimadam**

## A.2 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:

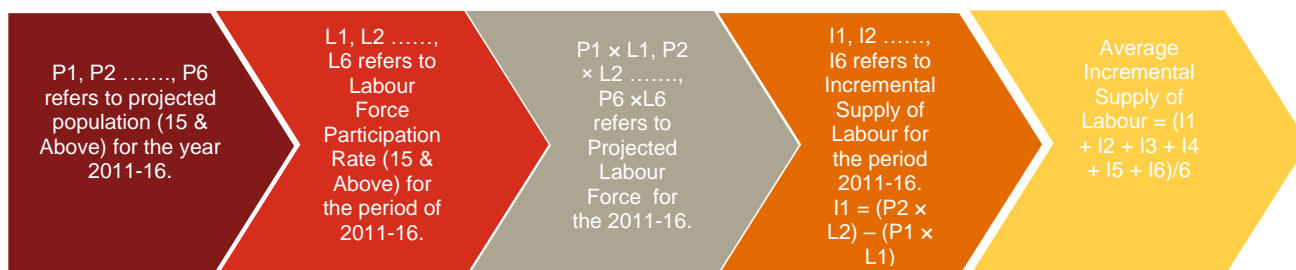
Figure 32: Steps in Demand Estimation



### 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<sup>25</sup>. 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 33: Steps in Supply Estimation



<sup>25</sup> Report on Employment-Unemployment Survey, 2011-12, 2012-13, 2013-14, 2015-16 & 2017-18.

### ***A.3 List of Stakeholders Consulted***

<b>S.No</b>	<b>Stakeholder</b>	<b>Category</b>
1.	District Collector	Govt. official
2.	District Industries Center- General Manager	Govt. official
3.	District Assistant Director, District Skills Department	Govt. official
4.	Deputy General Manager, TANCEM	Govt. official
5.	District Employment Officer	Govt. official
6.	Ariyalur Industries Association	Industry Association
7.	Government Polytechnic College, Keelapazhavur	Training Service Provider
8.	Principal, PAC Ramaswamy Raja Industrial Training Center	Training Service Provider
9.	Project Manager, GM-DIC	Govt. official
10.	Sagayam Engineering Works	Industry
11.	Deepa Cement Works	Industry
12.	Renuga Blood Test And Lab	Industry
13.	Sri Krishna Engineering Works	Industry
14.	Rajesh Galvanizing Work	Industry
15.	Mks Guru Cement Works	Industry
16.	Ganesh Welding	Industry
17.	Rsv Welding	Industry
18.	Selvam Furniture	Industry
19.	Panthalaraja Cement Works	Industry
20.	Narayanan Welding Works	Industry
21.	Svm Traders And Furniture	Industry
22.	Rmr Rasi Solid Bricks	Industry
23.	Sis Welding Works And Hardworks	Industry
24.	Manikannan Welding Works	Industry
25.	Little Engineering Works	Industry
26.	Sri Murugan Hollow Blocks And Cement Works	Industry
27.	Hotel Adhisayam	Industry
28.	Sri Hari Painting Works	Industry
29.	S K Metal Works	Industry
30.	Senthil Murugan Furniture And Wood Carving	Industry
31.	Elamtri Welding	Industry
32.	Jayam Fly Ash Bricks	Industry
33.	E Rahuman Hollow Bricks	Industry
34.	Jvk Wheel Alignment	Industry
35.	Om Sakthi Transports	Industry
36.	Sri Vaishnavi Enterprises	Industry
37.	Sri Maga Kaliyamman Welding	Industry
38.	Sri Murugan Engineering And Welding Works	Industry
39.	S S Construction	Industry
40.	Annai Wood Oil Fabrication	Industry
41.	Hotel Raja	Industry
42.	Gopalakrishnan	Industry
43.	Deepika Cement,Bricks And Halloblacks	Industry
44.	Singar Traders And Working	Industry
45.	Sri Gk Honda	Industry
46.	Idhayam Lab Center	Industry
47.	Sri Murugan Bike Showroom And Services	Industry
48.	Rainbow	Industry
49.	Sri Sivasakthi Tyre Retrading	Industry
50.	Oriental Bluse Metal	Industry
51.	Hatsun Dairy Products	Industry
52.	Pazhani Hardware And Welding	Industry
53.	Color Computer Service	Industry

54.	Sri Amman Engineering Works	Industry
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