Skilling for the Future

Skill Gap Assessment & Action Plan for Tamil Nadu

District Skill Development Plan for Villupuram

November 2019

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Disclaimer

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List of Abbreviations

S.No	Abbreviation	Expanded Form
1.	ASER	Annual Status of Education Report
2.	ASI	Annual Survey of Industries
3.	ATMA	Agricultural Technology Management Agency
4.	AVAG	Auroville Village Action Group
5.	BFSI	Banking Financial Services and Insurance Sector
6.	CFC	Common facilities centre
7.	DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
8.	DES	Directorate of Economics and Statistics
9.	DISE	District Information System for Education
10.	GDDP	Gross District Domestic Product
11.	GSVA	Gross State Value Add
12.	DIC	District Industries Centre
13.	GVA	Gross Value Added
14.	ITI	Industrial Training Institute
15.	IT-ITES	Information Technology and Information Technology Enabled Services
16.	LFPR	Labour Force Participation Rate
17.	Manuf.	Manufacturing
18.	MIS	Management Information System
19.	MSME	Micro, Small and Medium Enterprises
20.	NCVT	National Council for Vocational Training
21.	NEET	Not in Education, Employment, or Training
22.	NIC	National Industrial Classification (2008)
23.	NSDC	National Skill Development Corporation
24.	NSQF	National Skills Qualification Framework
25.	NULM	National Urban Livelihood Mission
26.	PMKVY	Pradhan Mantri Kaushal Vikas Yojana
27.	PSU	Public Sector Undertaking
28.	Pub. Admin.	Public Administration
29.	QP-NOS	Qualification Pack – National Occupational Standards
30.	SIDCO	Tamil Nadu Small Industries Development Corporation Limited
31.	SIPCOT	State Industries Promotion Corporation of Tamil Nadu
32.	SSC	Sector Skill Council
33.	TANSIDCO	Tamil Nadu Small Industries Development Corporation Limited
34.	TIDCO	Tamil Nadu Industrial Development Corporation
35.	TN-GIM	Tamil Nadu Global Investors Meet
36.	TNSDC	Tamil Nadu Skill Development Corporation

37.	TNSRLM	Tamil Nadu State Rural Livelihood Mission
38.	Tr. & Tou.	Trade and Tourism Sectors
39.	WPR	Worker Population ratio

1. Executive Summary

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

Tamil Nadu currently has the highest Gross Enrolment Ratio in Higher Education (48.6)[2], among all the states in India. The state faces a mandate of developing and maintaining high quality human resources to deal with the evolving economy, and ensuring social justice in the form of decent employment for its educated populace. Thus, it is essential to carefully analyse the industry demand, investment patterns, 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 establish "District level Skill Development Action Plans for Tamil Nadu". This is the first time such a comprehensive State-wide skill gap study taking into consideration block-level information from each district has been conducted 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 upcoming years, disaggregated as skilled and semi-skilled workforce requirement has been estimated at the district level.

Methodology for Study: Mixed-method research design was 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:

- Youth aspiration survey: a quantitative survey covering 360 youth across the following groups – engaged in economic activity (self-employed, wage-employed, entrepreneurs), students in formal education, vocational and skill training institutions (Polytechnics, ITI), and those who fall under the Not in Education, Employment or Training (NEET) category. Six blocks in the district were covered: Tirukkoyilur, Ulundurpet, Rishivandiam, Sankarapuram, Chinnasalem and Koliyanur

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

- Quantitative employer survey: covering 45 employers with adequate representation from Large, Medium, Small and Micro Industries across the key sectors defining the district economy.
- 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, more than twenty five focus group discussions and nearly five hundred individual consultations have been conducted across the state.

Estimation of labour demand and supply were undertaken based on the analysis of data sourced from the Census of India, the Department of Economics and Statistics of Government of Tamil Nadu, the Reserve Bank of India, the National Sample Survey Organisation and the Bureau of Labour and Employment under the Ministry of Labour and Employment, Government of India. Estimates were further refined based on the data pertaining to the proposed investments (pragmatically rationalised and considered), and the anticipated developments within key sectors; in addition, due consideration is given to the 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, and validated through quantitative survey findings and qualitative consultations. Budgetary requirements for the training projects have been estimated based on the cost categories as defined within the recent Common Cost Norms published by the Ministry of Skill Development and Entrepreneurship, Government of India.

Key Findings:

Key findings of the study are presented hereunder:

Demographic Analysis	• Villupuram contributes to 4.6% of the total population of Tamil Nadu. • The district has recorded Sex Ratio as 987, as against the State level measure of 995. • It is one of the least urbanized district in the state with only 15% of its population resides in urban area, which is 2.2% lower than the state average (48.4%). • Villupuram has the largest rural population of 2.9 million, which accounts for 7.9% of the state's rural population. • 35.8% of the overall population in the district are in the age group of 15-34 years. • The median age is set to increase from 29 years in 2011 to 32 years in 2026 indicating an ageing population. Thus, the state needs to invest in skill development immediately to reap benefits of the demographic dividend. The overall literacy rate of the district is 71.9%, which is lower than state average of 80%. The district has seen an increase in the literacy rate among females indicating enhanced scope to encourage improved female labour force participation.
Economic Analysis	• The district is an agrarian district and the main activity for livelihood of the people in the district is paddy cultivation. • The economy of Villupuram grew at a CAGR of 5% between 2011-12 and 2017-18. • It ranks 29th in terms of GDDP per Capita • The district has an array of agro-based industries, rice mills and sugar mills apart. Also called the sugar bowl of Tamil Nadu. • This district has seen a decrease in share of agriculture and allied sector since 2011-2012. • The industrial sector experienced fluctuations in output and has grown at a CAGR of 7% between 2011-2012 and 2016-2017. • Manufacturing and Construction sectors account for 95% of the industrial sector output. • The service sector experienced fluctuations in output and has grown at a CAGR of 6% during 2011-2012 to 2016-2017. • Real Estate and Trade, Tourism contribute to more than half of the total service sector in the district. • Retail is the emerging sector in the district.
Labour Market Analysis	• The overall labour force participation and worker population ratio are higher at the district level compared to the state level. • More than half of the workers in the district (51.7%) are in casual labour as against the state average of 44%. • Youth Unemployment Rate (15-29 years) is higher (13%) at the district level than at the state level (11%). This could be attributed to either limited job opportunities in the district or the lack of industry-relevant skills among the youth.

Education & Skill Development	• VillupuramThere are 29 General Arts & Science Colleges (of which, 7 are women's colleges) in the district with an overall enrolment of 34,835 students. There are 32 ITIs in the district, out of which four of them have the affiliation in order and rest 28 have applied for re-affiliation. • There are 13 polytechnic colleges in the district. Apart from this, the district has 1 Medical college, 1 Pharma college, 12 Teacher's training institutes (TTIs), and 4 Nursing colleges. • Training on traditional skills required to be imparted to youth.
Findings from Primary Survey	
Youth Profile and Aspirations	• 54% of the total respondents are currently engaged in economic activities. • Only 3% of the female NEET respondents and 4% of the male NEET respondents, wish to work in the future. • The main factors determining the job aspirations of the youth are Salary (wages) / Income (82%), Job Security (67%), closeness to residence (38%) and Social Status (19.7%). • Lack of guidance / information on appropriate job available for skill levels (84%) and lack of work experience (8%) were the major challenges faced by youth in pursuing their career aspirations. • The key factors determining employability of the respondents included level of education attainment, years of experience and certifications in technical skills. Clear Communication Skills, analytical thinking and team work were identified as key skills specific to their aspired jobs. • While 54% of the respondents were looking for apprenticeships, 24% were intending to take up a vocational / skill training program and 29% respondents were looking to continue education. • Agro-business, Education and Skill Development, Banking Financial Services and Insurance and Textile and apparel were the most preferred sectors among the female respondents, while the male respondents preferred sectors like Agro-business, Construction, Banking Financial Services and Insurance, Food Processing and electronic & IT Hardware. • The youth have high salary expectation, with the median expected salary of ₹ 15,000 per month for entry-level jobs. • 76% of the total respondents had awareness of Govt. run vocational programs but none of them had undergone any vocational training previously. • One fourth of the total respondents were interested in undertaking any vocational training.
Employer & Other Key Stake holder Perspective	**Quantitative Survey** • 80.5% of the employers recruit through references. • The most common challenge faced by employers was nature of work (lack of interest among employees on strenuous physical work -36.6%), followed by high local wages (31.7%) and lack of prior experience (26.8%). • More than half of the employers stated that domain skill upgradation of the workers needed utmost focus. In addition, 19.5% employers stated that communication skills trainings are required for the workers. • Only 3% of the respondents were considering adoption of high levels of technology. The industries see a greater role for upskilled / re-skilled labour who can adopt to newer and efficient techniques. **Qualitative Inputs** • After apprenticeship training, there is no mechanism to track students. • Short-term course graduates are more willing to work in private enterprises, as they are usually unemployed, with inadequate job prospects based on their prior qualification (most are college graduates, with very few school graduates). • Key challenges in recruiting from vocational programs was the skills mismatch of the youth and their lack of experience in working environment through internships or apprenticeships. • English Communication was a major challenge for workers in the services sector. Soft Skills, Interpersonal Skills, and attitude were also highlighted as major challenges across all sectors. • TSPs, District officials, and Industries highlighted a dearth of good quality trainers for both soft skills and job-specific technical skills. The centralised model of sector skill councils in training & certifying trainers and assessors made it hard for the stakeholders to access good quality trainers and assessors. • Auroville provides training, and community development support to village women (around 5,000 women have gained employment as school teachers, cooks, waitress, gardening, sales representatives, handicrafts making, garment making and beauty parlours technicians). • Eco-friendly products, organic fabric garments, catering and restaurants have scope in terms of entrepreneurship in the district. • The retail and hotel sectors are also willing to hire more women workforce.

Incremental Demand	• As per the skill gap estimation, the overall demand for skilled and semi-skilled workforce over the next six years is around **80,064** • Key sub-sectors driving the demand are manufacturing, construction, trade and repair services, education; human health and social work activities, and repair of computers and personal and household goods.

Recommendations: Based on qualitative, quantitative and secondary information findings and inferences, the following recommendations have been identified for consideration:

- TNSDC- Auroville Village Action Group Collaboration to adopt skill training models to deliver short term skill development and vocation trainings to youth in the district
- Provide Advance agricultural training to increase agriculture production. Krishi Vigyan Kendra at Tindivanam and ATMA can introduce NCVT courses for advance agricultural courses like Agriculture Machinery Operator, Agriculture Machinery Demonstrator, Agriculture Machinery Repair and Maintenance Service Provider, Agriculture Extension Executive. The entire value has to be catered to help increase profit margin and motivate farmers to carry on cultivation.
- Facilitate 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.
- Introduce a unified job portal for job postings at all levels of skill across sectors. A portal for jobs/ apprenticeships open to both employers and jobseekers would enable both sides to minimize time and effort in finding suitable vacancies and profiles
- Strengthening and formalizing traditional industries in the district. The traditional industries like terracotta and clay pot making and woodcarving in Villupuram suffer majorly because most of the artisans are not trained in marketing their products. Training can be given in marketing, export and finance so that the artisans are also aware of how to market their products. In addition, these sectors need to be formalized through introduction of simpler registration process, taxation, organization and representation, legal frameworks, social protection and business incentives/support. The jobs need to be formalized by introduction of legal recognition and protection as workers, rights and benefits of being formally employed, freedom from discrimination minimum wage, occupational health and safety measures, employer contributions to health and pensions, right to organize and bargain collectively and membership in formal trade unions
- Promotion of service sector opportunities among youth. Private activity in the hospitality, tourism and retail sectors can be fostered to provide local employment to youth. Hospitality, retail and domestic appliance repair and service can absorb local youth in significant numbers, and provide jobs suited to the needs of young women.

2. District Profile

2.1. Demographic Profile

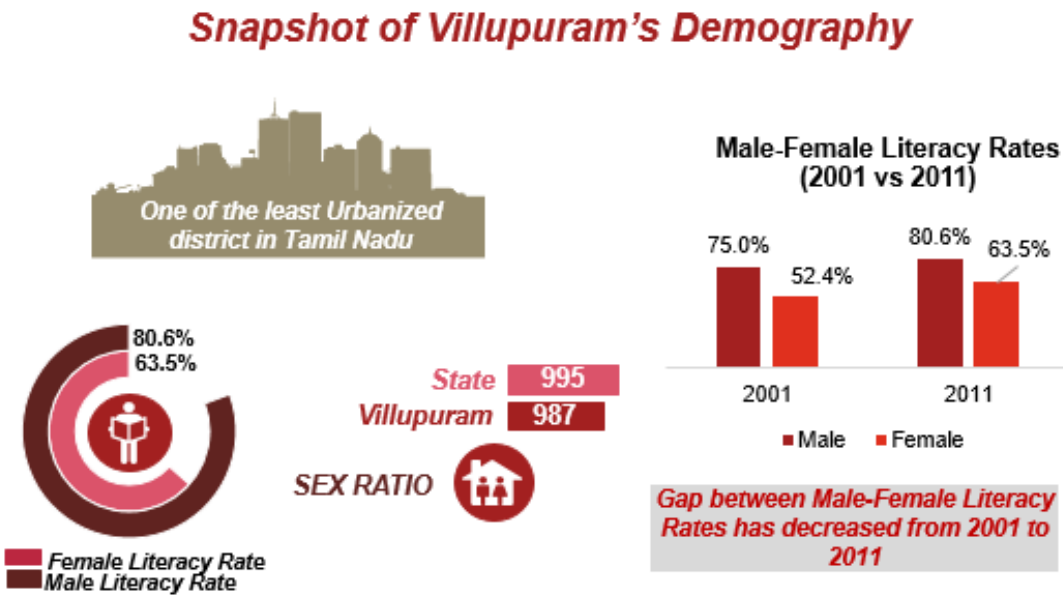
The district is an agrarian district and the main activity for livelihood of the people in the district is paddy cultivation.

Villupuram contributes to 4.6% of the total population of Tamil Nadu. 64% of its population falls within the working age group (15-59 years). Only 15% of its population resides in urban area, which is 33 percent points lower than the state average (48.4%). It is the one of the least urbanized district in the state.

Villupuram has the largest rural population of 2.9 million, which accounts for 7.9% of the state's rural population.

Table 1: Key Demographic Indicators Villupuram vs Tamil Nadu[3]

SN	Indicator	Villupuram	Tamil Nadu
1	Total population	3,458,873	7,21,47,030
2	Female population	1,718,054	36,009,055
3	Population Density per sq.km (2011)	481	555
4	Urban Population	15%	48.4%
5	SC population (as % of total population)	29.4%	20.0%
6	ST population (as % of total population)	2.2%	1.1%
7	Differently abled population (as % of total population)	1.7%	1.6%
8	Population in age group 15-34 years (as % of total population)	35.8%	34.8%
9	SC population aged 15-34 years (as % of SC population)	37.0%	36.6%
10	ST population aged 15-34 years (as % of ST population)	35.3%	35.0%
11	Literacy rate	71.9%	80.3%

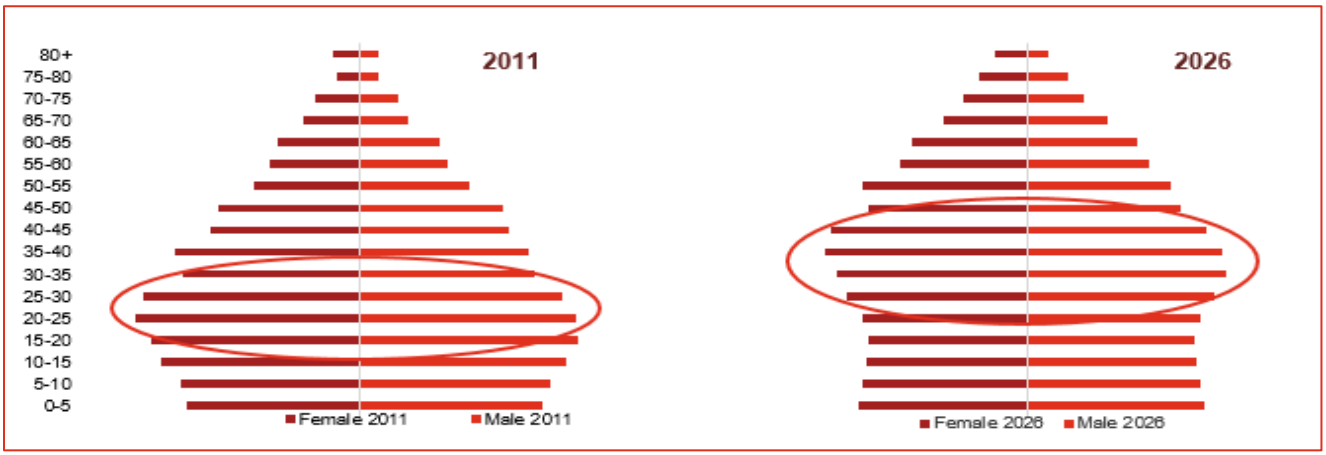


[3] Census 2011 & 2011

Key Highlights from the analysis of Census Data:

- **Population Growth and Urbanization:** The Decadal growth rate **of the population in the district** was **16.8%** between 2001 and 2011, compared to **15.6%** at the state level.
- **Literacy:** The district had a female literacy rate of 63.5% while the male literacy rate of 80.6%. These are lower than the corresponding literacy rates at the state level. The literacy rates among males increased by 7%, while the increase was three times more for females (21%), reducing the gap between them from 43% in 2001 to 27% in 2011.
- **Youth Demography:** 36.1% of the population were between 15-34 years in 2011. The median age of the District during 2011 was 26 years, which is lower than the median age of the state (29 years in 2011), indicating a relatively younger population in the district. The population is set to get older with median age in 2026 expected to be around 32 years.

Figure 1 Age-wise Population Pyramid of Villupuram (2011 vs 2026)[4]

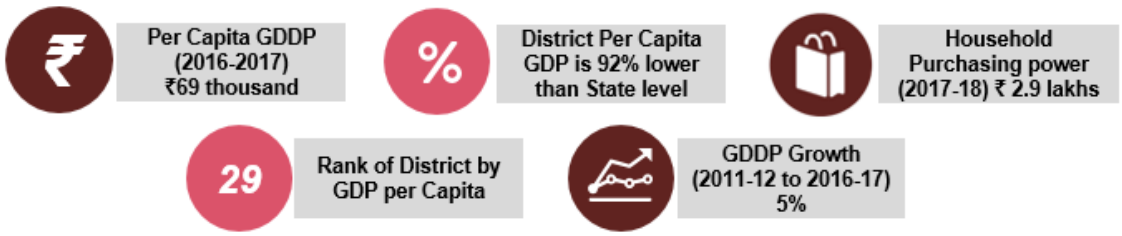


They relatively younger population of Villupuram could be positive force for development when provided with the knowledge and opportunities they need to thrive.

2.2. Economic Profile

Villupuram is one of the least industrialized district in the state and majority of the population depends on agriculture. It contributes to 1.8% of the states GSDP.[5] The district ranks **29th in terms of Per Capita Income and 30th in terms of Purchasing Power**.[6]

Figure 2 Key Economic Indicators of Villupuram District



[4] Age wise Population projected for 2026 based on age group wise life expectancy, birth and death rates
[5] D0ES, GoTN
[6] PwC Analysis,
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.

2.2.1. Sector Analysis[7]

Figure 3 Sectoral Snapshot of GVA 2016-2017

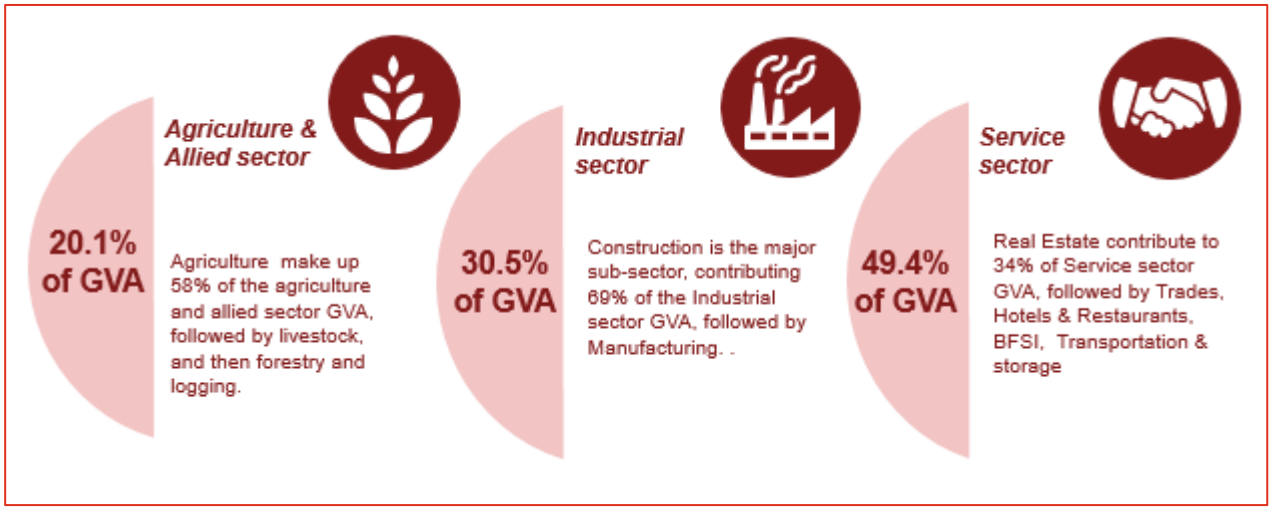
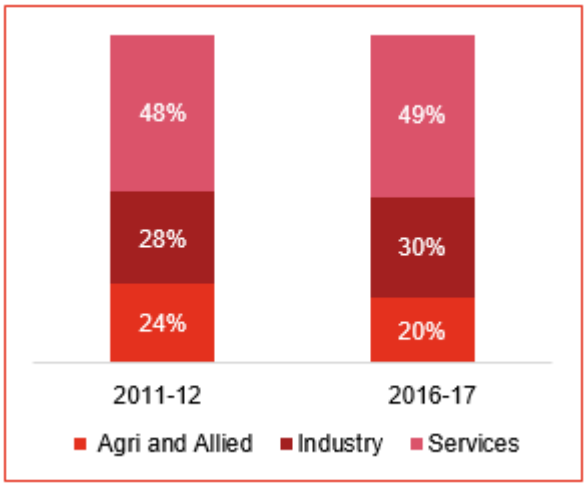


Figure 4 Sectoral Share of GVA (2011-12 & 2016-17)



The Economy of the District is dominated by the service sector, accounting for about 49% of the district output in 2016-2017. Villupuram is one of the less prosperous districts with the Per Capita GDDP lower than the State Average. In 2013-14, the agriculture and allied sector boomed due to increase in sugarcane production. This district has seen a decrease in share of agriculture and allied sectors since 2014-15. In the year 2016-17, Tamil Nadu suffered the worst rainfall in last 140 years and was hit by severe drought, thus affecting the overall agriculture production in Villupuram.

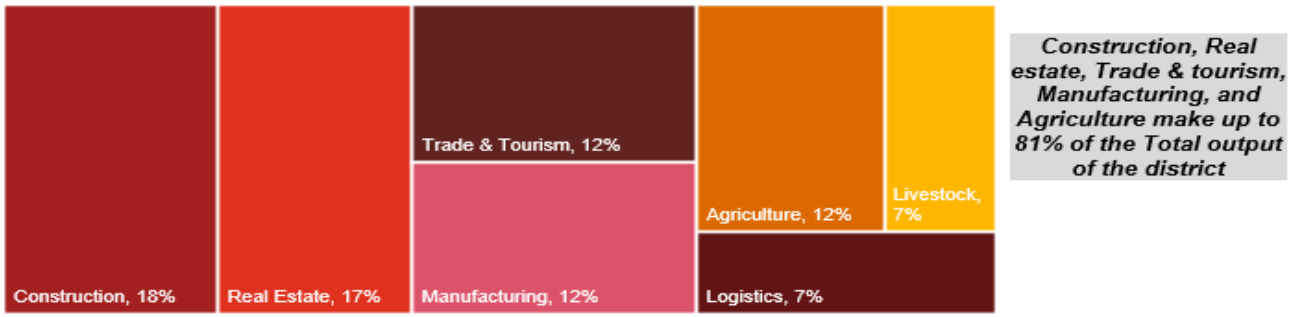
The Services sector has witnessed a increase in contribution to GDDP from 48% in 2011-12 to 49% in 2016-2017. The share of industry's contribution to economy has gone up by two percentage points between 2011-2012 and 2016-2017.

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

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR (2011-12 and 2016-17)
Agri & Allied	*1%*	*43%*	*0%*	*-8%*	*-20%*	*1%*
Industry	*8%*	*9%*	*1%*	*14%*	*2%*	*7%*
Services	*7%*	*8%*	*8%*	*1%*	*4%*	*6%*

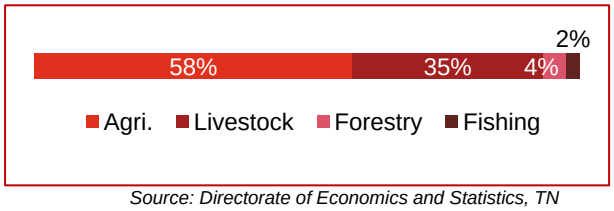
[7] *Directorate of Economics and Statistics, Tamil Nadu*

Figure 5 Share of GVA by Industry of Origin (2016-17)



Agriculture and Allied Sector

Figure 6 GVA of Agriculture and Allied Sectors (2016-2017)



Source: Directorate of Economics and Statistics, TN

Villupuram has 5.7 Lakhs households engaged in agriculture. Out of this, 75% are marginal farmers, 16% are small farmers and 9% are big farmers. The share of big farmers (42%) is higher than the State average of 34%[8].

Agriculture and allied sector contributed to 20% of the district output in 2016-2017. Even though the sector has seen a decline over the years, it still holds a remarkable place in terms of food grain production. From 2013-14 to 2017-18, the district ranked first in food grain production. Villupuram contributes more than 10% of the state's food production every year[9].

Sugarcane is the important commercial crop in Villupuram District, catering to the requirements of sugar mills located both within the district and the neighbouring districts. The district is also referred as the "Sugar bowl of Tamil Nadu". The district houses a *Krishi Vigyan Kendra* at Tindivanam, with an objective to provide village level training to all the farmers for effective transfer of advanced technologies. In addition, it also has one Agricultural Technology Management Agency (ATMA), which focuses on strengthening research, farmer linkages and provides technology transfer through demonstrations, trainings and exposure visits.

Industrial Sector

Figure 7 Industrial Sector GVA (2016-2017)

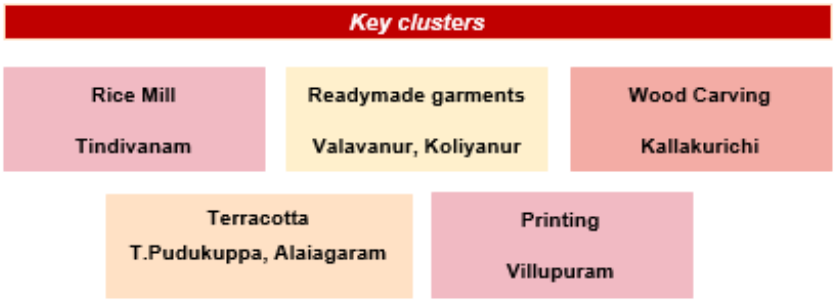
Source: Directorate of Economics and Statistics, TN

Construction sub-sector accounts for 60% of the sector output. The sector experienced fluctuations in output and has grown at low CAGR of 7% between 2011-2012 and 2016-17. The key manufacturing sectors by output include Beverages, basic chemicals, and food products. Non-metallic mineral products, grain mill products and spinning, finishing and weaving of textiles are other sectors that employ a significant share of the Industrial workers.

The main large-scale unit of the district are sugar mills, which are spread over at Villupuram, Kallakurichi, and Sangarapuram blocks of the district. The district is covered well with National Highway Roads and rail links of 180 km length to facilitate more industries of various activities to this district. SIDCO estate houses only one operational unit (Pioneer Cladding). Other units are planned to be set up in the coming years.

Upcoming units- Paper mills, Steel structure and Metal roofing system units and restaurants.

[8] Villupuram.nic.in
[9] Villupuram.nic.in



An analysis of data from Annual Survey of Industries (2014-15)[10] shows that seventeen sub-sectors contribute to 98% of the Gross Value Addition (GVA) in the industrial activity of the district. The details appear in the table below:

Table 3 Profile of Manufacturing Sector from ASI 2014-15

Industry	No. of Units	No. of Employee	Gross Value Added (share in total GVA)	Share of Employment	Average workers per unit
Other food products	15	4,362	25%	26%	291
Support activities to agriculture and post-harvest crop activities	5	369	19%	2%	74
Chemicals, fertilizer and nitrogen compounds, plastics and synthetic rubber in primary forms	10	700	11%	4%	70
Grain mill products, starches and starch products	135	5,056	9%	30%	37
Vegetable and animal oils and fats	7	359	8%	2%	51
Paper and paper products	6	382	5%	2%	64
Other chemical products	32	873	4%	5%	27
Dairy products	19	1,057	3%	6%	56
Electric motors, generators, transformers and electricity distribution and control apparatus	13	454	2%	3%	35
Electronic components	5	536	2%	3%	107
non-metallic mineral products	37	478	2%	3%	13
Rubber products	8	438	2%	3%	55
Other fabricated metal products; metalworking service activities	5	500	2%	3%	100
Beverages	9	297	1%	2%	33
Wearing apparel, except fur apparel	13	277	1%	2%	21
Footwear	6	432	1%	3%	72
Spinning, weaving and finishing of textiles	3	228	1%	1%	76
TOTAL	**328**	**16,798**	**98%**	**100%**	**70**

Source: Annual Survey of Industries 2014-15

According to the ASI 2014-15, 328 Industrial units were present in the district, directly employing 16,798 workers (top seventeen sectors). The top-ranking sub-sector with respect to GVA is “Manufacture of food products”, and the top three sub-sectors involve support activities for agriculture, chemicals and Grain mill products. Average workers per unit is maximum in food products manufacturing, electronics components, fabricated metal products; metal working service activities and Spinning, weaving and finishing of textiles. These sectors have the maximum scope of providing employment.

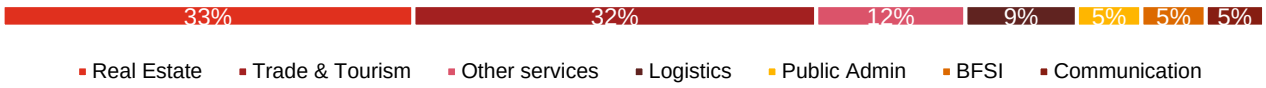
Services Sector

Real estate contributes to one-third of the total service sector in the district. The sector experienced fluctuations in output and has grown at a moderate CAGR of 6% during the period of 2011-2012 to 2016-2017.

Retail is an upcoming sector in the district. Youth are employed in Food marts, Garments shops, Jewellery shops. Tourism is the other prominent sector. Auroville is the major tourism destination at Villupuram.

[10] Government of TN

Figure 8 GVA of Services Sector (2016-2017)



Source: Directorate of Economics and Statistics, TN

Traditional Industries

Villupuram has wood carving cluster spread over Kallakurichi and Chinnasalem blocks of the district. Traditional industries like weaving of lungi spreads over at Gingee, Kandamangalam, Kanai and Mugaiyur blocks of the district.[11]

Villupuram district has a coastal length of about 32 km across Vanur and Marakanam blocks in Bay of Bengal. There are about 19 landing places by active fishermen population of 2,986. There are fishermen co-operatives societies, fisher women co-operative societies and inland fishermen co-operative societies functioning in the district. There is one fish net making unit in Vanur Block. There are about 18 brackish water aquaculture farms in the district.[12]

Potteries Industry- A Case Study[13]

Figure 9: A young worker, Shabana Art Potteries

Shabana Art Potteries is a traditional unit set up at Villupuram; which manufacturers potteries and clay terracotta items including utensils and other decorative items. Besides providing employment opportunities to the women from neighbouring villages, it also provides them with a platform to become self-independent. The unit has helped the women to open bank accounts and helped them form SHGs in order to get loan benefits from banks.

Around 80 Scheduled Caste women and men are currently working in the unit. 80% of the workers are women in the age group of 20 to 55 years. One week training is given to the candidates and they gradually polish their skills on the jobs. The unit has tie up with marketing agencies in Mumbai and Chennai to sell their finished products. The raw materials are generally sourced in from Rajasthan and West Bengal. The unit have produced many entrepreneurs, who have set up their own pottery making smaller units. The major challenge faced by the unit is lack of infrastructure and space besides increasing costs of raw material. As the demand for clay utensils are increasing and people are refraining from using plastic wares, this sector has the potential to grow in the near future. Through government subsidies and support, growth in this traditional unit is possible.

Figure 10: Shabana Art Potteries workshop, Villupuram

[11] DC-MSME Report
[12] DC-MSME Report
[13] Primary stakeholder consultation

Figure 11: Ti bcbob BsuQpuf sjf t t showroom, Villupuram

Auroville- Art and Handicrafts[14]

Figure 12: Auroville garment making unit

Auroville, an experimental township, has around 170 social enterprises providing employment to around 5,000 people from the surrounding villages. **Auroville Village Action Group (**AVAG**),** which is a non-profit organization, under the Auroville Trust, does community building for villagers in and around the region. To bring about participatory village transformation, livelihood trainings and social enterprise trainings are given to youth and women to make them earn a living. Trainings are provided in making handicrafts such as paper lampshades, wall lamps, hanging lamps, crochet work, garments etc. Besides being exported to foreign countries, these products are sold in shops around Auroville and Puducherry. Frequent exhibitions are also conducted to display these items in Chennai and Puducherry. In addition to counselling, they also help connect villagers with government services and other relevant organizations.

Figure 13: Auroville woollen toy making

Recommendations: TNSDC can tie up with Auroville Village Action Group to deliver training courses to woman and youth. The highly experienced trainers can be approached for delivering the select courses in handicrafts.

2.2.2. Investments and key economic drivers

Table 4 Sector-specific growth of Credit off Take[15] (2013-14 to 2016-17) - RBI

Industry category as per RBI	Amount in INR Crore				Growth 2013-14 to 2016-17
	2013-14	2014-15	2015-16	2016-17	
Recreation services	1.5	1.3	50.6	58.5	243%
Other Industries	23.0	29.2	28.3	79.6	51%
Rubber & Plastic Products	2.9	8.1	8.4	9.9	50%

[14] Primary stakeholder consultation

[15] 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.

Industry category as per RBI	Amount in INR Crore				Growth 2013-14 to 2016-17
	2013-14	2014-15	2015-16	2016-17	
Electricity, Gas & Water	1.1	1.9	2.6	3.0	38%
Chemicals & Chemical Products	4.9	20.6	12.2	12.1	35%
Tourism, Hotel & Restaurants	6.3	10.7	12.8	14.7	33%
Manufacture of Cement & Cement Products	2.5	2.7	2.4	5.7	32%
Basic Metals & Metal Products	3.4	4.4	8.6	6.9	27%
Woods and Wood Products	2.1	3.1	4.9	3.8	23%
Food Manufacturing & Processing	205.4	298.2	293.7	344.7	19%
Retail Trade	359.0	289.6	390.5	521.0	13%
Wholesale Trade	100.7	86.1	119.4	141.1	12%
Engineering	12.4	10.9	19.4	15.2	7%

According to the RBI data, the district has seen highest recent growth in credit across Food manufacturing and processing, recreation services, Rubber and Plastic Products, Electricity, Gas and Water, Chemicals & Chemical Products, Tourism, Hotel & Restaurants sectors.

Food processing, real estate, Tourism, Engineering, trade are sectors with high growth potential.

2.3. Labour Market Profile[16]

The overall labour force participation and workforce participation ratio are higher at the district level than at the state, however both LFPR and WPR for age group 15-29 years is marginally lower than the state figures. More workers in the district are in self-employment (33%) compared to wage employment (14.7%) as per MoLE estimates. Youth Unemployment Rate (15-29 years) is higher (13%) at the district level than at the state level (11%).

Figure 14 Key Labour Market Indicators[17]

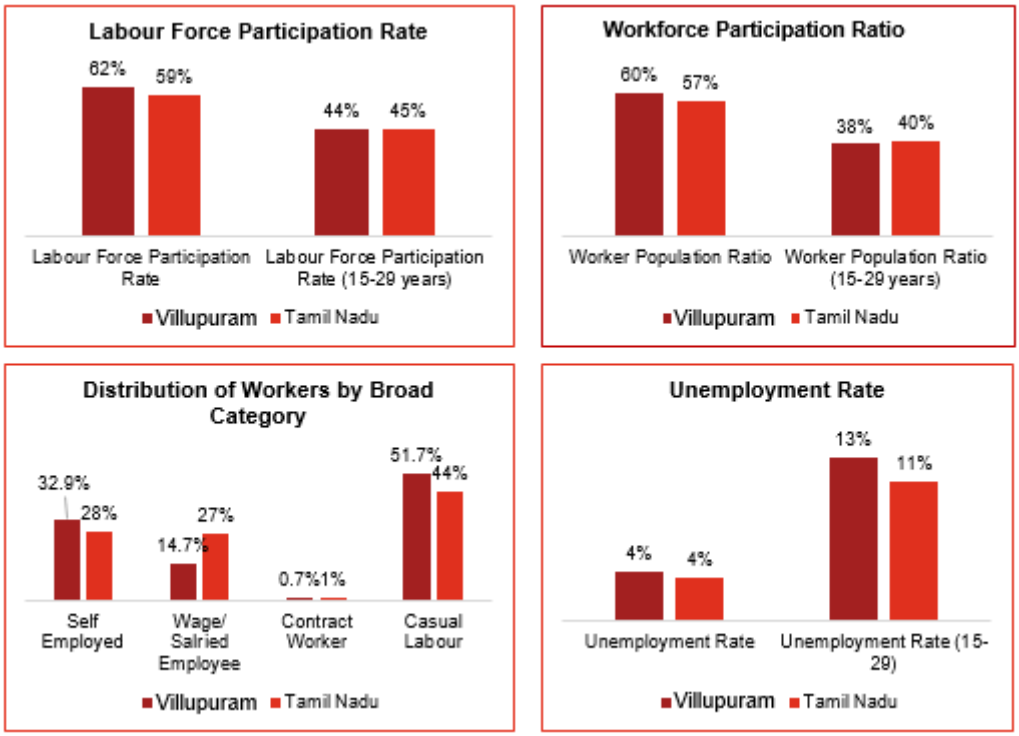
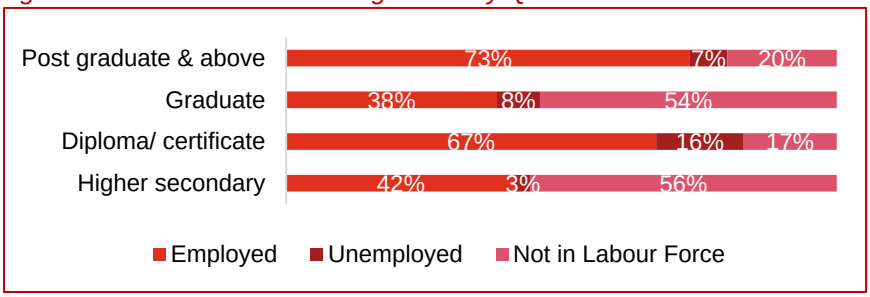


Figure 15 Distribution of Working status by Qualification: District Level Estimates



The education-level classification of the district population reveals that 7% post-graduates are unemployed. This is lower compared to the state average (10% post-graduates unemployed).

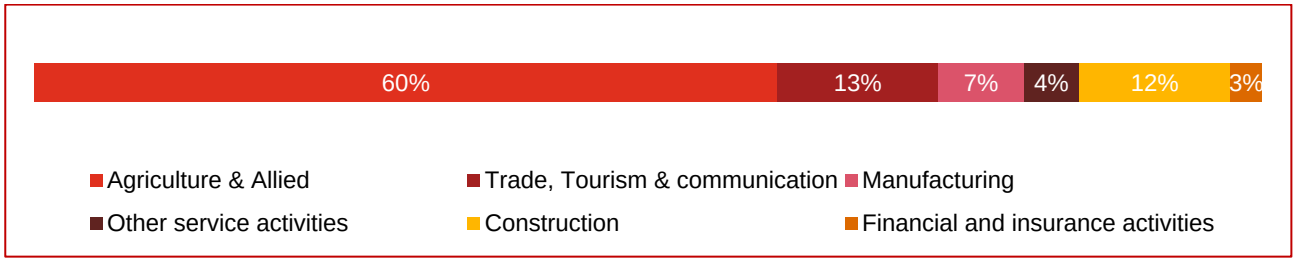
Table 5: LFPR and Unemployment Rate by gender & Location

	LFPR		Unemployment Rate	
Sex	Rural	Urban	Rural	Urban
Male	78.4%	74.6%	4.6%	3.4%
Female	50.4%	11.1%	3.7%	-

Disaggregation by area and sex, it is found that females residing in rural areas have a labour force participation rate, 39 percentage points higher than their urban counterpart. The urban unemployment rate for males is lower than their rural counterpart.

[16] Analysis in this section are based on the District Level Estimates, EUS, 2013-14, Labour Bureau
[17] District Level Estimates, EUS, 2013-14, Labour Bureau

Figure 16 Sector-wise share of Employment



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

Three fifth of the workforce in the district are employed in the agriculture and allied sector and but its contribution is only 20% of the GDDP. This reflects that there is an issue of productivity in the agri and allied sector. Trade, Tourism and Communication is the second most important sector in terms of employment followed by construction.

Large share of the population is employed in labour intensive agri and allied sector. Trade, Tourism and Communication is the second most important sector in terms of employment followed by construction

2.4. Education and Skill Development Profile

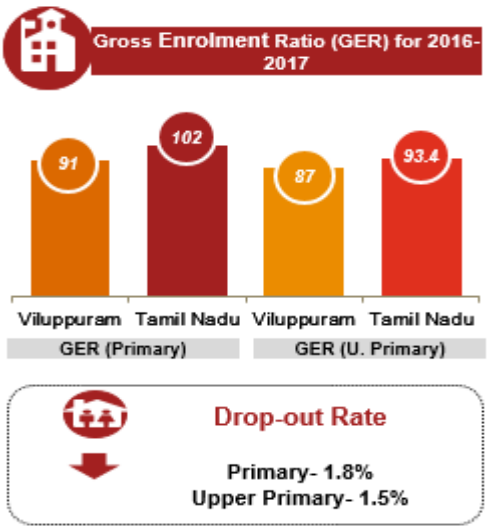
2.4.1. Education Profile

According to District Statistical Handbook, there were 1,865 primary schools, 506 middle schools, 307 high schools and 280 higher secondary schools in Villupuram district.[18]

The Gross Enrolment Ratio[19] at both primary and upper primary levels are lower than the state averages. The ratio indicates that the number of students in the district outstrip the expected population in the age cohort by a significant margin. One of the reasons is the presence of several schools, catering to students from the neighbouring districts. The dropout rates are high at 1.8% at the primary level and at 1.5% at the upper primary level.[20]

Villupuram has 29 General Arts & Sciences Colleges (out of which 7 are women's colleges) in the district with an enrolment of 34,835 students. There are 32 ITIs in the district, out of which four of them have their affiliation in order and rest 28 have applied for re-affiliation. There are 13 polytechnic colleges in the district. Apart from this, the district has one Medical college, one pharma college, 12 Teacher's training institute (TTIs), and four Nursing colleges.

Figure 17 GER and Drop-out Rates - DISE



Auroville ITI, a private ITI under the Auroville Trust provides diploma courses in 30 government-recognised trades in various fields Corporate Secretaryship, Computer Hardware & Networking, Data Processing & Computer Application and NCVT courses in Draughtsman Civil, Electronic Mechanic, Modular Employment Skills (MES). In addition to the Government syllabus, the institute also offers courses in spoken English, communication, social responsibility, healthcare, yoga and sports. The institute received affiliation for dual system of training from the Director General of Training under Skill Ministry in the following three trades:

- Fitter in Industrial Partnership with Grace Infrastructure Pvt. Ltd. Pondicherry and Appasamy Pvt. Ltd. Pondicherry.

[18] District Statistical Handbook 2016-17

[19] Gross enrolment ratio (GER) is defined as Number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education.

[20] DISE report cards

- Electronic Mechanic in industrial Partnership with GT- Electronic India Pvt. Ltd, T.C. Kootroad Vanur Taluk and Appasamy Pvt. Ltd Pondicherry and Sunlit Future Auroville.
- Draughtsman Mechanic in Partnership with Appasamy Pvt. Ltd.

Figure 18 Auroville ITI

During the two years of training period, students are trained at the campus for seven months per year and for the remaining five months, they are attached to relevant workplaces. During the training period at workplace, students receive a stipend from the organization.

Table 6 Institutions of Higher Education in Villupuram District[21]

S.No	Institution Type	No of Institutions	Students		
			Males	Females	Total
1.	Engineering Colleges	17	11,662	5,994	17,656
2.	General Arts & Science Colleges	29	13,323	21,512	34,835
3.	Polytechnics	13	7,669	587	8,256
4.	Nursing	4	92	940	1,032
5.	Pharmacy	1	132	104	236
6.	Teacher's training institute	12	446	814	1,260
7.	Medical	1	235	270	505
8.	ITIs	32	2,650	824	3,474

2.4.2. 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).

Table 7 Vocational Training under Short Term Skill Development Programs[22]

Scheme	Sector	Job Role	No. of Training Centres	Intake
Deen Dayal Upadhyay Grameen Kaushal Yojana	Apparel	-	12	4,635
	Agriculture			
	Retail			
	Electrical			
	Food processing			
	Automotive			
	Construction			

[21] District Statistical Handbook, Govt. of Tamil Nadu, 2016-17
[22] 2017-2018 training year report.

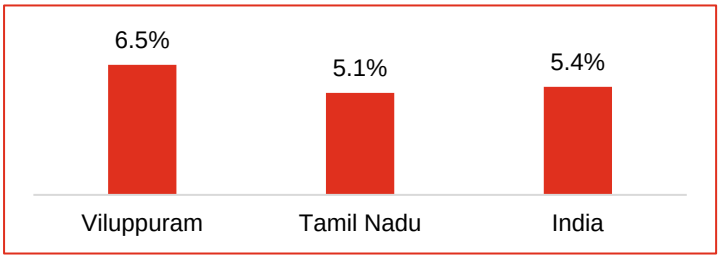
Scheme	Sector	Job Role	No. of Training Centres	Intake
	Iron & Steel			
	Tourism and Hospitality			
	Healthcare			
	IT/ITeS			
	Electronics			
	Capital Goods			
	Logistics & Supply Change Management			
Pradhan Mantri Kaushal Vikas Yojana	Agriculture	Dairy Farmer/ Entrepreneur	1	120
	Leather	Stitcher (Goods & Garments)	1	120
	Media & Entertainment	Makeup Artist	1	120
	Construction	Assistant Electrician	2	120
Tamil Nadu Skill Development Programs	Apparel	Sampling Tailor	1	80
		Hand Embroiderer	1	60
		Sewing Machine Operator	2	120

Table 8 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	Driver Cum Mechanic	1	0
		Mechanic (Motor Vehicle)	20	378
	Construction	Electrician	21	503
	Banking, Financial Services and Insurance	Finance Executive	1	0
	Capital Goods	Draughtsman (Civil)	2	13
		Draughtsman (Mechanical)	2	19
		Instrument Mechanic	1	18
		Sheet Metal Worker	1	21
		Welder	8	214
		Turner	1	0
		Welder (GMAW & GTAW)	1	93
	Electronics and Hardware	Mechanic (Refrigeration and Air-Conditioning)	3	198
		Wireman	9	13
	Infrastructure Equipment	Electronics Mechanic	1	20
		Mechanic Diesel	2	31
	Mining	Fitter	19	445
		Fitter (DST)	1	0
	Strategic Manufacturing	Marine Engine Fitter	1	36
	Textile and Apparel	Sewing Technology	3	31
	IT/ ITeS	Computer Hardware & Network Maintenance	1	17
		Computer Operator and Programming Assistant	2	50
		Information Communication Technology System Maintenance	1	3

Figure 19 Proportion Undergone Vocational training 2015-16, MoLE[23]

With respect to vocational training in the district, 6.5% had received training in the district compared 5.1% in the state as per Employment and unemployment survey 2015-16. This is higher than the state and country average.



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

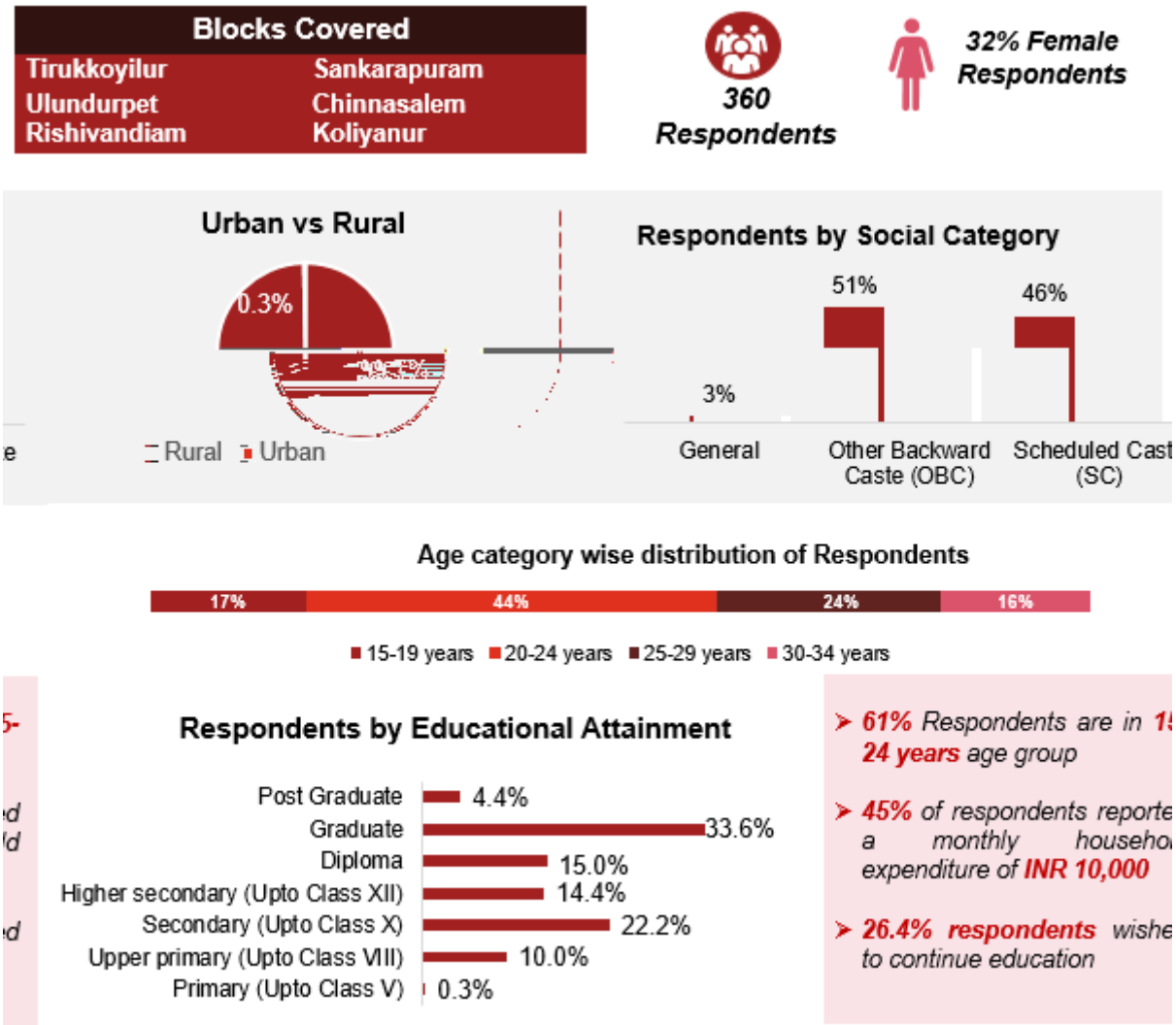
3. Youth perspective

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.

3.1. Profile of Respondent Youth

The structured household survey tool was administered with 360 youth (young men and women in the age group of 15-34 years) sampled from six blocks **Tirukkoyilur, Ulundurpet, Rishivandiam, Sankarapuram, Chinnasalem, Koliyanur**[24]. The detailed block selection methodology is described in Appendix A.1. Of the total respondents, **32%** were **female respondents**; and **almost all the respondents** were from the rural category. The sample has balanced representation of various socioeconomic and demographic characteristics of the population.

Figure 20 Respondent Profile of Youth Aspiration Survey

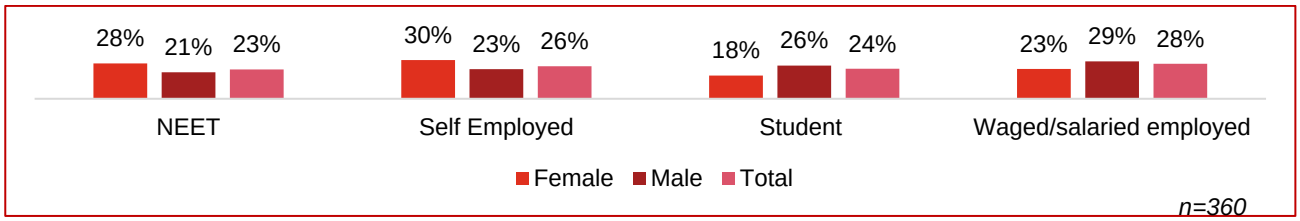


[24] Detailed methodology of selection of blocks is described in Appendix 1 of the report.

3.2. Youth's Educational and Economic Engagement Status

The figure below illustrates the gender wise classification (current status) of the respondents interviwed during the youth survey. While the female respondents were majorly in the Self Employment (30%) and NEET (28%) categories, the male respondents were largely distributed between Wage / Salaried Employment (29%), and in Education system (26%).

Figure 21 Current Status of Respondent by gender



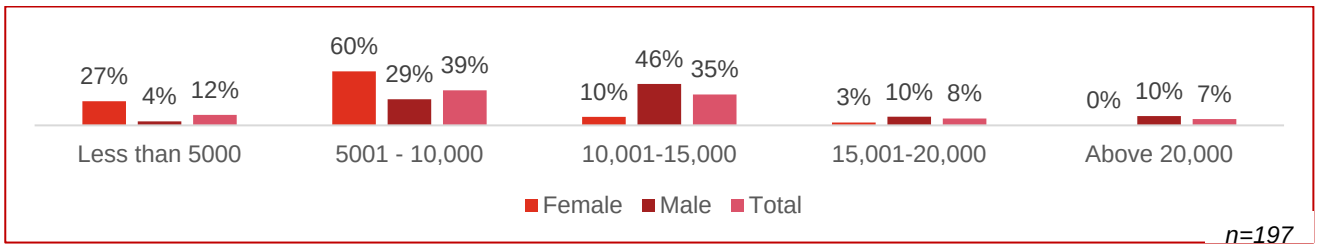
3.3. Economic Engagement of Youth

54% of the total respondents are currently engaged in economic activities.

55% of the total respondents are currently working and had worked before. Out of the respondents who are not presently working, only 4% of these respondents have ever been engaged in economic activities. 98% of the respondents (ever engaged in an economic activity and currently working) reported that they were employed in a field related to their education/ training. 32% of these respondents who were currently in employment/ or ever worked were females.

86% of these respondent's work location was within the district.

Figure 22 Distribution of Respondents (currently working and ever worked) across Monthly Income Category across gender



27% of these female respondents reported that they receive less than ₹ 5,000 monthly. More than half of the male respondents under this category (51%) 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 demotivates females to take up any form of economic activity. Around 20% of the respondents were dissatisfied with their jobs.

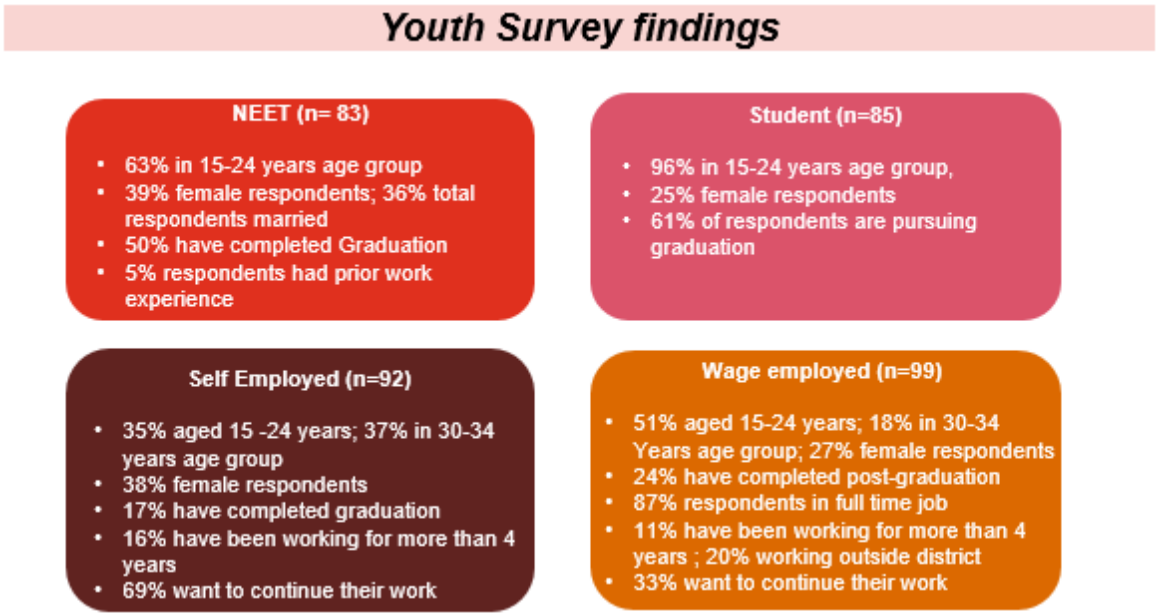
Among those with education of higher secondary and below, skilled work like tailor, mason were the most common form of economic activity. **It is important to note that, 34% of the respondents who had completed their post-graduation and graduation degrees had been engaged in unskilled work.**

Table 9 Education Qualification of Respondents and Employment Type

n=197

	Upper Primary and Below	Secondary	Higher secondary	Diploma	Graduate and above
Farm Activities	8%	3%	24%	10%	11%
Unskilled worker (construction, MNREGA)	41%	23%	14%	29%	34%
Salaried Employment (teacher, government official, etc.)	3%	7%	10%	14%	20%
Skilled worker (tailor, mason)	43%	57%	48%	24%	20%
Petty Business/Trade	3%	12%	10%	19%	9%
Major Business/Trade/ Manufacturing	3%	1%	0%	10%	5%
Number of respondents	**34**	**69**	**29**	**21**	**44**

Figure 23 Youth survey findings across categories



3.4. Youth under NEET Category

23% of the total respondents were neither in employment, nor in education nor in any training.

39% of the NEET category respondents were females. Majority of the NEET respondents (55%) were between the age group of 20-24 years while 31% were between 25-29 years. **19% of the NEET respondents reported to have completed their Diploma course and 50% had completed their graduation**.

Only 13.5% of the NEET respondents have ever worked before. Three fourth of theses respondents in NEET category have worked for more than1 year.

Only 3% of the female NEET respondents and 4% of the male NEET respondents wish to work in the future.

Table 10 NEET Category Respondents

Duration in NEET Category (n=83)			
	Female	Male	Total
Less than 6 months			
6 months- 1 year			
1- 2 years			
2- 3 years			
3 - 4 years			
4 - 5 years	0%	0%	0%
More than 5 years			

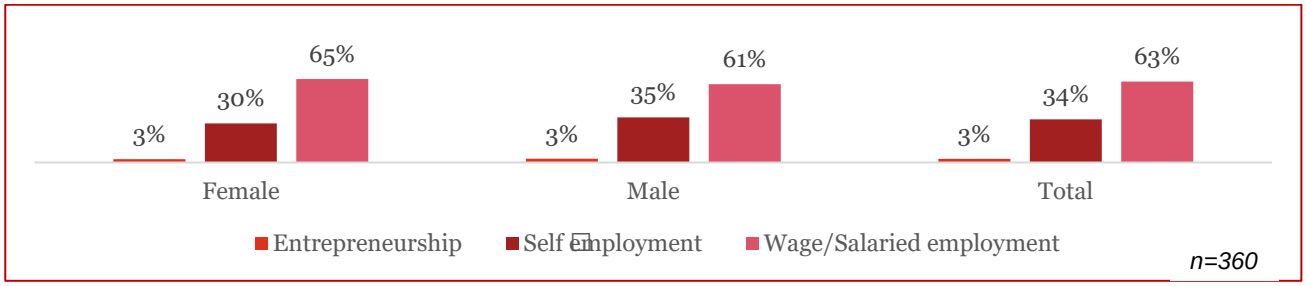
Wish to Work (n=83)			
	Female	Male	Total
Yes	3%	4%	3.6%
Total	32	52	83

Actively Seeking Work (n=3)			
	Female	Male	Total
Yes	100%	100%	100%
Total	1	2	3

3.5. Youth Career Aspiration

The youth in the district prefer wage-employment (63%). Both female and male respondents have shown similar interest in the pursuit of wage employment. 16% of the respondents who preferred wage employment wanted a job in the government sector while 74% were not sure about their preference. Rest 10% wanted a job in the private sector.

Figure 24 Career Aspiration of Youth



One third of the youth perceived that there is a lack of adequate employment opportunities available in the district.

The main factors determining the job aspirations of the youth are Salary (wages) / Income (82%), Job Security (67%), closeness to residence (38%) and Social Status (19.7%).

46% of the respondents (all excluding NEET and students) perceived that they were largely prepared for requirements for a job while 27% of the respondents are not sure about their preparedness. The main reason for the youth perceiving themselves to be prepared for employment, is due to their available work experience in the relevant field (30%).

Table 11 Career Aspiration - Factors, Preparedness and Availability of Jobs

Factors Determining Aspiration (n=360)*	Responses
Salary (wages) / Income	82%
Job Security	67%
Closeness to Residence	38%
Social Status	13%
Emigration Prospects	4%
Opportunities for promotion and career development	4%
Flexible work arrangement	4%
Gender suitable role	3%
Employer provided benefits and perks	3%
Safety / Security	1%
Traditionally Acquired Skills / Family Business	1%

Perception of Preparedness for Jobs (n=192)	Responses
Completely prepared	46%
Largely Prepared	4%
Moderately Prepared	18%
Somewhat prepared	9%
Not sure	24%

Availability of Job Opportunities (n=360)	Responses
Somewhat inadequate	10%
Somewhat adequate	4%
Neither adequate nor inadequate	24%
Inadequate	24%
Do not know	38%

**Multiple response question*

Lack of guidance / information on appropriate jobs available with matching skill levels (84%) and lack of work experience (8%) were the major challenges faced by youth in pursuing their career aspiration. Other factors include lack of jobs locally (7%) and pressure related to getting married (7%). **In addition, 6% of the youth highlighted the lack of sufficient education or technical/vocational skills as a challenge in pursuing their career aspiration.**

*Table 12 Career Aspiration Challenges in pursuing desired career**

Challenges	Responses	Challenges	Responses
Lack of guidance / information on appropriate job available for skill levels	84%	Lack of technical / vocational skills	6%
Lack of work experience	8%	Lack of sufficient education qualification	3%
Lack of jobs locally	7%	Lack of family support / social acceptance of girls being engaged in economic activity	3%
Pressure related to getting married	7%	Low financial strength	1%

**Multiple response question*

Three-fifth of the youth considered that higher education is the skill most valued by employers.

The key factors determining employability of the respondents, included, level of educational attainment (39%), years of experience (24%) and certifications in technical skills (21%). Clear Communication Skills (67%), analytical thinking (32%) and team work (20%) were identified as key skills specific to their aspired jobs. **While 54% respondents were looking for apprenticeships, 24% were intending to take up a vocational / skill training program and 29% respondents were looking to continue education.**

Table 13 Key Requirements to enhance employability and steps to achieve aspirations

Key Requirements to enhance employability (n=360)			
Requirements	Responses	Requirements	Responses
Education attainment (level of education)	39%	Institution of Education / Skill Training	3%
Years of Relevant Work Experience	24%	Soft skills	3%
Certifications of Technical Skill	21%	References	1%
Relevant work experience in similar position or field	7%	Performance in Interviews	1%
Key Skills Required for desired job(n=360)*			
Clear communication	67%	Time management	4%
Analytical thinking	32%	Critical thinking and analysis	4%
Team work	20%	Leadership	4%
Creativity, originality and initiative	17%	Active listening	4%
New Steps to achieve aspirations(n=360)*			
Steps	Responses	Steps	Responses
Apprenticeship / Gathering Work Experience	54%	Continuing Education	29%
Vocational/ Skill Training	24%	Already in Pursuit	0.3%

**Multiple response question*

Career aspiration and preference of sectors varied across the gender group. Agro-business (20%), Education and Skill Development (16%), Banking Financial Services and Insurance (12%) and Textile and apparel (11%) were the most preferred sectors among the female respondents, while the male respondents preferred sectors like Agro-business (17%), Construction (14%), Banking Financial Services and Insurance (11%), Food Processing (7%) and electronic & IT Hardware (7%). The figure below details out the gender wise career aspiration for the youth.

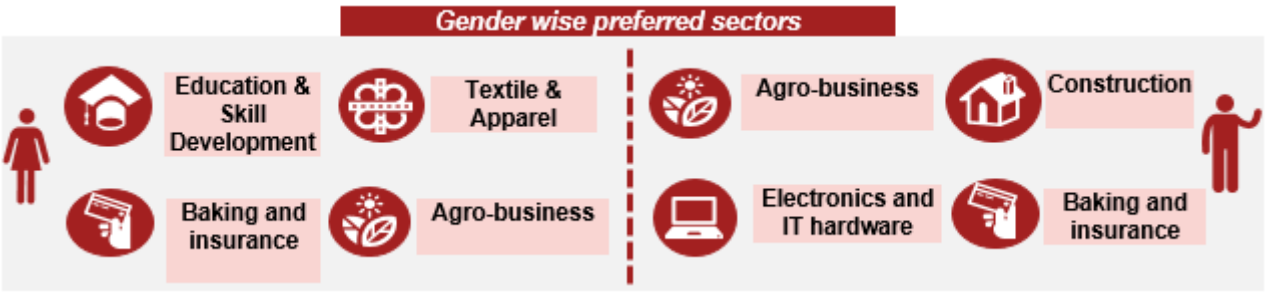
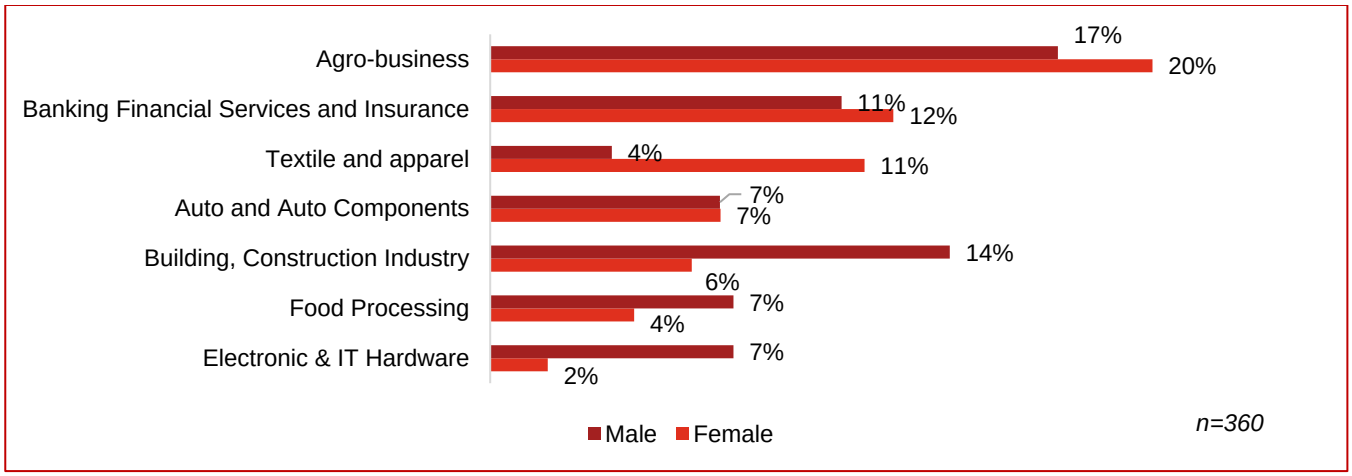
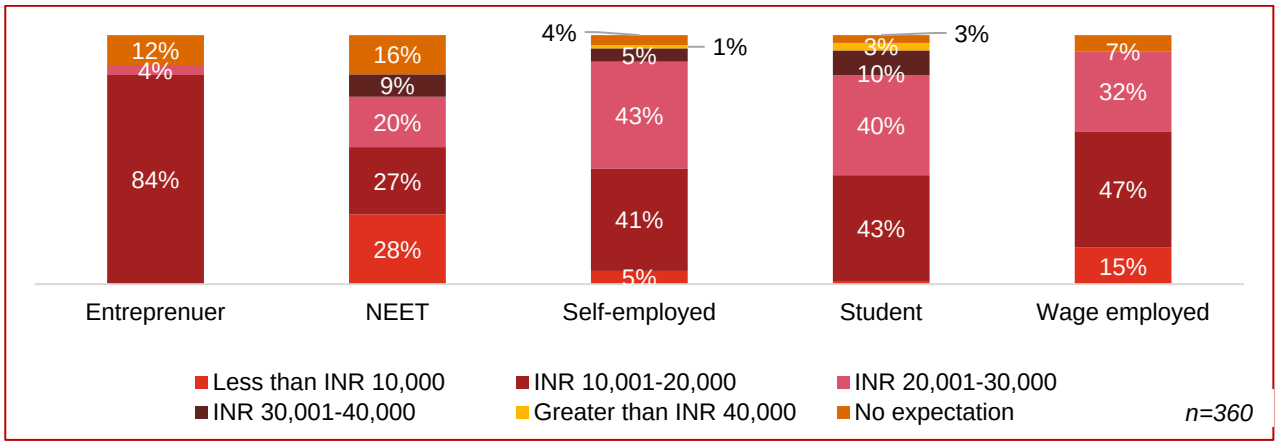


Figure 25 Sectors aspired by respondents



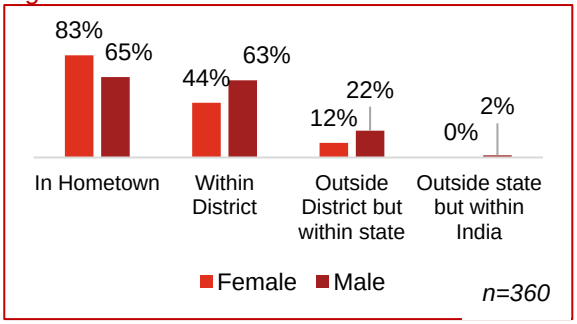
The median wage expectation is around ₹15,000 per month. Around 39% of the respondents have expectations of monthly income greater than ₹20,000. Male respondents aspired for higher salaries compared to their female counterparts. 27% the respondents in the NEET category aspired for a monthly salary ranging between ₹ 10,001 to 20,000. Compared to respondents in self-employment[25] where 53% aspired for income above ₹ 20,000, less (39%) respondents in wage employment aspired for the same. Respondents currently in education system aspired to get a higher salary (13% wished to get salary above ₹30,000 per month).

Figure 26 Aspired monthly salary of respondents by category



[25] Traditionally self-employment includes both enterprises and engaging in a profession/ trade on own account (as defined in the National Sample Surveys on Employment and Unemployment [http://mospi.nic.in/sites/default/files/publication_reports/nss_report_554_31jan14.pdf]. However, in this study, it has emerged that youth prefer to be engaged independently in a trade/ profession on their own account more than setting up an enterprise.

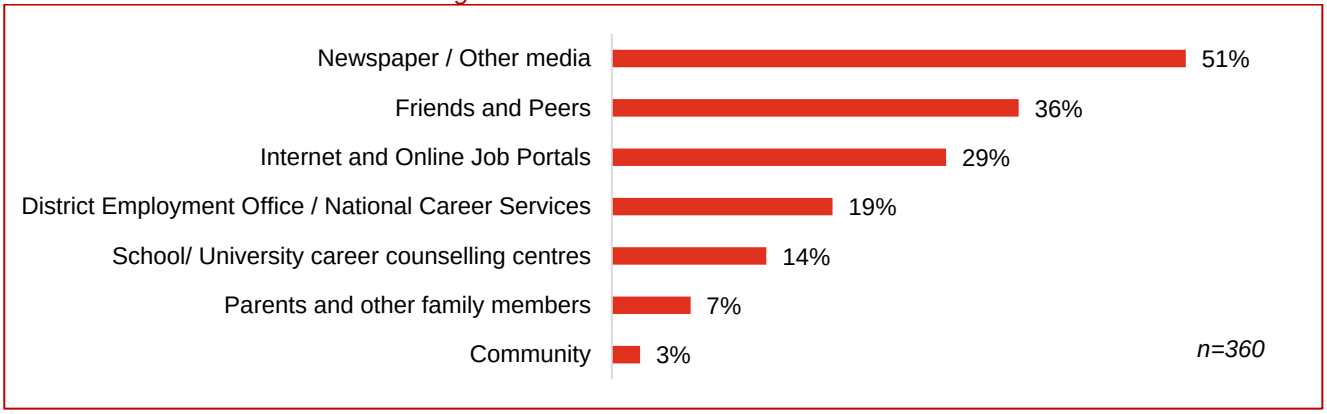
*Figure 27 Preference for Work Location**



72% of the respondents preferred a job within their hometown. The respondents were reluctant to migrate outside of their hometown / district for the purpose of employment. Male respondents were ready to move outside their hometown; however, the female respondents preferred their work locations to be situated within their hometown.

**Multiple response question*

*Figure 28 Sources for Job Information**



**Multiple response question*

The most important source for the job related information was newspaper and media (51%), followed by friends and peers (36%). Internet and online job portals also played a role is providing job information (29%).

54.2% of the respondents felt that the counselling services were not adequate in meeting their requirements.

The key inputs requested by the respondents from career counselling services include information on relevant vacancies (54%) and guidance on applying for desirable jobs (27%).

Figure 29 Perception on Counselling Services

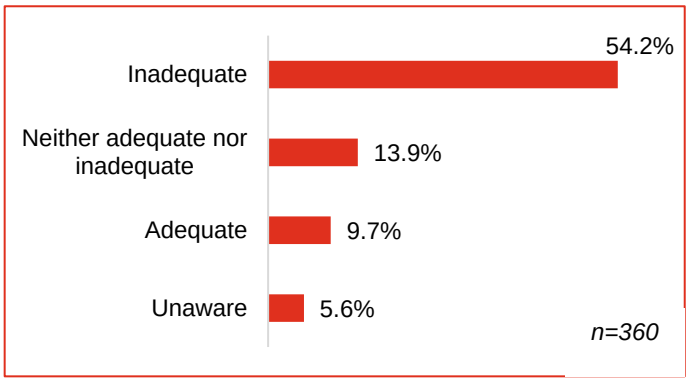
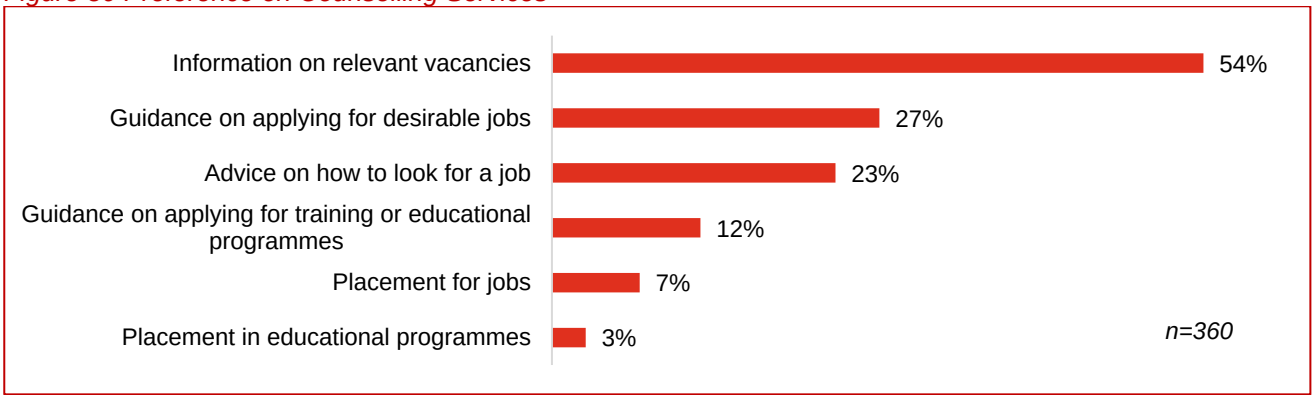


*Figure 30 Preference on Counselling Services**

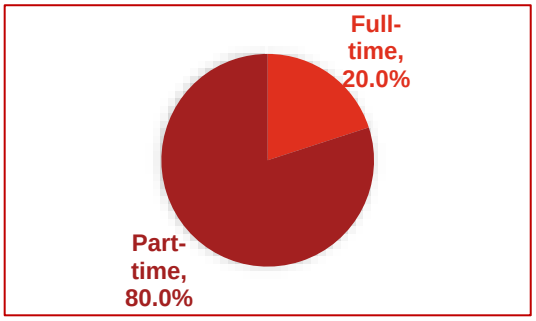


**Multiple response question*

3.6. Skill Training Preferences of Youth

76% of the total respondents had awareness about Govt. run vocational programs but none of them had undergone any vocational training previously. One fourth of the total respondents were interested in undertaking any vocational training. Of these respondents 91% preferred the trainings to be short term certificate courses (less than 6 months) and 80% wanted the courses to be part time in nature. Though the respondents weighed most aspects of a training program as being important, they were mostly concerned with reputation of training service provider (76%) and quality of training (76%).

Figure 31 Skill Training type interested in



Agro-business, Banking and insurance, Construction, electronics and IT hardware were the most popular and aspired sector amongst male respondents and Ago-business, Textile, healthcare, banking and education amongst female respondents.

4. Employer's and Other Stakeholder's Perspective

4.1. Employers' Perspective

The study covered employers to understand the demand side perspectives of skills. The information was collected through both quantitative survey and qualitative approaches including in-depth interviews and focus group discussions.

The survey covered 45 Industries from primarily from five sectors, with highest representations from the construction, auto and auto components, Food Processing, iron and steel and Furniture and Furnishings, which contribute to majority of the local economy. More than two third of the industries (69%) surveyed were in operations for more than 10 years.

Figure 32 Distribution of Industries by Size

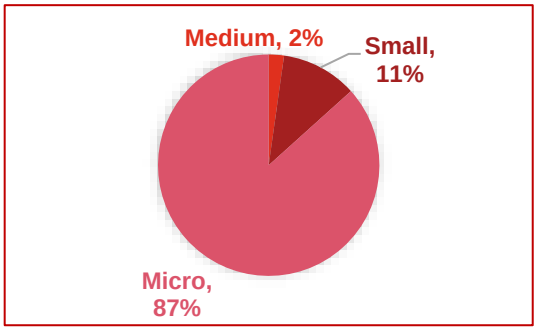
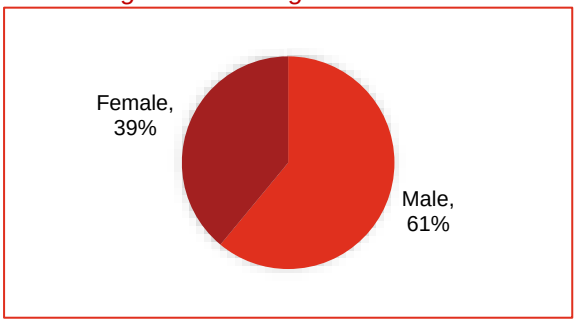


Table 14 Sector wise coverage of Industries in Employer Survey

S.No	Sector	Number of Industries Surveyed	S.No	Sector	Number of Industries Surveyed
1.	Building Construction Painting Industry	17	2.	Machinery Equipment	2
3.	Auto and Auto Components	7	4.	Chemical & Pharmaceuticals	1
5.	Food Processing	6	6.	Capital Goods	1
7.	Furniture and Furnishings	6	8.	Textile and Apparel	1
9.	Iron, Steel and Other Metals	3	10.	Plastics	1

Figure 33 Average distribution of workers



Majority of the employers (80.5%) recruited through employee reference, from either existing employees or known sources as a mode of recruitment.

Local Community (41.5%) was the second most preferred mode of recruitment. There has been slower uptake of recruitments from Job Melas and Campus recruitment (2.4%) and employment exchange program (5%).

The most common challenge faced by employers include the youth's lack of interest on strenuous physical work (36.6%), followed by high local wages (31.7%) and lack of prior experience (26.8%).

*Table 15 Modes and Challenges in Recruitment Process**

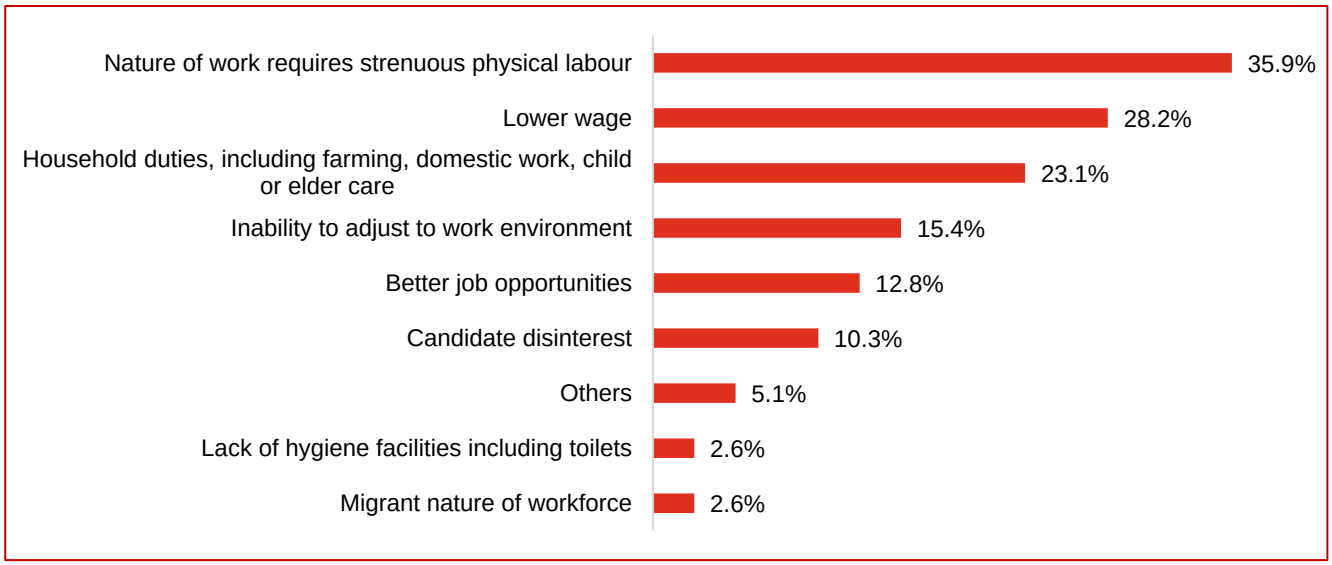
Key Modes of Recruitment			Key Challenges faced in Recruitment		
S.No	**Particulars**	**%**	**S.No**	**Particulars**	**%**
1.	Employee Reference	80.5%	1.	Nature of work requires strenuous physical labour	36.6%
2.	Local Community	41.5%	2.	High local wages	31.7%
3.	People registered with Employment Exchange	4.9%	3.	Lack of Prior Experience	26.8%
4.	Advertisements in Newspapers	2.4%	4.	Lack of basic education requirement	14.6%
5.	Campus recruitment in ITIs/Polytechnic	2.4%	5.	Candidate Disinterest and Attitude	7.3%
			6.	Lack of requisite core skills	4.9%
			7.	Resistance by family to allow them to work	2.4%

**Multiple response question*

The surveyed industries were largely dominated by the male workers. Semi-Skilled workers dominated the share of workforce (47.3%) followed by unskilled workers (29.9%). Most of the females employees were employed in the unskilled work as daily wage labourers for doing manual work. While 80.5% respondents affirmed sourcing migrant workers from other districts of Tamil Nadu, 85% of the respondents sourced their workers from the southern districts of Tamil Nadu. All the employers stated that they recruited employees from Eastern India. States of Bihar, West Bengal and Odisha were the key sources of migrant workers.

Figure 34 Distribution of workers-Skill Levels

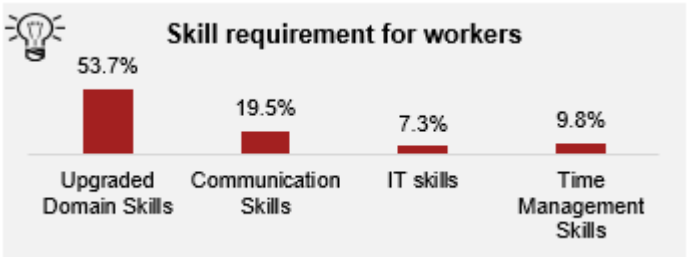
*Figure 35 Key causes of Attrition**



**Multiple response question*

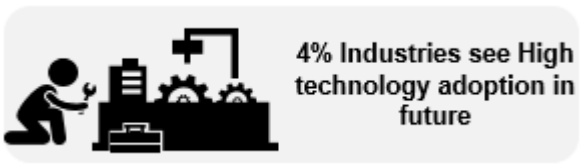
The employers estimate 40% attrition annually from their workforce.

Nature of work, lower wages, inability to adjust to work environment, better job opportunities, candidates' disinterest were the dominant cause of attrition.



More than half of the employers stated that domain skill upgradation of the workers needed utmost focus. In addition, 19.5% employers stated that communication skills trainings are required for the workers.

Only 4% of the employers feel there is high growth prospects in the industries, while 4% of the respondents see high adoption of technology in the future and only 3% of the respondents have already initiated plans in adoption of technology.



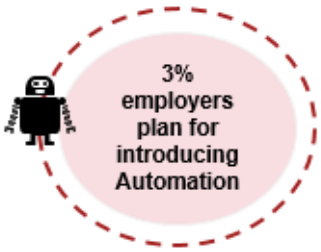


Table 16 Growth Prospects and prospective adoption of technology

Growth Prospects of Industry	%	Level of Technology adoption	%	Plans to adopt Technology	%
High	4%	**High**	4%	Yes	3%
Medium	10%	**Medium**	0%		
Low	32%	**Low**	36%	No	62.2%
Can't Say	54%	**Can't Say**	60%	Can't say	7%

4.2. Other Stakeholders' Perspective

The study also included in-depth interviews of more than 15 stakeholders including District Collector and other line departments involved in the Skill Development, Livelihood and Employment and Industrial development related activities, Industrial Associations, Vocational Education and Skill Development institutions among others. A focus group discussion was conducted with eight stakeholders from various organizations.

Domain skills and communication skills are the two major requirements for workers.

Responses indicate that there is medium to high demand for skilled labour perceived in the next five years. However, challenges faced in recruitment in general and from institutions need attention in order to improve the quality of the work force.

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

Table 17: Qualitative findings Villupuram

S No	Topic	Responses
1.	Youth/ Candidate Attitude and Abilities	• Youth aspire for service-sector jobs in catering, hospitality and office-oriented white-collar jobs. • Women tend to work in mills, but discontinue after marriage and having children • In spite of completion of course, most women students are not employed, as they are reluctant to move to different city. • Training centres encourage woman trainees to take up employment outside district through counselling sessions. • Youth getting placement in local organizations, tend to attend the training period and then leave the enterprise. • Candidates' demand for higher wages leads to attrition in the industries.
2.	Education-schools, ITI/ Polytechnics/ Engineering colleges in the district	• After apprenticeships, there is no mechanism to track students. • Short-term course graduates are more willing to work in private enterprises, as they are usually unemployed, with inadequate job prospects based on their prior qualification (most are college graduates, with very few school graduates). • Students from engineering streams tend to choose additional skill courses in beauty and wellness, domestic appliance repair, and hardware repair. • As the Training institutions do not emphasize practical application of knowledge, it is difficult to absorb fresher in the industries without providing them adequate on-the job training. • Engineering diploma students lack practical application knowledge and are generally paid lesser than ITI graduates, in the recent times. They are not given proper technical training required in the job market.

S No	Topic	Responses
3.	Employment Scenario	• Retail is an upcoming sector in Villupuram due to emergence of shopping marts. Youth are employed in Food marts, Garments shops, Jewellery shops etc. Food and transportation is provided to the youth to attract them for these roles. • Sugar mills and rice mills are the major employers in Villuppuram. • Female employees are mostly employed in retail, mills and textile sectors. • Caste issues hinder woman entrepreneurs from setting up own unit in a higher caste area.
4.	Labour Requirements	• Job opportunities for the skilled category are present in the food processing, retail, manufacturing sectors. • The industries perceive a preference for jobs among youths in the services sector, especially in retail, food delivery and cab services over a fixed employment in manufacturing sector.
5.	Women Employment	• Auroville provides training, and community development support to village women (around 5,000 women have gained employment as school teachers, cooks, waitress, gardening, sales representatives, handicrafts making, garment making and beauty parlours technicians). Eco-friendly products, organic fabric garments, catering and restaurants have scope in terms of entrepreneurship in the district. • The Tourism & Hospitality sector is also willing to hire more women workforce in the sector

5. Skill Gap Analysis

5.1. Skill Gap Assessment - Incremental Demand for Skilled & Semi Skilled Workforce

As per our methodology for estimating demand and supply, it can be seen that **manufacturing, construction, trade and repair services, education; human health and social work activities, and repair of computers and personal and household goods** show high levels of demand for both skilled and semi-skilled workers. The detailed methodology is explained in Appendix A.2.

Table 18 Sector wise Incremental Demand for Skilled and Semi Semi-Skilled Workers between 2019 and 2025

Sectors	Incremental Demand for Skilled Workers			Incremental Demand for Semi Skilled Workers			Total Incremental Demand
	2019-21	2022-25	Total	2019-21	2022-25	Total	Total
Agriculture	1,066	1,437	2,503	7,464	10,056	17,520	20,023
Allied Activities	144	204	349	1,010	1,431	2,441	2,789
Manufacturing	1,632	2,304	3,936	3,263	4,608	7,872	11,807
Construction	1,611	2,555	4,166	4,029	6,387	10,415	14,582
Trade & Repair Services	416	584	999	1,439	2,020	3,459	4,459
Hotels and restaurants	393	572	965	762	1,108	1,870	2,835
Transportation and storage	237	324	561	570	778	1,347	1,909
Communication and services related to broadcasting	421	616	1,036	210	308	518	1,555
Financial and insurance activities	864	1,320	2,183	432	660	1,092	3,275
Real estate	285	430	715	713	1,075	1,788	2,504
Public Administration	135	184	319	108	147	255	574
Education; Human health & Social Work Activities	1,117	1,564	2,681	893	1,251	2,145	4,825
Arts, entertainment and recreation	348	487	835	278	390	668	1,503
Repair of computers and personal and household goods	1,166	1,633	2,799	933	1,307	2,240	5,039
Other Services	552	774	1,326	442	619	1,061	2,387
Total Demand	**10,388**	**14,987**	**25,374**	**22,546**	**32,144**	**54,690**	**80,064**
Total Supply	**8,724**	**11,632**	**20,356**	**21,752**	**29,002**	**50,754**	**71,110**
Total Skill Gap	**1,664**	**3,354**	**5,018**	**794**	**3,142**	**3,936**	**8,954**

6. District Skilling Action Plan

6.1. 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.

Table 19 Summary of Trainings

S. No	Sector	Trades	Target (Persons)	Budget (₹)
1.	Agriculture Sector	• Agriculture Machinery Operator • Agriculture Machinery Demonstrator • Agriculture Machinery Repair and Maintenance Service Provider • Agriculture Extension Executive • Vermicompost producer • Fishnet making • Fish Seed Grower • Fishing boat mechanic	2,980	₹3.31 Crores
2.	Food processing	• Fruits and Vegetables Drying/ Dehydration Technician • Packing Machine Worker – Food Processing • Food Products Packaging Technician • Assistant Lab Technician - Food and Agricultural Commodities • Fruits and Vegetables Canning Technician • Industrial packing technician	3,000	₹4.11 Crores
3.	Plumbing, Electronics and Hardware	• Plumber (General) • Solar Domestic Water Heater Technician • Field Technician – AC • Field Technician – Refrigerator • Field Technician - Washing Machine • Field Technician - Other Home Appliances	1,700	₹3.05 Crores
4.	Tourism & Hospitality	• Food & Beverage Steward • Housekeeping Attendant • Chef • Billing Executive • Facility Supervisor • Tour escort and Driver • Assistant Catering Manager • Front Office Associate • Guest Relations Manager	1,640	₹2.51 Crores
5.	Construction	• Draughtsman • Construction Fitter • Fabricator • Construction Welder • Helper Electrician • Foreman – Electrical Works (Construction)	3,300	₹9.66 Crores
6.	Banking, Financial services and Insurance	• Life Insurance Agent • Accounts Executive (Recording, Reporting) • Goods & Services Tax (GST) • Accounts Assistant • Mutual Fund Agent	1,950	₹1.15 Crores
7.	Handicraft and Carpets, Furniture and Fittings	• Clay/ Terracotta handicraft maker • Handicraft painter • Perfumed Candle maker • Hand Crochet Lace Maker • Clay potteries/utensils maker	2,790	₹3.73 Crores

S. No	Sector	Trades	Target (Persons)	Budget (₹)
		• Design Marker / Supervisor • Product Checker / Quality checker • Designer (Wood Products) • Carpenter Wooden Furniture		
8.	Retail	• Cashier • Retail Sales Associate • Store Operations Assistant • Distributor Salesman • Retail Trainee Associate	3,200	₹4.31 Crores
9.	Healthcare	• Nursing • Emergency Medical Technician • Medical Records & health Information Technician • Blood Bank Technician • General Duty Assistant • Medical Equipment Technician (Basic Clinical Equipment) • Pharmacy Assistant • Medical Laboratory Technician • Ambulance Driver	3,000	₹3.58 Crores
Total			**23,560**	**₹ 35.4 crores**

Note:

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

- INR 42.40 for Category-I
- INR 36.30 for Category -II
- INR 30.30 for Category-III

The Cost of training in the project shelves represents the calculation of: (training target × training hours × per hour cost) + (training target × number of days of training × INR 100).
Where:
Number of days of training = training hours / 8
Transportation costs per trainee per day = INR 100
To the figures arising from the above formula, the training and assessment costs (INR 1,000 per trainee × training target for the whole project) has also been added. The total training cost for each project arrived through such a process has been added to the summary table above.

The training projects are described below:

Table 20 Training Project 1-Agriculture Sector

Name of the Project: Training in Agriculture sector							
Key Economic Drivers: • Villupuram is the sugar bowl of the state. • Highest district to contribute to production of food grain • To boost the production latest agricultural technology and machineries should be introduced • 32 km of coastline – fisheries							
Key Partners: Department of Agriculture, Agriculture SCC, Agricultural Technology Management Agency (ATMA)							
Job Roles	**NSQF Level**	**NSQF Code**	**Duration of Training**	**Cost Category**	**Target Group**	**Training Target (People)**	**Cost of Training (₹)**
Agriculture Machinery Operator	4	AGR/Q1103	200 hours*	1	Class 8th pass	300	₹0.33 Crores
Agriculture Machinery Demonstrator	5	AGR/Q1107	200 hours	1	Class 10th pass	300	₹0.33 Crores
Agriculture Machinery Repair and Maintenance Service Provider	5	AGR/Q1111	200 hours*	1	Class 12th	200	₹0.22 Crores
Vermicompost producer	4	AGR/Q1203	200 hours*	2	Class 10th pass	1,000	₹0.98 Crores
Fishnet making	-	To be developed	200 hours*	2	Class 8th pass	500	₹0.49 Crores
Fish Seed Grower	4	AGR/Q4908	210 hours	3	Class 10th pass	500	₹0.46 Crores
Fishing boat mechanic	4	AGR/Q5103	240 hours	2	Class 8th pass	180	₹0.22 Crores
					Total training cost	**2,980**	**~₹ 3.01 crores**
					Total Assessment and Certification cost (₹ 1,000 per candidate)		**₹ 0.30 crores**
					Total cost		**₹3.31 Crores**
Key Considerations: **The youth can be encouraged to take up advanced agricultural methods to increase production. Upskilling trainings can be given to existing farmers.**							

**-Job roles do not have training hours mentioned. The average training hours for the sector and NSQF level within the sector, and applied those as notional hours. In some cases, insights from consultations with stakeholders are also considered.*

Table 21 Training Project 2- Food processing Sector

Name of the Project: Training in Food Processing sector							
Key Economic Drivers: • Expected growth and investment potential in Food processing Sector • Food processing amongst top 3 sectors aspired by youth as per primary survey • Largest producer of food grain in the state							
Key Partners: APEDA (Agricultural and Processed Food Products Export Development Authority), ITI, Food processing sector skill council							
Job Roles:	**NSQF Level**	**NSQF Code**	**Duration of Training**	**Cost Category**	**Target Group**	**Training Target (People)**	**Cost of Training (₹)**
Food Products Packaging Technician	5	FIC/Q7001	240 hours	1	12th Class Pass	400	₹0.53 Crores
Industrial Production Worker –	2	FIC/Q9005	240 hours	1	5th class Pass	1000	₹1.32 Crores

Food Processing							
Quality Assurance Manager	6	FIC/Q7602	240 hours*	1	M.Sc.	600	₹0.8 Crores
Traditional Snack and Savory Maker	4	FIC/Q8501	240 hours	1	8th Class Pass	400	₹0.53 Crores
Cold Storage Technician	4	FIC/Q7004	250 hours	3	12th Class , Preferably/ Diploma /ITI with certification in refrigeration	600	₹0.65 Crores
					Total	3,000	₹3.81 Crores
					Total Assessment and Certification cost (₹ 1,000 per candidate)		₹0.30 crores
					Total cost		₹4.11 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.

**-Job roles do not have training hours mentioned. The average training hours for the sector and NSQF level within the sector, and applied those as notional hours.*

Table 22 Training Project 3- Plumbing, Electronics and Hardware Sector

Name of the Project: Training in Plumbing, Electronics and Hardware sector							
Key Economic Drivers:							
• Repair and service of domestic appliances and personal goods has an incremental demand of around 2,000 in the district in next three years							
Key Partners: ITI							
Job Roles:	**NSQF Level**	**NSQF Code**	**Duration of Training**	**Cost Category**	**Target Group**	**Training Target (People)**	**Cost of Training (₹)**
Plumber (General)	3	PSC/Q0104	410 hours	1	10th pass	300	₹0.68 Crores
Field Technician – AC	4	ELE/Q3102	300 hours	2	8th Class+ 2 yrs	500	₹0.74 Crores
Field Technician – Refrigerator	4	ELE/Q3103	300 hours	2	8th Class+ 2 yrs	200	₹0.3 Crores
Field Technician - Washing Machine	4	ELE/Q3106	300 hours	2		200	₹0.3 Crores
Field Technician - Other Home Appliances	4	ELE/Q3104	360 hours	2	8th pass	500	₹0.88 Crores
					Total	**1,700**	₹2.88
					Total Assessment and Certification cost (₹ 1,000 per candidate)		₹0.17
					Total cost		**₹3.05 Crores**
Key Considerations: Youth can be trained to provide services for repair of domestic appliances. ITI and Diploma graduates can also be given in this sector.							

Table 23 Training Project 4-Tourism & Hospitality Sector

Name of the Project: Training for Tourism & Hospitality Sector
Key Economic Drivers:
• Tourism is the most prominent sub sector, contributing to 24% of the service sector • Auroville is a major tourist hub in Villupuram district

- Credit offtake high for tourism and hotel sector
- Estimated Incremental demand of 2,000 persons in hotel and restaurant sector
- Puducherry is 40km from the district town

Key Partners: ITI, Tourism and Hospitality Skill Council, Tourism Department

Job Roles:	NSQF Level	NSQF Code	Duration of Training	Cost category	Target Group	Training Target (People)	Cost of Training (₹)
Food & Beverage Service - Steward	4	THC/Q0301	300 hours	2	Class 10th pass	300	₹0.45 Crores
Housekeeping Attendant (Manual Cleaning)	3	THC/Q0203	250 hours	2	Primary education	300	₹0.37 Crores
Chef-de-partie	6	THC/Q0404	285 hours	1	Class 8th pass	300	₹0.48 Crores
Billing Executive	4	THC/Q5801	300 hours*	2	Graduate	240	₹0.36 Crores
Facility Supervisor	5	THC/Q5709	300 hours*	2	ITI	100	₹0.15 Crores
Tour Escort	4	THC/Q4402	330 hours	2	12th Class passed, Preferably	100	₹0.17 Crores
Assistant Catering Manager	6	THC/Q5901	300 hours*	3	Class 12th pass	100	₹0.13 Crores
Front Office Associate	4	THC/Q0102	280 hours	3	Class 12th pass	100	₹0.12 Crores
Guest Relations Manager	6	THC/Q0108	300 hours*	2	Class 12th pass	100	₹0.15 Crores
					Total training cost	1,640	₹2.34 Crores
					Total Assessment and Certification cost (₹ 1,000 per candidate)		₹0.16 crores
					Total cost		**₹2.51 Crores**

Key Considerations:
- Tourism is the most prominent sub sector, and youth can be employed in this sector easily
- Woman can be employed in the sector

**-Job roles do not have training hours mentioned. The average training hours for the sector and NSQF level within the sector, and applied those as notional hours.*

Table 24 Training Project 5- Construction Sector

Name of the Project: Training for Construction sector

Key Economic Drivers:

- Construction is one of the identified sectors with high skill demand in the next five years
  The most preferred sector for undergoing training/ pursuing career during youth aspiration survey amongst male respondents

Key Partners: 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	500	₹1.65 Crores
Construction Fitter	3	CON/Q1205	350 hours*	1	Class 10th pass	500	₹0.97 Crores
Quality Technician	6	CON/Q0403	516 hours	1	Class 12th pas	300	₹0.86 Crores
Fabricator	4	CON/Q1206	600 hours	1	Class 12th pass	400	₹1.32 Crores
Construction Welder	4	CON/Q1252	600 hours*	1	Class 10th pass	1000	₹1.65 Crores
Helper Electrician	2	CON/Q0601	350 hours	1	10th pass	600	₹1.16 Crores

Construction Electrician -LV	4	CON/Q0603	636 hours	1	Class 10th pass	1000	₹1.75 Crores
					Total	3,300	9.33 Crores
					Total Assessment and Certification cost (₹ 1,000 per candidate)		0.33 crores
					Total cost		₹9.66 Crores

Key Considerations:
- Tie up with upcoming investment sites to understand the need of manpower in construction sector
- Focus on ITI graduates and diploma graduates
- Trainings can be accompanied by stipends
- Trainings can focus on sustainable practices

**-Job roles do not have training hours mentioned. The average training hours for the sector and NSQF level within the sector, and applied those as notional hours. In some cases, insights from consultations with stakeholders are also considered.*

Table 25 Training Project 6- Banking, Financial services and Insurance Sector

Name of the Project: Training in Banking, Financial Services and Insurance sector

Key Economic Drivers:
- Marketing of traditional handicrafts is important to boost its growth
- These skill training programs would also benefit the traditional sector artisans in the district
- Skilled labour force requirement in the sector as per skill gap estimation projection
- One of the aspired sectors during youth aspiration study
- High demand of GST Assistants in the industries
- The large number of MSME units and have potential for better marketing and financial management of their enterprises
- Marketing of traditional handicrafts is important to boost its growth
- These skill training programs would also benefit the traditional sector artisans in the district

Key Partners: BFSI, ITI, MSME Associations

Job Roles	NSQF Level	NSQF Code	Duration of Training (hours)	Cost Category	Target Group	Training Target (People)	Cost of Training (₹)
Marketing and Social Media manager	4	ASC/Q1110 *(Derived QP from Automotive sector)*	100 hours*	2	Diploma/ Graduation	300	₹0.15 Crores
GST Accounts Assistant	4	BSC/Q0910	100 hours	3	Graduation: commerce or allied subject	300	₹0.13 Crores
Mutual Fund Agent	4	BSC/Q3802	100 hours*	3	Class 12th pass	300	₹0.13 Crores
Life Insurance Agent	4	BSC/Q3801	100 hours*	3	Class 12th pass	500	₹0.22 Crores
Accounts Executive (Recording, Reporting)	4	BSC/Q1001	100 hours	3	Graduate in Commerce	450	₹0.2 Crores
Export Assistant	5	AMH/Q1601 *(Derived QP from Apparel sector)*	270 hours	2	Diploma/ Graduation	100	₹0.14 Crores
					Total training cost	1,950	₹0.95 crores
					Total Assessment and Certification cost (₹ 1,000 per candidate)		₹0.20 crores
					Total cost		₹1.15 Crores

Key Considerations:
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.

**-Job roles do not have training hours mentioned. The average training hours for the sector and NSQF level within the sector, and applied those as notional hours. In some cases, insights from consultations with stakeholders are also considered.*

Table 26 Training Project 7: Handicrafts and Carpets and Furniture & Fittings sector

Name of the Project: Training in Handicrafts and carpets, Furniture & Fittings sector							
Key Economic Drivers: • Villupuram is famous for its terracotta and wood handicrafts, toys • Auroville supports woman to take up handicraft as an livelihood option • High export potential							
Key Partners: Auroville, Shabana Art Potteries							
Job Roles	**NSQF Level**	**NSQF Code**	**Duration of Training**	**Cost Category**	**Target Group**	**Training Target (People)**	**Cost of Training (₹)**
Clay/ Terracotta handicraft maker	4	HCS/Q1502	305 hours	2	Class 5th pass	240	₹0.36 Crores
Handicraft painter	-	To be developed	250 hours *	2	Class 5th pass	300	₹0.37 Crores
Perfumed Candle maker	-	To be developed	250 hours *	2	Class 5th pass	500	₹0.62 Crores
Hand Crochet Lace Maker	3	HCS/Q7703	240 hours	2	Class 12th pass	300	₹0.36 Crores
Clay potteries/utensils maker	-	To be developed	250 hours *	2	Class 5th pass	240	₹0.3 Crores
Design Marker / Supervisor	5	HCS/Q1501	250 hours*	2	Class 8th pass	120	₹0.15 Crores
Product Checker / Quality checker	4	HCS/Q1601	230 hours	2	Class 8th pass	90	₹0.11 Crores
Designer (Wood Products)	5	HCS/Q6601	210 hours	3	Class 10th pass	500	₹0.46 Crores
Carpenter Wooden Furniture	4	FFS/Q0102	308 hours	2	Class 5th pass	500	₹0.76 Crores
					Total training cost	**2,790**	**~₹ 3.44 Crores**
					Total Assessment and Certification cost (₹ 1,000 per candidate)		**₹ 0.30 Crores**
					Total cost		**₹3.73 Crores**
Key Considerations: Formalization of traditional sectors is important. The existing artisans need upskilling and fresh trainings can be imparted to new entrants.							

**-Job roles do not have training hours mentioned. The average training hours for the sector and NSQF level within the sector, and applied those as notional hours. In some cases, insights from consultations with stakeholders are also considered.*

Table 27 Training Project 7: Retail Sector

Name of the Project: Training in Retail Sector							
Key Economic Drivers: • Urbanizing population will spur the growth of large retailers • Upcoming marts and malls in the district							
Key Partners: Retailer's Association, Villupuram							
Job Roles:	**NSQF Level**	**NSQF Code**	**Duration of Training (hours)**	**Cost Category**	**Target Group**	**Training Target**	**Cost of Training (₹)**
Cashier	2	RAS/Q0102	200	2	Minimum Age - 14 Years ; Preferable Qualification shall be Minimum: Graduate	400	₹0.4 Crores
Retail Sales Associate	4	RAS/Q0104	280	2	10th Class Pass	400	₹0.55 Crores
Store Ops Assistant	1	RAS/Q0101	200	2	Secondary School Grade X Passed	600	₹0.59 Crores
Seller Activation Executive	4	RAS/Q0301	280	2	10th Class Pass	400	₹0.55 Crores

Digital Cataloguer	4	RAS/Q0302	280	2	12th Class, Preferably	800	₹1.1 Crores
Retail Trainee Associate	3	RAS/Q0103	280	2	10th Class	600	₹0.82 Crores
					Total training cost	**3,200**	₹ 3.98 **Crores**
					Total Assessment and Certification cost (₹ 1,000 per candidate)		₹ **0.32 Crores**
					Total cost		**₹4.31 Crores**

Key Considerations:
- Women can be targeted – but adequate facilities must be provided
- On the job training can be provided by local retailers

Table 28 Training Project 8: Healthcare Sector

Name of the Project: Training for Healthcare sector

Key Economic Drivers:
- Healthcare is a booming sector in the district.
- Incremental demand of around 9000+ skilled and semi-skilled workers in next three years in this sector

Key Partners: Hospitals, Medical colleges, Nursing colleges

Job Roles	NSQF Level	NSQF Code	Duration of Training	Cost category	Target Group	Training Target (People)	Cost of Training
Emergency Medical Technician	4	HSS/Q 2301	240 hours	1	12th Pass with Science	400	₹0.23 Crores
Medical Records & health Information Technician	4	HSS/Q5501	600 hours	1	12th Pass with Science	400	₹0.23 Crores
Blood Bank Technician	4	HSS/Q2801	1000 hours	1	12th Pass with Science	300	₹0.17 Crores
General Duty Assistant	4	HSS/ Q 5101	240 hours	2	10th Pass	500	₹0.25 Crores
Medical Equipment Technician (Basic Clinical Equipment)	3	HSS/Q5601	600 hours	1	12th Class preferably but 10th Class in certain cases	400	₹0.6 Crores
Pharmacy Assistant	4	HSS/Q5401	200 hours	2	12th Pass	500	₹1.01 Crores
Medical Laboratory Technician	4	HSS/ Q 0301	1500 hours	1	12th Pass with Science	400	₹0.67 Crores
Ambulance Driver	4	ASC/Q9706	400 hours	1	10th class pass	100	₹0.17 Crores
					Total training cost	3,000	₹3.28 Crores
					Total Assessment and Certification cost (₹ 1,000 per candidate)		₹0.30 crores

Total cost		₹3.58 Crores7.16 Crores
Key Considerations: The Healthcare sector has completely moved into using high-end technological medical equipment and methods for treating patients. The industry is rapidly developing, fuelled by large investments from existing corporate hospital chains and new entrants backed by private equity investors. Woman can be employed in the sector easily.		

6.2. Key Recommendations

Study findings reveal that there is an emerging demand for skilled workforce in the district with several investments lined up within the district. However, access to skills, livelihoods and gainful employment varies across the district. Technical skills, lack of soft skills, aspirations, migration patterns and access to financial institutions emerge has key impediments in the employment of youth. However, it also emerges that opportunities for the youth, especially in sectors like tourism, trade and retail, and construction and repair services. Recommendation on key interventions that needs to be taken up in order to foster the participation of youth in the economy are as follows:

- **Advance agricultural training:** Even though agriculture sector is the highest employer in the district, the productivity is very low. Krishi Vigyan Kendra at Tindivanam and ATMA can introduce NCVT courses for advance agricultural courses like Agriculture Machinery Operator, Agriculture Machinery Demonstrator, Agriculture Machinery Repair and Maintenance Service Provider, Agriculture Extension Executive. The entire value has to be catered to help increase profit margin and motivate farmers to carry on cultivation.

- **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.

- **Collaboration with Auroville Village Action Group:** TNSDC can tie up with Auroville Village Action Group to deliver training courses to woman and youth. The highly experienced trainers can be taken on board for delivering the select courses in handicrafts. Auroville Village Action Group provides training, and community development support to village woman (around 5,000 women have gained employment as school teachers, cooks, waitress, gardening, sales representatives, handicrafts making, garment making and beauty parlors technicians). Eco-friendly products, organic fabric garments, catering and restaurants have scope in terms of entrepreneurship in the district.

- **A unified job portal for job postings at all levels of skill across sectors:** Qualitative consultations with industry representatives revealed that there is a mismatch between placement practices in vocational training institutions and recruitment practices among employers. A portal for jobs/ apprenticeships open to both employers and jobseekers would enable both sides to minimize time and effort in finding suitable vacancies and profiles. Youth aspiration findings also indicate that youth have a preference for placement services/ guidance with respect to applying for suitable jobs. It would act as a platform to enable active connect between the employers and prospective employees, as well as prospective apprentices or internees. A common portal would fulfil this need as well.

- **Strengthening and formalizing traditional industries:** The traditional industries like terracotta and clay pot making and wood-carving in Villupuram suffer majorly because most of the artisans are not trained in marketing their products. Training can be given in marketing, export and finance so that the artisans are also aware of how to market their products. In addition, these sectors need to be formalized through introduction of simpler registration process, taxation, organization and representation, legal frameworks, social protection and business incentives/support. The jobs need to be formalized by introduction of legal recognition and protection as workers, rights and benefits of being formally employed, freedom from discrimination minimum wage, occupational health and safety measures, employer contributions to health and pensions, right to organize and bargain collectively and membership in formal trade unions.

- **Promotion of service sector opportunities among youth:** Private activity in the hospitality, tourism and retail sectors can be fostered to provide local employment to youth. Hospitality, retail and domestic appliance repair and service can absorb local youth in significant numbers, and also provide jobs suited to the needs of young women. Qualitative consultations and secondary data analysis reveal that service sectors have great demand for both skilled and semi-skilled labour in the district. Hospitality in particular can absorb workers from different education levels – college graduates can work in administration, school graduates and dropouts can work in catering, security, housekeeping and transportation.

A. Appendix

A.1 Methodology for Block Selection for Youth Aspiration survey

Sampling Design for Youth Survey

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

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

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

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

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

Selection of Block

We conducted the survey in six blocks in Villupuram with the following stratification - two high performing, two moderate performing and two low performing industrial blocks. To ascertain and rank the blocks into the categories, a multi-faceted approach was undertaken which is outlined as follows. It is to be noted that the ranking of the blocks is on a relative basis that is, ranked with respect to the district and not on a generalized scale.

For categorizing the blocks into High, Medium and Low, we used four data points. We chose variables such as the Count of MSME Clusters, the Number of TANSIDCO Industrial Estates, the Number of SIPCOT Industrial Estates and finally the outstanding credit annual data from the Aggregate Deposit and Bank Credit of Scheduled Commercial Banks (SCBs) at Centre-Level.

Geographic Information System (GIS) was used to capture the Latitude and Longitude of the individual locations of the Centre (RBI Centre – Credit data), MSME Clusters, SIDCO and SIPCOT Industrial Estates. The same were mapped to the respective blocks by overlaying the locations onto the block map of Tamil Nadu. For enabling aggregation of data at block-level and mapping the location, the block-level map of Tamil Nadu was digitised using in-house GIS technologies.

a. RBI's centre level banking data

The RBI's quarterly release of centre level banking data reports the volume of credit and deposits, and the number of accounts and branches for every centre consisting more than at least three branches in for every centre across India. A centre, as per the definition of the RBI, is a self-governing revenue generating body such as a Municipal Corporation and Municipal Council. Given that banking data serves as a good indicator for the level of economic development in a block, these centres shall be mapped to their respective blocks and the aggregates of the centre level data for every bock shall be considered to determine the level of industrial performance.

b. DCMSME Reports

The Development Commissionerate of Micro Small and Medium Enterprises reports the industrial performance at the district level on a yearly basis. The DCMSME reports the prominent industrial clusters in these districts. The same was collected and mapped to the respective blocks in order to identify blocks with high industrial performance.

c. Cluster Observatory Data for Tamil Nadu

The Cluster Observatory run by the Foundation of MSME Clusters (FMC), Ministry of SSI reports the prominent industrial, MSME, Handicraft, Handloom and Service clusters for all the sates in India. The clusters reported for Tamil Nadu was used to identify the blocks with high industrial activity.

d. List of SIDCO and SIPCOT estates in Tamil Nadu

In addition to the same, the presence of an industrial estate and its years of operation serve as good indicators for the level of industrial activity of a block. Hence, the list of SIPCOT and SIDCO estates across Tamil Nadu was obtained and was mapped to their respective blocks. As for the individual scores for the variables such as the Count of MSME Clusters, 'Number of SIDCO Industrial Estates' and 'Number of SIPCOT Industrial Estates', the scores were awarded based on the aggregate number with each number carrying a score of 10, 10 and 100, respectively.

For 'credit data' variable, to accommodate regional differences, percentile calculation was employed at the district-level grouping. The final score of each block was arrived at by considering individual score weights. 25% weights was assigned to MSME and TANSIDCO clusters, 5% weights was assigned to SIPCOT industrial estate clusters and 45% weights was assigned to annual centre-level credit data post awarding of the scores.

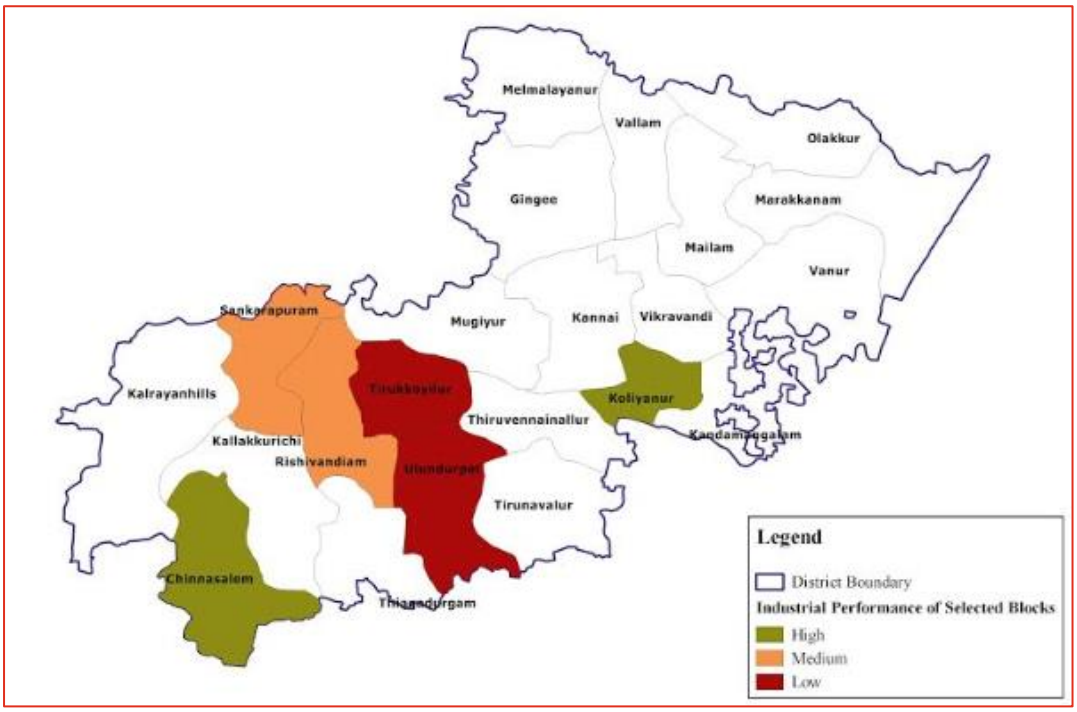
Based on the weights, the total score of each block was calculated. The total score was capped at 100.

The blocks were then categorized as High/Medium/Low, the total score was then converted into percentile values and was categorized into three groups – 0 to 33.33th percentile values for Low, 33.33 to 66.67 percentile value for Medium and 66.67 to 100 percentile values for High. The percentile values were calculated with respect to each district as the base, to accommodate for regional differences. These were triangulated using the Govt. of Tamil Nadu published list of backward blocks in each the district.

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

- Low- Tirukkoyilur, Ulundurpet
- Medium – Rishivandiam, Sankarapuram
- High – Chinnasalem, Koliyanur

Figure 36 Villupuram block selection map

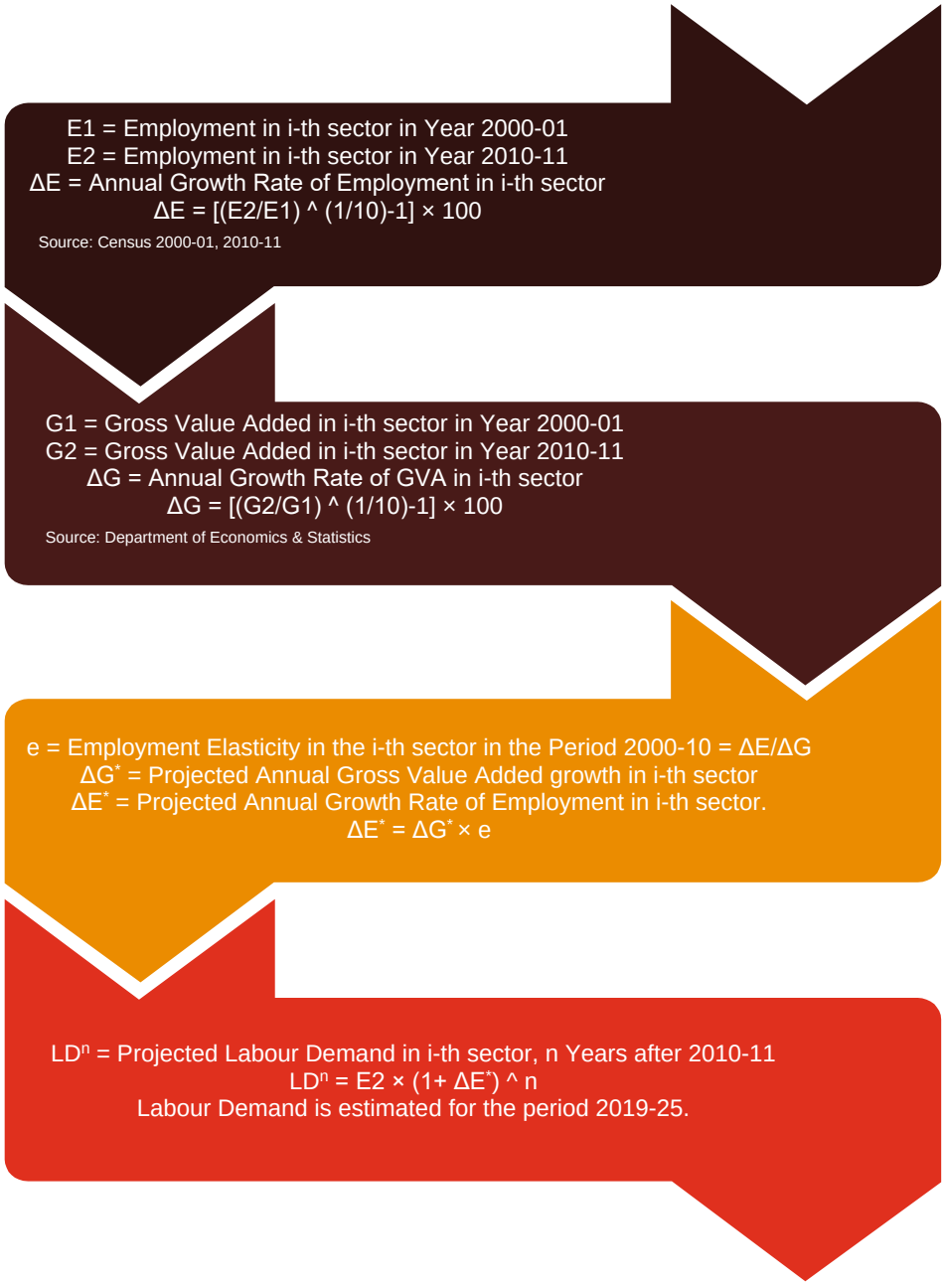


A.2 Methodology for Present and Future Labour Demand – Supply and Gap Estimation

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:

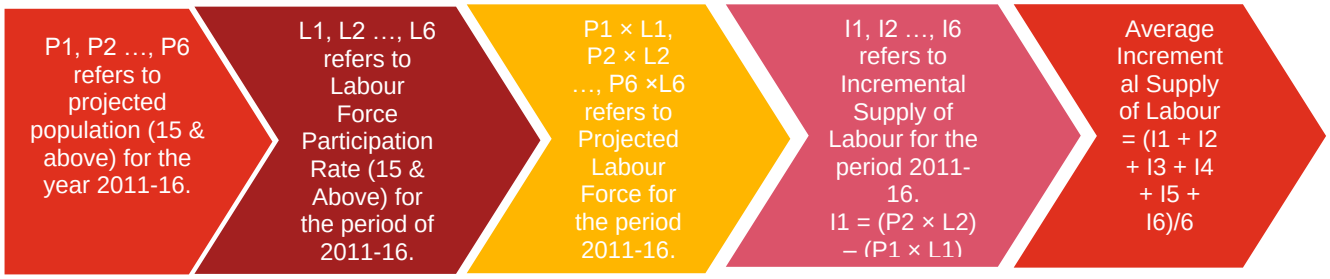
Figure 37 Steps for Demand Estimation



Supply Estimation

We estimated the average incremental supply of labour for the period 2011-16 and assume it to remain constant for the period of 2019-25. Although the population (15 & above) is increasing, the labour force participation is decreasing in the state[26]. 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 38 Steps for Supply Estimation



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

S.No	Stakeholder	Category
55.	Sri Sivakani wood curving and Furniture	Industry
56.	Suba Hollow Blocks	Industry
57.	Pioneer Cold Store And Cladding Pvt Ltd	Industry
58.	Elegant Construction	Industry
59.	Sri Vaithyanathan Lorry Body Labour Works	Industry
60.	K R B Construction	Industry