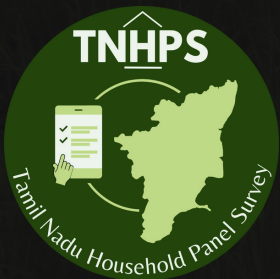


Department of  
Economics  
& Statistics



# Tiruvarur



Tamil Nadu Household Panel Survey  
**Pre-Baseline District Report 2018-19**



**Tamil Nadu Household Panel Survey (TNHPS)  
Pre-Baseline Survey (PBS) District Report 2018-19**

***Tiruvarur District***

February 2024

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Suggested citation:

Ananthpur, K., Venkatachalam, L., & Jafar, K. (2024). 'Tiruvarur - Tamil Nadu Household Panel Survey (TNHPS): Pre-Baseline Survey (PBS) District Reports: 2018-19'. Chennai: Madras Institute of Development Studies, Government of Tamil Nadu. DOI: 10.5281/zenodo.10634877

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## Acknowledgements

We would like to thank the Planning, Development and Special Initiatives Department (P&D) of the Government of Tamil Nadu (GoTN) for initiating the Tamil Nadu Household Panel Survey's Pre-Baseline Survey (TNHPS–PBS), coordinated by the Madras Institute of Development Studies (MIDS), Chennai, India.

Our gratitude goes to Dr. V. Irai Anbu, former Chief Secretary, GoTN and former Commissioner of Department of Economics and Statistics (DES), GoTN under whose guidance this project was conceptualised and implemented. We thank Mr. Ramesh Chand Meena, Additional Chief Secretary, P&D, GoTN; Dr. K. Gopal, former Additional Chief Secretary, P&D, GoTN; Mr. Vikram Kapur, former Additional Chief Secretary, P&D, GoTN and current Additional Chief Secretary, Tamil Nadu Small Industries Development Corporation, GoTN, and Mr. S. Krishnan, former Additional Chief Secretary, Industries, Investment Promotion & Commerce Department, GoTN, and current Secretary, Ministry of Electronics and Information Technology (MeitY), for giving us the opportunity to conduct the TNHPS–PBS to collect preliminary data for key socioeconomic variables. We are also thankful to the previous Planning and Development Secretaries—Dr. T. V. Somanathan, Ms. Jayashree Raghunandan and Mr. Ashish Vachhani—for their support and advice and to the Government of Tamil Nadu for providing the required funding for this survey.

We thank Mr. S. Ganesh, Director, DES, GoTN; Dr. Pinky Jewel, Dr. M. Karunakaran, Dr. Atul Anand, and Mr. Ashok Dongre, former Commissioners, DES, GoTN and Dr. P. Balasubramaniam, Additional Director, DES, GoTN for their support in planning and implementation of the survey. We thank Mr. Ramakrishnan, Additional Director, DES for his continued support. We are thankful to all the members of the Data Analytics Unit for their cooperation. We also extend our gratitude to the DES officials from Tiruvarur district who served during 2018-19—Mr. Thirugnanam, the Deputy Director (DD); Assistant Directors (AD) and Statistical Officers (SO)—for their support in conducting the training, survey supervision and carrying out quality control mechanisms. The high quality of the data collected during the survey was ensured by the Block Statistical Investigators and Assistant Statistical Investigators from Tiruvarur district. We thank them for their efforts.

We want to thank our colleagues from the Survey Research Center (SRC) at the University of Michigan for their continued methodological and technical support throughout the survey. Specifically, Prof. William G Axinn, Research Professor, Survey Research Center/Population Studies Center; Prof. Narayan Sastry, Research Professor, Survey



Research Center/Population Studies Center; Ms. Julie de Jong, Survey Methodologist, SRC; Dr. Raphael Nishimura, Director of Sampling Operations in Survey Research Operations; Prof. Dirgha J. Ghimire, Research Professor, Population Studies Center; and Dr. Emily Treleaven, Research Assistant Professor, SRC, Institute for Social Research.

Prof. P. G. Babu, former Director, MIDS deserves our gratitude for guiding the project team and providing insights on the key findings. We are thankful to Prof. Shashanka Bhide, Senior Advisor, Research Programmes, National Council of Applied Economic Research, New Delhi, and former Director, MIDS, for initiating this project and for his continued guidance. We thank the late Dr. Hukum Chandra, National Fellow, ICAR–Indian Agricultural Statistics Research Institute and sampling consultant for the TNHPS, for his guidance on the sampling and estimation. We thank Prof. Brinda Viswanathan, Professor, Madras School of Economics, for her insights and inputs on the estimation and analysis.

Lastly, the former and current members of the TNHPS Project team deserves thanks for their hard work, without which this mammoth task would not have been possible. We extend our gratitude to the former team members: Research Managers—Ms. Radhika Asrani, Mr. Vinod Ramanarayanan, Mr. Rishi Kishore, and Dr. Karthick V., Research Consultant—Dr. Vipin Valiyatoor, Data Analysts—Ms. Aditya Anand and Mr. Shrikrishna Bhat K., Research Investigators—Ms. Diksha Ramesh, Ms. Laya Zachariah, Ms. Bhavya Shrivastava and Ms. Sreekutty M. Balan, Research Assistants- Ms. Gopika Vipin, Ms. Srinidhi Ramakrishnan, Ms. Anjana Raj, Ms. Miya Kunhathu, Mr. Varun Ramgopal, Mr. Thangasamy P., and Mr. Srivatsan Mohan, and the Research Interns. We appreciate the hard work and contributions of the current team including the Research Manager- Ms. Jyotsna Rosario, Field Manager- Dr. G. V. Shanmugam, IT Consultant- Mr. G. Manivannan, Research Associates—Ms. Gargi Sridharan, Mr. Balamurugan S., Ms. Madhurambal S. and Mr. Balaram Vishnu S., Research Assistant—Ms. Kanishka S. M., and the Research Interns. We are also grateful to the Regional and District level field managers who played a vital role in the training and data collection processes.

## Summary of PBS Findings

### *Demographic Indicators*

- Tiruvarur had a sample size of 6,255 households, of which 65.87 percent of households were from rural areas and 34.13 percent of households were from urban areas.
- The district had a huge demographic dividend with close to three-quarters of the population aged between 6 and 45 years. Around 32.19 percent of the population was between 26-45 years of age.
- The BC and SC social groups were the largest in number, together constituting 81.48 percent of the total households in the district.

### *Education*

- The PBS estimates show that the literacy rate in the district had increased from 82.86 percent (Census, 2011) to 85.57 percent in 2018 and continued to be higher than the state average of 85.40 percent.
- A wide gender gap in literacy rate at 9.78 percent prevailed in the district in 2018, which was, however, lower than the state gender gap at 10.82 percent. The gender gap was wider in rural areas at 10.42 percent than in urban areas at 6.88 percent.
- While almost all the General category—about 95.54 percent—households in the district received formal education, around 21.33 percent of the SC population had not received formal education.

### *Employment*

- The share of unemployed population at 4.76 percent was higher in the district compared to the state estimate of 3.50 percent. Around 46.22 percent of the population was employed and the rest at 49.01 percent were not in the labour force.
- While around 69.78 percent of the male population was employed, the female work participation was just around a quarter at 25.33 percent.
- Around 71.40 percent of the female population was not in the workforce, and among these, majority of them at 72.15 percent were associated with attending to domestic duties as a homemaker.
- Since Tiruvarur is largely a rural district, close to half of the employed population were casual labourer in agriculture sector. Also, around 59.81 percent of the SC and

around 41.34 percent of the DNC population were employed as casual labourers in agriculture sector.

- While casual labour in agriculture sector was predominant source of employment in rural areas, in urban areas of the district, majority of the population was self-employed non-agriculture.

#### *Land Ownership and Assets*

- The percentage of households owning agricultural land in the district was lower at 15.65 percent than the state level estimate of 19.41 percent. DNC category households were predominant agricultural landholders in the district.
- Around 17.11 percent of the households that owned agricultural land in the district depended on rain-fed irrigation alone.
- Around 90.59 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares.
- Around 29.17 percent of the households in Tiruvarur district owned at least one agricultural, allied agricultural or fishing asset. This was higher than the state PBS estimate of 20.92 percent.
- While almost all the General category households in the district owned at least one household asset, around 23.46 percent of SC households did not own any household asset, including a mobile phone.

#### *Household Income*

- The mean annual household income of Tiruvarur district was ₹71,530, which was lower than the state PBS estimate of ₹1,42,752; in the urban areas it was ₹1,30,405 and in rural areas it was ₹59,732. Tiruvarur was ranked thirty-second out of 32 districts with respect to this parameter.
- The mean income from salaried work (₹1,38,670) was the highest, followed by self-employment (₹77,770).
- The Gini coefficient for income inequality in Tiruvarur district (0.531) was lower than the state estimate (0.563). Similar to other districts' estimates, the income inequality across households in rural areas of the district (0.499) was found to be lower to that of the urban areas (0.530).
- While more than 70 percent of the ST category households in Tiruvarur district expected an increase in their future income, more than half of the SC, DNC, MBC, and BC and close to half of the General category households expected their income to remain same.



## Basic Infrastructure

- Around 90.28 percent of the households in the district were living in their own house, which was higher than the state level estimate at 75.16 percent. In rural areas, around 95.92 percent of households lived in an own house whereas in urban areas it was just around 62.72 percent.
- Out of the households that lived in own house in the district, 17.80 percent of houses were built under a government scheme. Higher percentage of SC category households had built houses under a government scheme in the district compared to other social groups.
- More than one-third of the households of the households at 36.91 percent in the district were living in pucca houses, which was much lower than the state level estimate of 63.42 percent.
- The primary source of water for households in the state was piped water into the dwelling in urban areas and public tap/standpipe in rural areas. However, in Tiruvarur district, public tap/standpipe was predominantly used in both rural and urban households.
- Tiruvarur district witnessed an incline in electrification in its rural areas between 2011 and 2018, with an increase from 92.42 percent in 2011 to 96.43 percent in 2018.
- In 2011, firewood was the primary cooking fuel by households in the district at 63.96 percent and LPG was being used by only about 33.41 percent of the households. But in 2018, this scenario had reversed and around 60.01 percent of the households were using LPG.
- More than half of the SC and around 46.85 percent of the DNC households in the district still used firewood as the primary cooking fuel.
- The percentage of households with latrine within the house premises increased from 39.70 percent in 2011 (Census, 2011) to 59.27 percent in 2018 in the district. Tiruvarur was ranked twenty-fifth among the then 32 districts in terms of this indicator.
- Around 60.83 percent of the SC households and around 26.58 percent of MBC households did not have access to a latrine within the house premises.
- The proportion of total households in the district following open defecation had declined considerably from 56.82 percent in 2011 to 40.21 percent in 2018.

## 1. Introduction

### 1.1 Profile of Tiruvarur District

Tiruvarur district in Tamil Nadu was formed in the year 1997 by reorganising Thanjavur and Nagapattinam districts into Thanjavur, Nagapattinam and Tiruvarur districts. It is in the central region of the state, with Thanjavur and Nagapattinam in the north, Nagapattinam in the east, Bay of Bengal in the south, and Thanjavur in the west.

According to Census (2011), Tiruvarur had a total population of 12.64 lakhs, accounting for approximately 1.75 percent of Tamil Nadu's total population, which was 7.21 crores. The district comprised 3.27 lakh households, with 79.61 percent residing in rural areas. The male population was 49.57 percent, and the female population was 50.43 percent. Tiruvarur demonstrated a child-sex ratio of 958.46 compared to the state average of 943.27. Within the social groups, 34.08 percent of the population belonged to the Scheduled Castes, while 0.24 percent belonged to the Scheduled Tribes. The literacy rate in Tiruvarur district stood at 82.86 percent, compared to the state's average of 80.09 percent. The male literacy rate was reported to be 89.13 percent, while the female literacy rate was reported to be 76.72 percent.

In the fiscal year 2018-19, Tiruvarur's Net District Domestic Product was ₹13,36,531 lakh, ranking thirtieth among all districts. The district's per capita Net District Domestic Product was recorded at ₹1,00,102, ranking thirty-first among all districts. Nonetheless, the per capita Net District Domestic Product of the district was below the Tamil Nadu average of ₹1,83,884 (Department of Economics and Statistics, 2023). In terms of sectoral distribution, the primary sector (agriculture and allied) contributes approximately 24 percent to its domestic income, while the secondary (industry) and tertiary (service) sectors contribute approximately 12 percent and 64 percent, respectively (Department of Economics and Statistics, 2017).

According to the Tamil Nadu State Planning Commission (2017a), Tiruvarur ranked twenty-eighth in terms of the Human Development Index with a score of 0.568, indicating the need for improving the development of the general population. It ranked twenty-fifth in the Gender Inequality Index with a score of 0.1, demanding attention to expanding resources to close the gender divide. In terms of the Child Development Index, the district ranked tenth with a score of 0.673, which reflects well upon the district's investment in the development of the younger generation. Additionally, Tiruvarur ranked eighteenth in terms of the Multidimensional Poverty Index with a score of 0.53, considered to be a modest ranking.

Tiruvarur district faces economic challenges with lower rankings in Net District Domestic Product and per capita income. Despite this, the district demonstrates significant dedication to child development, yet it must prioritise improvements in human development, gender equality, and poverty reduction for comprehensive progress.

### *1.2 About the TNHPS and Pre-Baseline Survey*

The Tamil Nadu Household Panel Survey (TNHPS) has been designed as a longitudinal survey, beginning with a Pre-Baseline Survey or the PBS—an extensive household listing activity—followed by a Baseline Survey (Wave 1) and subsequent periodic surveys (Wave 2, Wave 3 etc.). The TNHPS aims to analyse the patterns of change in various socio-economic indicators, including households' income, occupational structures and living conditions.

The PBS collected data on a comprehensive set of socio-economic indicators for the period 2018-19 with the results providing district-level estimates for these indicators, and informing the sampling design and the associated sampling frame for the first wave of the TNHPS. As Census (2021) has not yet commenced, the PBS estimates act as a valid benchmark for the Government of Tamil Nadu in terms of socio-economic development since 2011. The PBS surveyed around 2,12,282 households in the erstwhile 32 districts of Tamil Nadu across 1,476 Primary Sampling Units—684 rural PSUs and 792 urban PSUs.

This report analyses data from the PBS for the Tiruvarur district and presents the findings. Wherever possible, the report compares the district PBS estimates with the most recent census data of Tiruvarur (Census, 2011) and the state PBS estimates (TNHPS-PBS, 2021) to assess the socio-economic development of Tiruvarur district. The sample size for the district was 6,255 households, among which 4,120 households were from rural areas and 2,135 households were from urban areas. The blocks covered during the survey were: Kodavasal, Koradacheri, Kottur, Mannargudi, Nannilam, Needamangalam, Tiruvarur, and Valangaiman.



## 2. Survey Response

For the Pre-Baseline Survey (PBS) 2018-19, a total of 6,774 households in Tiruvarur district were selected using a multi-stage stratified sampling design<sup>1</sup>. The final sample size for PBS was 6,255 households, of which 65.87 percent of households were from rural areas and 34.13 percent of households were from urban areas of the district. The area-wise distribution of the total sample as well as the survey response is given in Table 2.1.

*Table 2.1 Distribution of Sample Households – Response-wise*

Response of Households	Area Type					
	Rural		Urban		Tiruvarur	
	Number of HHs	Percentage	Number of HHs	Percentage	Number of HHs	Percentage
Response	4,120	94.63	2,135	88.22	6,255	92.34
Non-Response	27	0.62	87	3.60	114	1.68
Non-sample	207	4.75	198	8.18	405	5.98
<b>Total</b>	<b>4,354</b>	<b>100</b>	<b>2,420</b>	<b>100</b>	<b>6,774</b>	<b>100</b>

Tiruvarur district had a lower response rate—willingness of households to participate in the TNHPS-PBS—of 92.34 percent compared to the state response rate of 96.5 percent. Rural areas had a higher response rate compared to the urban areas. Around 1.68 percent of households were not willing to participate in the survey. About 5.98 percent of the selected samples were removed as they were not considered as households as per the definition used in the PBS<sup>2</sup>.

<sup>1</sup> Detailed explanation of the Sampling Methodology available in the TNHPS-PBS State Report (see TNHPS-PBS, 2021).

<sup>2</sup> A household is defined as a group of persons normally living together and taking food from a common kitchen. The category called non-sample consisted of institutions, houses of NRIs and other buildings where there was no kitchen.

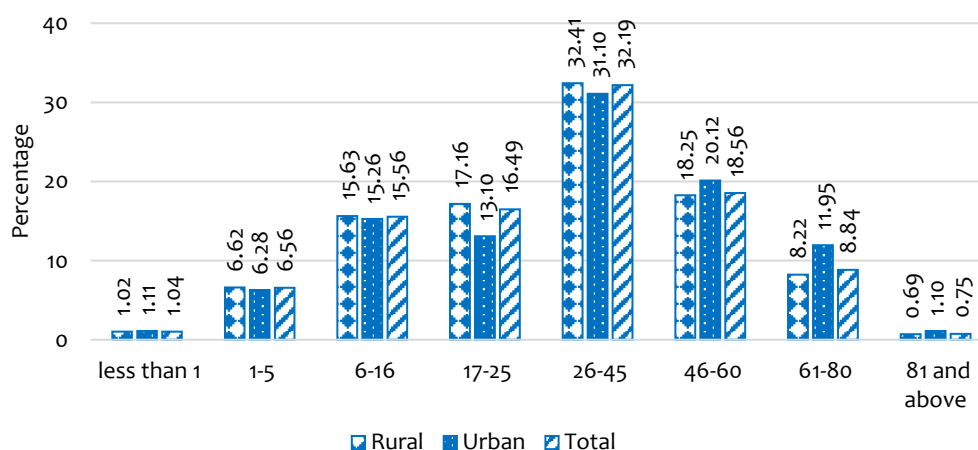
### 3. Key Findings

#### 3.1 Demographic Indicators

As per the PBS estimates, the average household size<sup>3</sup> in the district had reduced from 3.87 in 2011 (Census, 2011) to 3.52 in 2018. Around 47.91 percent of the population in the district were male, and 52.08 percent of the population were female. Around 21.35 percent of the households in Tiruvarur district were headed by females, which was comparatively higher than the state estimate of 18.93 percent (TNHPS-PBS, 2021).

Chart 3.1 shows the age-wise distribution of the population in Tiruvarur district.

Chart 3.1 Age-wise Distribution of Population



As per the PBS estimates, almost one third of the population in the district were in the age group of 26 to 45 years. The age group—17-60 years—in the district was 67.24 percent, which was slightly higher to the state estimate of 66.00 percent (TNHPS-PBS, 2021).

The percentage of currently married population was higher in urban areas compared to the rural areas of the district. A higher percentage of males were currently married compared to females. The widowed female population was notably higher than the widowed male population.

The religion-wise distribution of the households in the district as per the PBS estimates shows that 92.56 percent of the households practiced Hinduism, 3.62 percent practiced Islam and 3.82 percent followed Christianity.

<sup>3</sup> Household size is defined as the number of family members currently living in the household during the PBS survey.

Table 3.1 shows the social group-wise distribution of the households in the district.

*Table 3.1 Social Group-wise Distribution of Households*

Social Group	Percentage
SC	48.74
ST	0.34
BC	32.74
MBC	11.05
Denotified Communities (DNC)	6.39
General	0.63
DK/RF	0.10
<b>Total</b>	<b>100</b>

As per the PBS estimates, the highest percentage of households in Tiruvarur district belonged to the SC category. The percentages of SC and ST households in the district were 48.74 percent and 0.34 percent in 2018.

### 3.2 Development Indicators

In this section we discuss the PBS estimates on various development indicators such as literacy rate and employment status in Tiruvarur district.

#### 3.2.1 Education

The change in literacy rate of Tiruvarur district and the state of Tamil Nadu during the period 2011 and 2018 is given in Table 3.2. As per Census (2011), a person aged seven and above who can both read and write with understanding in any language is treated as literate. In the PBS, literacy rate is measured including those that have formal schooling and those that can read and write a simple sentence.

*Table 3.2 Literacy Rates between the Census (2011) and the PBS (2018)*

Gender	Rural		Urban		Tiruvarur		Tamil Nadu	
	2011	2018	2011	2018	2011	2018	2011	2018
Male	87.96	89.53	93.79	96.70	89.13	90.70	86.77	90.97
Female	74.38	79.11	85.79	89.82	76.72	80.92	73.40	80.15
<b>Total</b>	<b>81.10</b>	<b>84.09</b>	<b>89.71</b>	<b>93.02</b>	<b>82.86</b>	<b>85.57</b>	<b>80.09</b>	<b>85.40</b>

\*The represented trend should be understood under the context that Census does 100 percent enumeration whereas in the PBS, a sample is surveyed

As per Census (2011), the literacy rate in Tiruvarur district at 82.86 percent was higher than the state average of 80.09 percent. The PBS estimates show that in the year 2018, the literacy rate in Tiruvarur district had increased to 85.57 percent, which continued to be

higher than the state average of 85.40 percent. Nevertheless, the district had registered a 2.71 percent increase in literacy rate in this period when the state had registered a 5.31 percent increase. In terms of literacy rate, Tiruvarur was ranked fifteenth among the then 32 districts in 2018 (TNHPS-PBS, 2021).

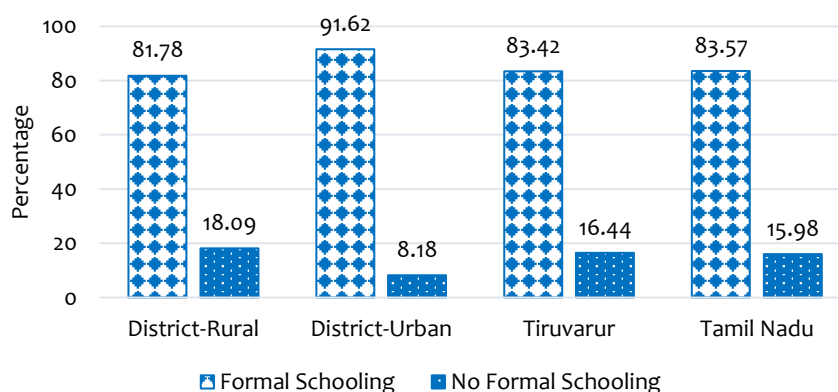
Both male and female literacy rates in Tiruvarur district had recorded an increase during the period under consideration, though a wide gender gap still prevailed. The gender gap in literacy rate had declined from 12.41 percent in 2011 to 9.78 percent in 2018, which is lower than the state gender gap of 10.82 percent in 2018.

Both rural and urban literacy rates recorded an increase between 2011 and 2018. However, the rural literacy rate was still 8.93 percent lower than the urban literacy rate in 2018. The gender gap in literacy rate was much higher in rural areas at 10.42 percent than in urban areas at 6.88 percent.

### 3.2.2 Education Status of Population (Age 7 and above)

In this section we discuss the education status of the population aged seven and above in Tiruvarur district. The area-wise education status of population in the district is given in Chart 3.2.

Chart 3.2 Formal Schooling of the Population (Age 7 and above) – Area-wise Percentages



\*Others and Don't Know/Refuse to Answer categories are not included in any chart, unless their value is substantially high. Therefore, the total might not add up to 100 percent.

Chart 3.2 shows that around 83.42 percent of the specified population in the district attended formal schooling, which was similar to the state estimate. The percentage of population with formal education in urban areas was much higher than in rural areas of the district.

Chart 3.3 Formal Schooling of the Population - Gender-wise Percentages

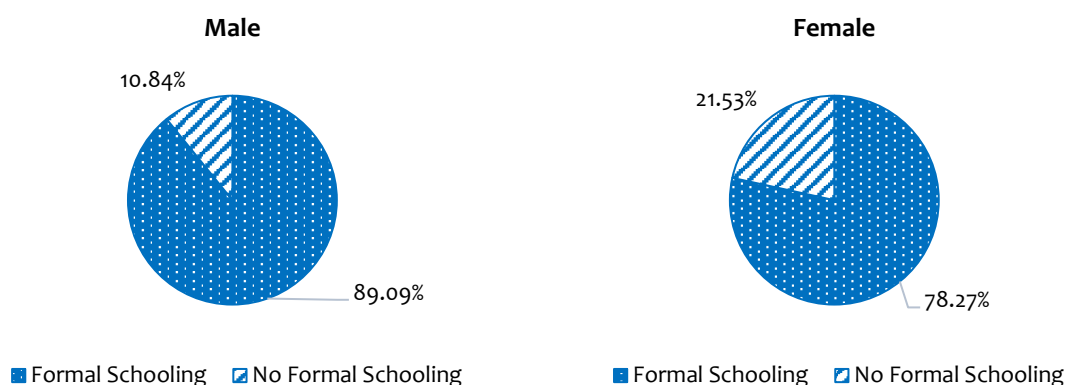


Chart 3.3 shows that the percentage of the population that acquired formal education in the district was much higher among males compared to females, again denoting a wide gender gap, like in literacy.

A district level analysis on educational status had shown greater divergence across various social groups.

Table 3.3 Formal Schooling of Population - Social Group-wise Percentages

Education Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Formal Schooling	78.54	92.65	89.69	86.85	84.65	95.54	83.42
No Formal Schooling	21.33	6.69	10.16	13.04	15.16	4.46	16.44
Others and DK/RF	0.13	0.66	0.15	0.11	0.19	0.00	0.14
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.3 shows that while more than 90 percent of the General and ST category population and more than 80 percent of the BC, MBC, DNC population in the district received formal education, around 21 percent of the SC population had not received formal education.

To take this analysis further, Table 3.4 gives detailed information on the current highest level of educational attainment of the population that received formal education.



*Table 3.4 Highest Formal Educational Attainment of Population - Area-wise Percentages*

Educational Attainment	Area Type		
	Rural	Urban	Tiruvarur
Primary (I to V)	22.92	19.20	22.24
Middle School (VI to VIII)	23.09	21.10	22.72
High School (IX to X)	27.18	24.47	26.68
Higher Secondary (XI to XII)	14.59	13.88	14.46
Bachelor's degree	6.30	11.23	7.20
Diploma Degree	3.55	4.60	3.74
Post Graduate Degree	2.21	5.30	2.77
Other Higher Education	0.01	0.02	0.01
Others/DK/RF	0.16	0.21	0.17
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Around 86.10 percent of the district's population with formal education had completed schooling up to higher secondary level. The percentage of population that completed tertiary education—such as bachelor's degree, diploma, or post graduate degree and above—was 13.72 percent, which was lower than the state estimate of 20.02 percent. Also, this figure was higher for urban areas than rural areas of the district.

*Table 3.5 Highest Formal Educational Attainment of Population – Gender-wise Percentages*

Educational Attainment	Gender		
	Male	Female	Tiruvarur
Primary (I to V)	20.45	24.08	22.24
Middle School (VI to VIII)	22.84	22.61	22.72
High School (IX to X)	29.82	23.45	26.68
Higher Secondary (XI to XII)	12.72	16.27	14.46
Bachelor's degree	6.59	7.83	7.20
Diploma Degree	5.50	1.92	3.74
Post Graduate Degree	1.99	3.58	2.77
Other Higher Education	0.01	0.01	0.01
Others/DK/RF	0.08	0.26	0.17
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.5 shows a similar pattern of schooling levels completed by males and females in the specified population in the district. In tertiary education, a higher percentage of females completed post-graduate degree compared to males, whereas the case with respect to diploma degree percentages were the reverse.

*Table 3.6 Highest Formal Educational Attainment of Population – Social Group-wise Percentages*

Educational Attainment	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Primary (I to V)	23.94	37.00	20.14	21.05	22.79	7.84	22.24
Middle School (VI to VIII)	23.57	25.71	22.47	20.19	23.31	10.22	22.72
High School (IX to X)	27.61	21.50	25.20	27.65	25.66	31.48	26.68
Higher Secondary (XI to XII)	14.22	8.61	14.50	15.08	15.10	18.74	14.46
Bachelor's degree	5.80	3.60	9.17	7.11	6.51	21.24	7.20
Diploma Degree	2.87	1.43	4.40	5.63	3.73	2.43	3.74
Post Graduate Degree	1.82	1.44	3.95	3.13	2.67	8.04	2.77
Other Higher Education	0.01	0.00	0.00	0.03	0.00	0.00	0.01
Others/DK/RF	0.16	0.71	0.17	0.12	0.22	0.00	0.17
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

The social group-wise analysis in Table 3.6 shows that most of the SC and ST population in the district completed only up to high school level. The percentage of population with tertiary education—bachelor’s degree and above—was quite high among the General category at 31.71 percent, followed by the BC category at 17.72 percent. Similar to the national and state level trend, the percentage of population with higher educational qualification in the district was lower among SC and ST categories.

About 16.44 percent of the population had not received formal education in Tiruvarur district (refer Chart 3.2). The PBS investigated the ability of those who could read and write a simple sentence with understanding or functional literacy.

*Table 3.7 Functional Literacy of Population with No Formal Schooling – Area-wise Percentages*

Functional Literacy	Area Type		
	Rural	Urban	Tiruvarur
Yes	12.75	17.11	13.11
No	86.92	82.53	86.56
DK/RF	0.33	0.36	0.33
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.7 shows the functional literacy status of the population with no formal schooling. Only 13.11 percent of the population without formal schooling had functional literacy. The specified population group in urban areas of the district had better functional literacy rate than the rural areas.

*Table 3.8 Functional Literacy of Population with No Formal Schooling - Social Group-wise Percentages*

Functional Literacy	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Yes	12.97	9.86	12.43	13.62	16.65	9.69	13.11
No	86.75	90.14	87.42	85.56	83.35	90.31	86.56
DK/RF	0.28	0.00	0.15	0.82	0.00	0.00	0.33
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.8 shows the functional literacy status of population with no formal schooling, across various social group categories. The functional literacy was low across all social groups. The DNC category population at 16.65 percent had the highest percentage of population with functional literacy, followed by MBC category population at 13.62 percent.

### 3.2.3 Employment Status

This section looks at the employment status of the household members, types of employment that they were engaged in, the unemployment status at the district level and comparison of these findings with the state PBS estimates. In the PBS, the population aged 14 years and above has been classified as employed, unemployed and not in the labour force<sup>4</sup>.

The employed category—population aged 14 years and above—includes the following:

- (i) People who are self-employed in agriculture,
- (ii) People who are self-employed in allied agricultural activities,
- (iii) People who are self-employed in non-agricultural activities,
- (iv) People who worked as casual labourers in agriculture,
- (v) People who worked as casual labourers in industry,
- (vi) People who worked as casual labourers in the service sector,
- (vii) People who worked as casual labourers in other domains,
- (viii) People who worked as salaried employees in the government sector,

<sup>4</sup> Percentage of population employed = (Number of employed persons 14 years and above/Total population of the district 14 years and above) \*100

Percentage of population unemployed = (Number of unemployed persons 14 years and above/Total population of the district 14 years and above) \*100

Percentage of population not in the labour force = (Number of persons 14 years and above not in workforce/Total population of the district 14 years and above) \*100

- (ix) People who worked as salaried employees in the private sector,
- (x) People who are involved in multiple occupations, and
- (xi) People who are involved in other types of work.

The unemployed category includes those aged 14 years and above, who did not work but was actively seeking and/or available for work.

The not in the labour force category consists of the following:

- (i) People who attended educational institutions,
- (ii) People who attended domestic duties only,
- (iii) Rentiers, pensioners, remittance recipients, etc.,
- (iv) People who are not able to work due to disability and
- (v) Others (including begging, etc.).

*Chart 3.4 Employment Status of Population (Age 14 years and above) – Area-wise Percentages*

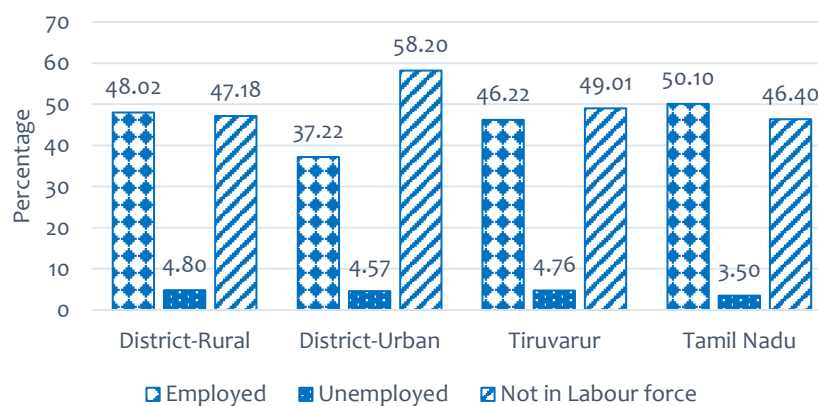
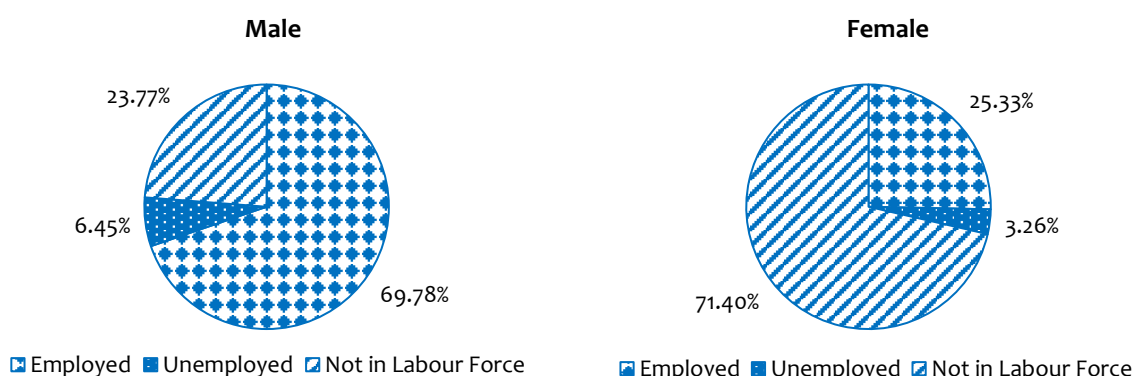


Chart 3.4 shows that the overall percentage of employed population—14 years and above—in the district was lower than the state estimate. Also, the share of unemployed population was higher in the district compared to the state estimate. The percentage of population employed was higher in rural areas of the district than the urban areas. Tiruvarur district was ranked twenty-eighth among all districts in Tamil Nadu in terms of employed population and ranked fifth highest in terms of the unemployed population.

Chart 3.5 Employment Status of the Population – Gender-wise Percentages



While 69.78 percent of the male population was employed, the female work participation was only 25.33 percent. Decreased female labour force participation has been well documented at the national level (Das et al., 2015; Desai, 2017; Desai & Joshi, 2019). Though the district female work participation was higher than the national average of 23.3 percent in 2017-18 (National Statistical Office, 2019), the same was lower than the state estimate of 29.96 percent (TNHPS-PBS, 2021). Around 71.40 percent of the female population was not in the workforce, and among these, majority of them at 72.15 percent were associated with attending to domestic duties as homemakers (see Chart 3.7). As per the state PBS estimates, Tiruvarur district was ranked twenty-sixth in terms of employed female population and ranked fifth highest in terms of unemployed female population.

Table 3.9 Work type of Employed Population – Area-wise Percentages

Work Type	Area Type		
	Rural	Urban	Tiruvarur
Self Employed Agriculture	5.09	3.78	4.92
Self Employed Non-Agriculture	6.92	28.31	9.79
Self Employed Allied Agriculture	1.63	1.10	1.56
Casual Labourer Agriculture	52.40	6.99	46.31
Casual Labourer Industry	6.38	6.84	6.44
Casual Labourer Service	5.09	13.69	6.24
Casual Labourer (Others)	9.25	6.17	8.84
Salaried Worker Government	3.03	10.81	4.08
Salaried Worker Private	9.22	21.81	10.90
Multiple Occupation	0.84	0.42	0.78
Other	0.08	0.09	0.08
DK/RF	0.07	0.00	0.06
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.9 shows that around half of the population were employed as casual labourers in agricultural sector, whereas the highest proportion of the working population in the state was salaried workers in the private sector at 21.82 percent (TNHPS-PBS, 2021). The casual



labourers in the agricultural sector were most common in rural areas of the district and higher percentage of population from urban areas were self-employed in non-agricultural sector.

*Table 3.10 Percentage of Employed Population Engaged in Different Types of Livelihood Activities – Social Group-wise Percentages*

Work Type	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Self Employed Agriculture	1.03	0.00	10.35	7.37	17.09	7.93	4.92
Self Employed Non-Agriculture	4.99	1.49	20.47	11.50	8.56	23.00	9.79
Self Employed Allied Agriculture	1.47	0.00	1.16	1.96	3.85	0.00	1.56
Casual Labourer Agriculture	59.81	0.00	21.29	36.86	41.34	1.49	46.31
Casual Labourer Industry	7.27	0.00	6.01	4.27	4.24	0.00	6.44
Casual Labourer Service	4.80	28.00	7.88	11.79	2.82	6.51	6.24
Casual Labourer (Others)	9.90	8.91	7.44	6.02	9.54	0.00	8.84
Salaried Worker Government	1.94	23.63	7.77	5.59	4.40	19.72	4.08
Salaried Worker Private	8.49	36.51	15.61	13.67	5.84	40.03	10.90
Multiple Occupation	0.26	1.46	1.58	0.97	2.32	0.00	0.78
Other	0.03	0.00	0.22	0.00	0.00	1.32	0.08
DK/RF	0.00	0.00	0.23	0.00	0.00	0.00	0.06
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

In Tiruvarur district, agriculture sector has been predominant for employment opportunities. At state level, around 33.33 percent of the SC population and 41.32 percent of the ST population were involved as casual labourers in agriculture sector (TNHPS-PBS, 2021). While most of the SC, MBC, BC, and DNC category population in the district were involved in agriculture sector as casual labourers, most of the ST and General category population were involved as salaried worker in private sector. Compared to the state estimates, the proportion of SC population involved as casual labourers in agriculture at district level was much higher, but the proportion of ST population involved as casual labourers in agriculture at district level was much lower.

*Chart 3.6 Composition of Population Not in the Labour Force – Area-wise Percentages*

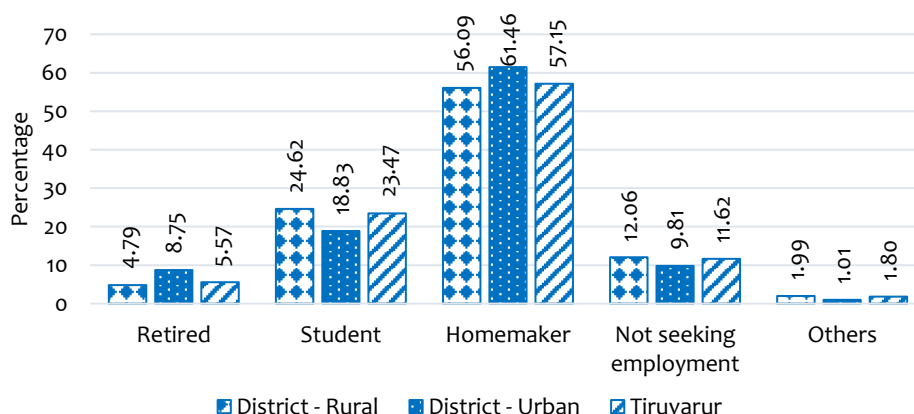
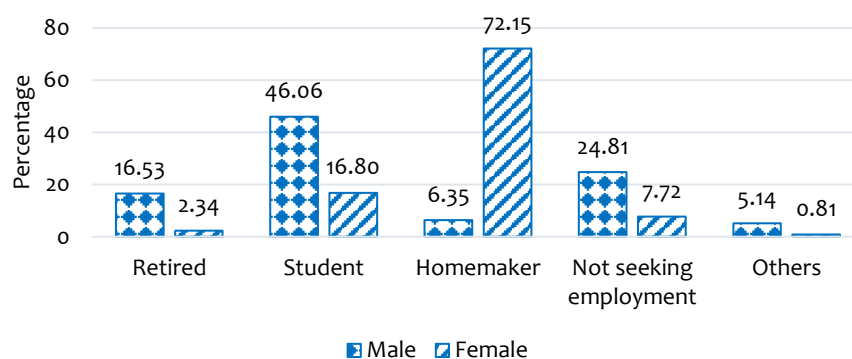


Chart 3.6 shows that, similar to the trend at the state level, more than half of the population that was not in the labour force in the district comprised homemakers involved in unpaid domestic duties of the household, followed by students. While the proportions of the population that were not seeking employment and were students were higher in rural areas than urban areas, the percentages of retired people and homemakers were higher in urban areas than rural areas.

*Chart 3.7 Composition of the Population Not in the Labour Force – Gender-wise Percentages*



While Chart 3.3 represents the lower female involvement in formal education, Chart 3.7 shows the staggeringly lower female involvement in higher education compared to men as only 16.80 percent of the female not in the labour force population was students. Similar to the state trend, majority of the male not in the labour force population was students, whereas a majority of females were homemakers. It must be noted that the study did not capture unpaid domestic labour or any other form of unpaid labour carried out by women.

*Table 3.11 Composition of the Population Not in the Labour Force – Social Group-wise Percentages*

Current Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Retired	4.38	17.50	6.63	4.87	5.93	24.78	5.57
Student	28.59	17.41	18.27	21.96	23.68	14.91	23.47
Homemaker	52.57	52.11	62.10	57.80	58.45	51.78	57.15
Not seeking employment	11.89	12.98	10.93	13.24	11.32	6.18	11.62
Others	2.12	0.00	1.68	1.73	0.62	1.57	1.80
DK/RF	0.45	0.00	0.39	0.39	0.00	0.78	0.39
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.11 shows that within all social groups, the percentage of homemakers was the largest compared to other categories in the district. The DNC and SC categories had a higher percentage of not-working population as students compared to the other social groups. Although majority of the employed DNC and SC population was casual labourers (see Table 3.10), the not-working population belonging to the student category was high for these two social groups.

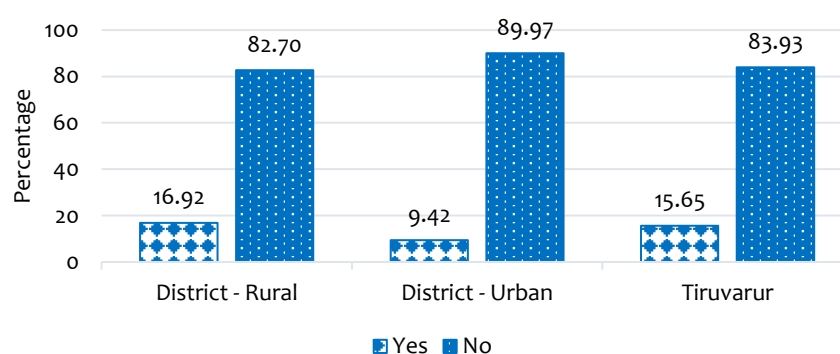
### 3.3 Socio-Economic Indicators

The PBS estimates for various socio-economic indicators of Tiruvarur district such as ownership of agricultural land, household assets and income are shown in this section.

#### 3.3.1 Ownership of Agricultural Land

The PBS estimates of ownership of agricultural land at the household level in the rural and urban areas of Tiruvarur district is given in Chart 3.8. The TNHPS PBS definition of land ownership does not include leased in land or other forms of holdings. Data was collected only on the ownership of agricultural land. The fourth round of National Family Health Survey (NFHS, 2015-16) was a secondary source of data that followed the same definition for ownership of agricultural land.

Chart 3.8 Ownership of Agricultural Land – Area-wise Percentages



The percentage of households owning agricultural land in the district was lower than the state level estimate of 19.41 percent. The district was ranked twenty-third in the state in terms of agricultural land ownership. Area-wise comparison shows that the percentage of agricultural land ownership in rural areas of the district was lower than the state rural estimate of 29.00 percent; and percentage share of agricultural land ownership in urban areas was higher than the state urban estimate of 8.61 percent (TNHPS-PBS, 2021).

Table 3.12 Type of Agricultural Land Owned by the Households – Area-wise Percentages

Type of Agricultural Land	Area Type		
	Rural	Urban	Tiruvarur
Only Irrigated Agriculture Land	79.57	64.95	78.06
Only Unirrigated Agriculture Land	15.80	28.51	17.11
Both Irrigated and Unirrigated Agriculture Land	4.45	2.02	4.20
DK/RF	0.18	4.52	0.63
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.12 shows that, as per the PBS estimates, around 17.11 percent of the households that owned agricultural land in Tiruvarur district depended on rain-fed irrigation alone. A

lesser percentage of urban households owned irrigated agricultural land compared to the rural households in the district. Canal irrigation, tank irrigation, tube and dug well irrigation are the major sources of irrigation in Tiruvarur district (Tamil Nadu State Planning Commission, 2017b). The proportion of households having irrigated agricultural land was higher in the district at 78.06 percent compared to the state estimate of 50.03 percent.

*Table 3.13 Ownership of Agriculture Land - Social Group-wise Percentages*

Agricultural Land Ownership	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Yes	6.80	0.00	22.63	21.98	35.81	31.97	15.65
No	92.90	100.00	76.77	77.39	64.06	68.03	83.93
DK/RF	0.30	0.00	0.60	0.64	0.13	0.00	0.42
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

An analysis on the social group-wise ownership of agricultural land by households in Table 3.13 shows that while DNC and General category households were the predominant agricultural landholders in the district, SC category households were the least agricultural land holders. Though 25 percent of the ST households at the state level owned agricultural land, none of the ST households sampled in the district owned agricultural land.

Based on the size of agriculture land, the PBS classified the land owned by the households into marginal, small, semi-medium, medium, and large. Of the households that owned agricultural land, the percentage of households under each size category is given in Table 3.14.

*Table 3.14 Size of Agriculture Land Owned by the Households – Area-wise Percentages*

Size of Agricultural Land (in Hectares)	Area Type		
	Rural	Urban	Tiruvarur
Marginal (0.01 - 0.99)	74.60	61.76	73.36
Small (1 - 1.99)	17.22	17.26	17.23
Semi Medium (2 - 3.99)	6.99	12.23	7.49
Medium (4 - 9.99)	1.05	8.15	1.73
Large (10 and above)	0.14	0.60	0.19
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.14 shows that 90.59 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares. This figure is higher when compared to the state level estimate of 89.33 percent. The share of semi medium, medium and large landholdings was lower than that of the state estimates of 7.64 percent, 2.26 percent and 0.77 percent respectively.

### 3.3.2 Ownership of Agricultural, Allied Agricultural and Fishing Assets

In this section, we discuss the ownership of agricultural, allied agricultural and fishing assets such as tractor, pump set, dairy animals, poultry birds, mechanised and non-mechanised boats, amongst the households of Tiruvarur district.

Chart 3.9 Ownership of Agricultural, Allied Agricultural and Fishing Assets – Area-wise Percentages

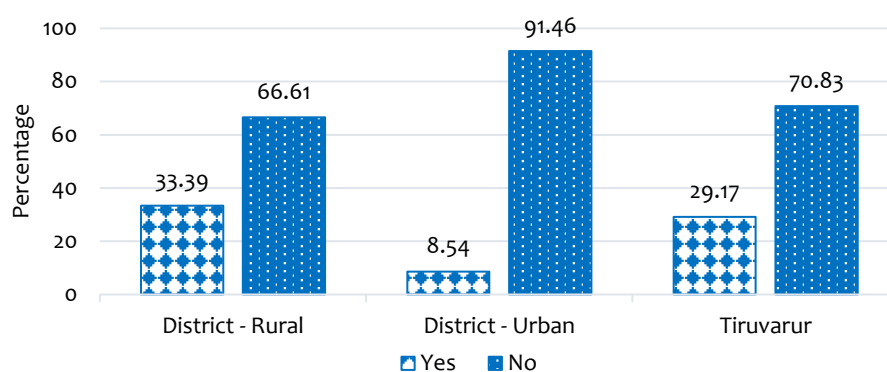
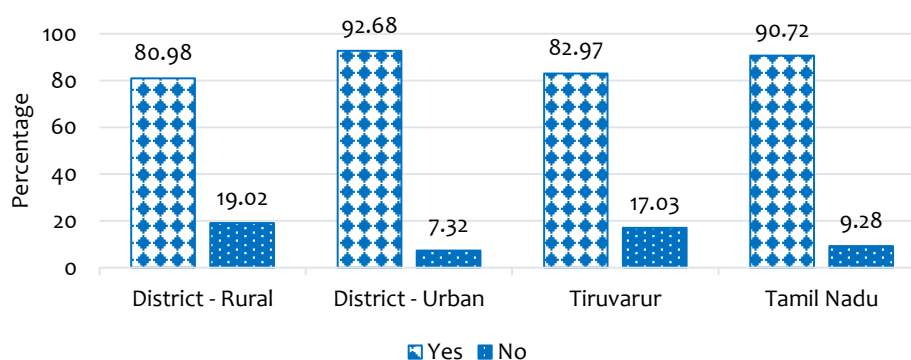


Chart 3.9 shows that only 29.17 percent of the households in Tiruvarur district owned at least one agricultural, allied agricultural and fishing assets. This estimate was higher than the state estimate of 20.92 percent. The ownership of such assets was higher in rural areas than urban areas. The ownership pattern was higher in both urban and rural areas of the district compared to their respective state urban estimates at 7.67 percent and state rural estimates at 32.69 percent (TNHPS-PBS, 2021).

### 3.3.3 Presence of Household Assets

Chart 3.10 shows the percentage of households in Tiruvarur district that own at least one household asset. Household assets include Air Conditioner (AC), refrigerator, two-wheeler, four-wheeler, and mobile phones. The PBS estimates found that the combination of mobile phone and two-wheeler was the predominantly owned assets in rural areas whereas a combination of refrigerator, two-wheeler and mobile phone was largely owned in the urban areas.

Chart 3.10 Ownership of at least one Household Asset – Area-wise Percentages





The percentage of households owning at least one household asset in Tiruvarur district was lower than the state estimate. Within the district, urban areas had higher percentage of households owning at least one household asset than the rural areas.

*Table 3.15 Presence of at least one Household Asset - Social Group-wise Percentages*

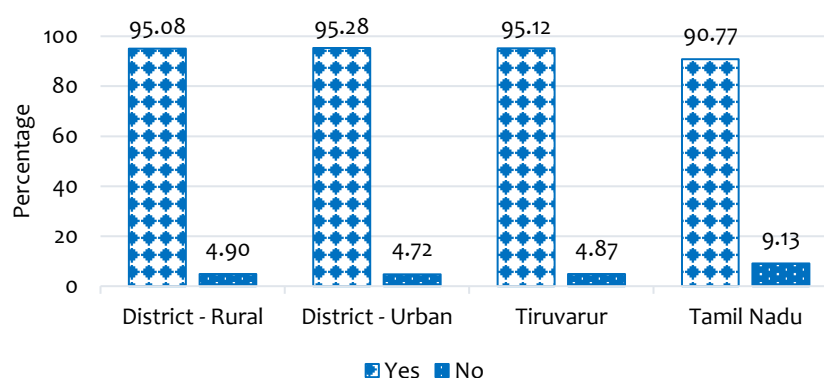
Presence of Household Asset	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Yes	76.54	92.88	90.01	87.91	85.87	98.75	82.97
No	23.46	7.12	9.99	12.09	14.13	1.25	17.03
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

The PBS estimates show that, while almost all General category households and more than 85 percent of ST, MBC, DNC, and BC households owned at least one household asset, 23.46 percent of SC households did not even own a mobile phone.

### 3.3.4 Possession of Ration Card

Possession of a ration card can be treated as a determinant of socio-economic status at the household level. It plays a vital role in inclusion (or exclusion) of households from the government welfare schemes such as the availability of subsidised items from public distribution system and subsidised LPG connection, for instance. The percentages of households that possessed ration card in rural and urban areas of Tiruvarur district are given in Chart 3.11.

*Chart 3.11 Possession of Ration Card – Area-wise Percentages*



The percentage of households that possessed ration card in rural, urban, and overall areas of Tiruvarur district are given in Chart 3.11. The district estimates on the percentage of households that possessed ration card was higher than the state estimate. Within the district, the possession of ration card in both rural and urban households were similar.

Table 3.16 Possession of Ration Card at the Household Level - Social Group-wise Percentages

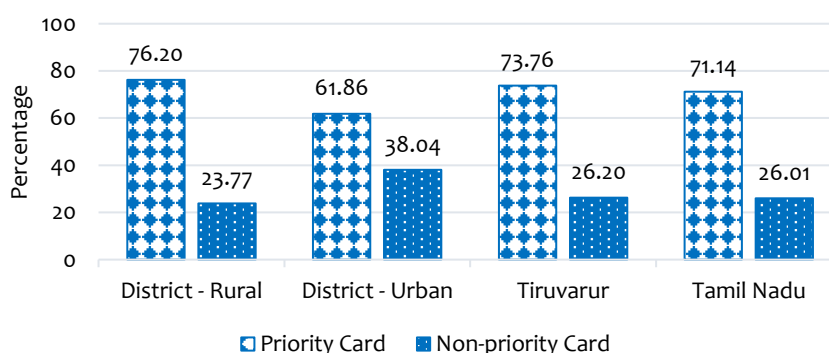
Possession of Ration Card	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Yes	93.84	95.19	96.52	95.72	96.57	96.14	95.12
No	6.12	4.81	3.48	4.28	3.43	3.86	4.87
DK/RF	0.03	0.00	0.00	0.00	0.00	0.00	0.02
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Social group-wise estimates on the possession of ration card at the household level is shown in Table 3.16. More than 90 percent of households belonging to all social groups possessed ration cards in the district.

### 3.3.5 Type of Ration Card

According to the National Food Security Act (NFSA) 2013, ration cards are broadly categorised into Priority Households (PHH) and Non-Priority Households (NPHH). Households with priority ration card are the target group of various social welfare schemes such as Antyodaya Anna Yojana (AAY) among others. The percentages of households possessing priority and non-priority ration cards in rural and urban areas of Tiruvarur district are given in Chart 3.12.

Chart 3.12 Type of Ration Card at the Household Level – Area-wise Percentages



The percentage of households possessing priority ration cards in the district was higher compared to the state level estimate. A higher percentage of rural households possessed priority cards than urban households.

## 3.4 Household Income

### 3.4.1 Annual Household Income from Various Sources in the year 2017-2018

In this section we analyse the annual income of households in Tiruvarur district from various sources in the year 2017-2018. The sources of income are earned from activities

such as agriculture, allied agriculture, salaried work, self-employed, wage labour and other sources. The category ‘other sources’ consists of other income sources such as pension, remittances, investments, and other mixed categories. Table 3.17 shows the mean income of households that depend on various sources of income in Tiruvarur district.

*Table 3.17 Mean Annual Household Income from Different Sources in the FY 2017-2018 (INR)*

Source	Rural	Urban	Tiruvarur	Tamil Nadu
Agriculture	50,989	1,08,841	56,231	61,830
Allied Agriculture	9,610	20,586	10,272	38,576
Salaried	1,15,610	1,97,169	1,38,670	2,29,857
Self Employed	61,640	1,05,194	77,770	1,47,403
Wage Labour	35,774	45,736	36,594	47,734
Other Sources	47,411	1,12,516	60,123	97,646
<b>Income from all Sources</b>	<b>59,732</b>	<b>1,30,405</b>	<b>71,530</b>	<b>1,42,752</b>

The mean household income was higher among the households with salaried income and lower among the households that depended on allied agriculture. Overall, the mean annual household income of Tiruvarur district was 49.89 percent lesser than the state estimates of ₹1,42,752. Among the then 32 districts, Tiruvarur was positioned last in terms of mean annual household income (TNHPS-PBS, 2021).

The mean household income in the rural areas of Tiruvarur district was ₹59,732, which was lesser than the state rural estimate of ₹92,765 (TNHPS-PBS, 2021). The mean household income was higher among the households that depended on salaried income. Lower mean income was reported among the households that engaged in allied agriculture.

The mean household income in the urban areas of Tiruvarur district was ₹1,30,405, which was lesser than the state urban estimate of ₹1,99,629 (TNHPS-PBS, 2021) and higher than the district rural estimate of ₹59,732. The mean household income was higher among the households that depended on salaried income. Lower mean income was reported among the households that depended on allied agriculture.

### *3.4.2 Income Inequality in Tiruvarur District*

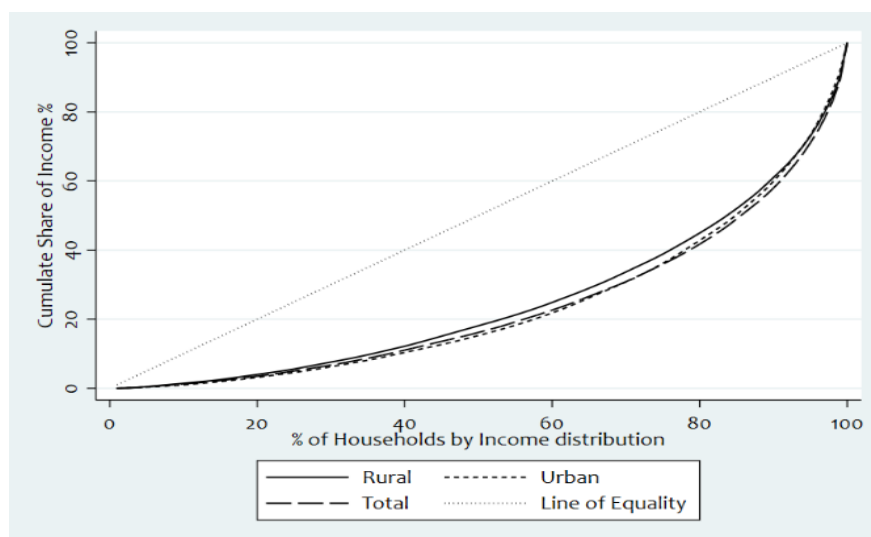
The Gini coefficient measures inequality levels in income or wealth where the coefficient value of 0 denotes perfect equality and 1 denotes perfect inequality (across households). The income inequality in Tiruvarur district (0.531) was lower than the state estimate

(0.563)<sup>5</sup>. Similar to other district estimates, the income inequality across households in urban areas of the district (0.530) was found to be higher than that of the rural areas (0.499).

*Table 3.18 Gini Coefficient of Income Inequality*

Area	Gini coefficient
Rural	0.499
Urban	0.530
Tiruvarur	0.531
<b>Tamil Nadu</b>	<b>0.563</b>

*Chart 3.13 Lorenz Curve and Income Inequality*



Lorenz curve is a graphical representation of inequality in the distribution of income or wealth of the population. Chart 3.13 shows that in Tiruvarur district, the bottom 60 percent of the household held around 20 percent of the total income; the bottom 80 percent of households held around 40 percent of total income and the top 20 percent of households have around 60 percent of total income. Both Chart 3.13 and Table 3.18 show that income inequality was higher in urban areas compared to the rural areas of the district.

### *3.4.3 Households' Expectation of Change in their Income in the Next 5 Years*

Besides the present income of the households (in the year 2017-18), the PBS also investigated the households' expectation of change in income in the next five years. The

<sup>5</sup> Other studies have estimated the Gini coefficient for Tamil Nadu, for instance - Chandrasekhar et al. (2021) estimated the Gini coefficient of income inequality for Tamil Nadu as 0.378 in 2018-19 using data from the Periodic Labour Force Survey (PLFS) (2018-19).

expectation of a household head on the change in the household's income in the future depends on various factors such as probability of a household member's entry (or exit) to (or from) the labour market, expected possession of financial and non-financial assets and so on. These variables can capture the level of optimism—or pessimism—that each household has about their future economic status.

Table 3.19 shows the area-wise percentage of households expecting an increase, decrease or no change in their income in Tiruvarur district.

*Table 3.19 Households' Expectation of Change in Income in the Next 5 Years – Area-wise Percentages*

Expectation of Change in Household Income	Area Type			
	Rural	Urban	Tiruvarur	Tamil Nadu
Higher	32.19	37.86	33.16	50.06
Lower	5.37	4.09	5.15	8.17
About the same	56.69	52.33	55.95	31.66
DK/RF	5.75	5.72	5.75	10.11
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Around one-third of the households in the district expected their income to increase in the following five years. The percentage of households expecting a decline in their future income were lesser in urban areas compared to the rural areas. Also, more than half of the households in the district anticipated their future income to remain the same.

*Table 3.20 Households' Expectation of Change in Income in the Next 5 Years - Social Group-wise Percentages*

Expectation of Change in Household Income	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Higher	30.72	73.61	34.96	36.85	33.77	39.63	33.16
Lower	5.48	0.00	5.25	6.24	0.97	0.00	5.15
About the same	57.07	26.39	54.57	52.46	62.87	47.47	55.95
DK/RF	6.73	0.00	5.21	4.45	2.40	12.90	5.75
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Around 73.61 percent of the ST households in Tiruvarur district expected an increase in their future income. Higher proportion of MBC category households expected their income to decrease in the next five years, compared to other social groups.



### 3.5 Basic Infrastructure

In this section we discuss the PBS estimates of variables such as ownership and type of houses, electrification status, drinking water and sanitation.

#### 3.5.1 House Ownership Status

The area wise percentage of households that have own house, stay at rented houses and other houses are given in Chart 3.14.

Chart 3.14 Ownership Status of the Households' Dwelling/ House – Area-wise Percentages

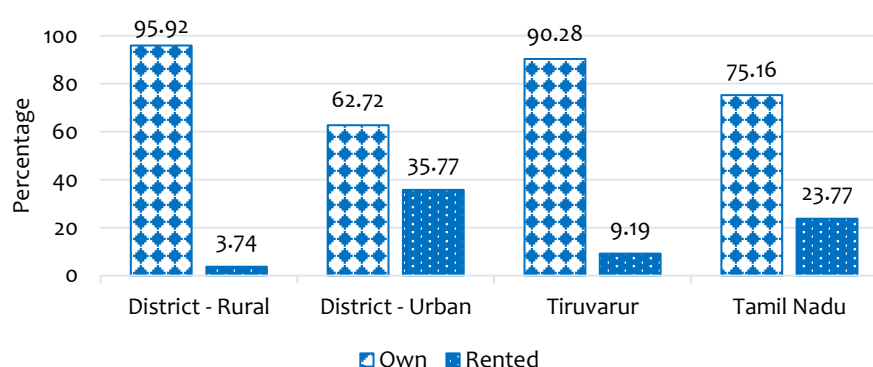


Chart 3.14 shows that the proportion of households living in their own house in the district was higher than the state level estimate. Tiruvarur district was ranked fifth among the then 32 districts of Tamil Nadu in terms of percentage of households living in their own house (TNHPS-PBS, 2021). While 95.92 percent of the households in rural areas lived in their own house, more than one-third of urban households were relying on rented houses for their stay. Around 1.5 percent of households in the urban areas of the district was living in other houses such as relative's house, encroachments etc. This data does not capture the ownership of a house in a different geographical location.

Table 3.21 Ownership Status of the Household' Dwelling/House - Social Group-wise Percentages

Ownership Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Own	96.96	85.58	80.65	88.43	94.94	63.22	90.28
Rented	2.80	14.42	18.44	10.94	4.46	35.51	9.19
Others	0.14	0.00	0.89	0.49	0.60	1.27	0.46
DK/RF	0.10	0.00	0.02	0.14	0.00	0.00	0.07
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.21 shows that more than 90 percent of SC and DNC households in the district lived in their own house, whereas only 63.22 percent of the General category households were doing the same.

A detailed analysis of ownership of houses showed that out of the 90.28 percent households (see Chart 3.14) that lived in an own house in the district, 17.80 percent of houses were built under a government scheme, which was higher than the state estimate of 14.12 percent (TNHPS-PBS, 2021). The social group-wise analysis of this parameter is given below.

*Table 3.22 House Constructed Under a Government Scheme - Social Group-wise Percentages*

House Constructed under Government Scheme	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Yes	26.00	0.00	6.37	11.02	15.14	18.19	17.80
No	73.98	100	93.40	88.98	84.86	81.81	82.12
DK/RF	0.02	0.00	0.23	0.00	0.00	0.00	0.08
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.22, shows that, in Tiruvarur district, SC households had the highest percentage of houses built under a government scheme compared to other social groups. While 35 percent of the house-owning ST category households in the state of Tamil Nadu had constructed a house under a government scheme (TNHPS-PBS, 2021), none of the thirty-six house-owning ST households surveyed in Tiruvarur district had done so.

### 3.5.2 House Type

Based on the material used for wall/roof or quality of houses, the PBS classifies the houses as Kutccha, Pucca and Semi-pucca. The percentage of houses that come under each type of houses are as follows.

*Chart 3.15 Type of House – Area-wise Percentages*

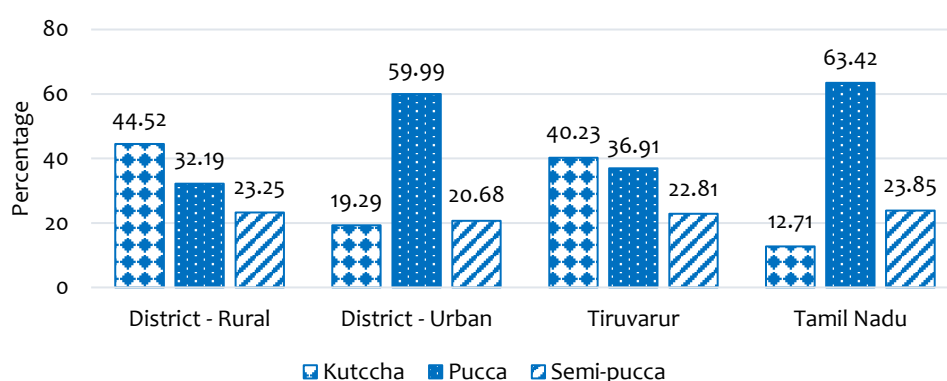


Chart 3.15 shows that majority of households in Tiruvarur district was living in Kutccha houses. The percentage of Kutccha houses in the district was much higher than the state estimates. The district estimate on the percentage of households living in pucca houses

was lower than the state estimate at 63.42 percent. While 75.22 percent of state urban households and 52.93 percent of state rural households lived in pucca houses (TNHPS-PBS, 2021), only 59.99 percent of district urban households and 32.19 percent of district rural households lived in pucca houses.

### 3.5.3 Primary Drinking Water Source

In this section we discuss on the PBS findings on primary source of drinking water of the households in Tiruvarur district. The primary sources<sup>6</sup> of water are: bottled water, piped water into dwelling, piped water to yard or plot, public tap or standpipe, tube well or borehole. Other water sources include protected well, unprotected well, rainwater collection and surface water (tank/pond/river/dam).

Chart 3.16 Primary Drinking Water Source of Households

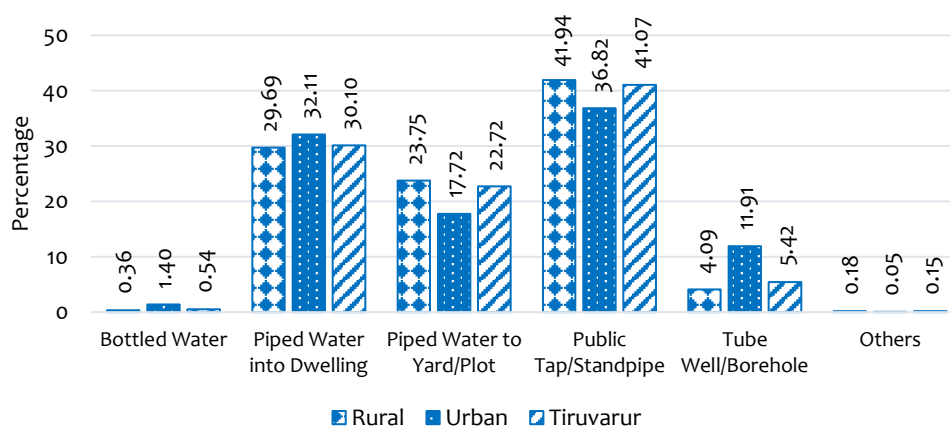


Chart 3.16 shows that 41.07 percent of households in Tiruvarur district were using public tap or standpipe as their primary source of drinking water, which was higher than the state estimate of 32.84 percent. The state estimates showed that piped water into the dwelling in urban areas at 37.02 percent and public tap/standpipe in rural areas at 44.51 percent were the primary water sources of households (TNHPS-PBS, 2021). However, in Tiruvarur district, public tap/standpipe was predominantly used in both rural and urban households.

### 3.5.4 Electricity

Tamil Nadu witnessed a mass electrification during the last decade. A comparison of households with electricity connection between Census (2011) and the PBS estimates shows that state was close to the status of complete electrification in case of urban areas. The electrification status improved in rural areas as well.

<sup>6</sup> Primary source - Water that is availed for the greater part of the year

Chart 3.17 Comparison of Households with Electricity between Census (2011) and PBS (2018)

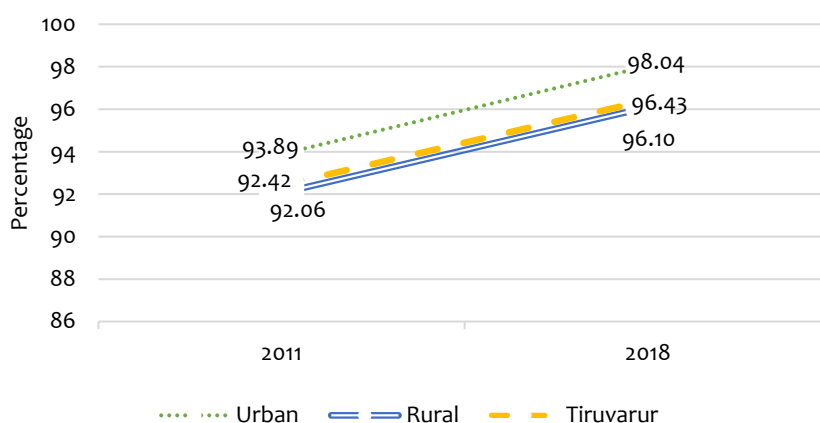


Chart 3.17 shows the electrification status of households in Tiruvarur district, along with a comparison to the electrification status during Census (2011). A rapid electrification happened in rural and urban areas of Tiruvarur district between 2011-2018. The rate of growth of households with electricity was slightly lesser in rural areas compared to the urban areas. However, the electrification status in the district at 96.43 percent was lesser than the state estimate of 97.6 percent. Tiruvarur was ranked twenty-sixth among the then 32 districts in terms of electrification (TNHPS-PBS, 2021).

### 3.5.5 Primary Cooking Fuel

A comparison of Census (2011) and the PBS estimates on the primary cooking fuel<sup>7</sup> used by the households in the district is given in Chart 3.18.

Chart 3.18 Comparison of Primary Cooking Fuel – Tiruvarur and Tamil Nadu

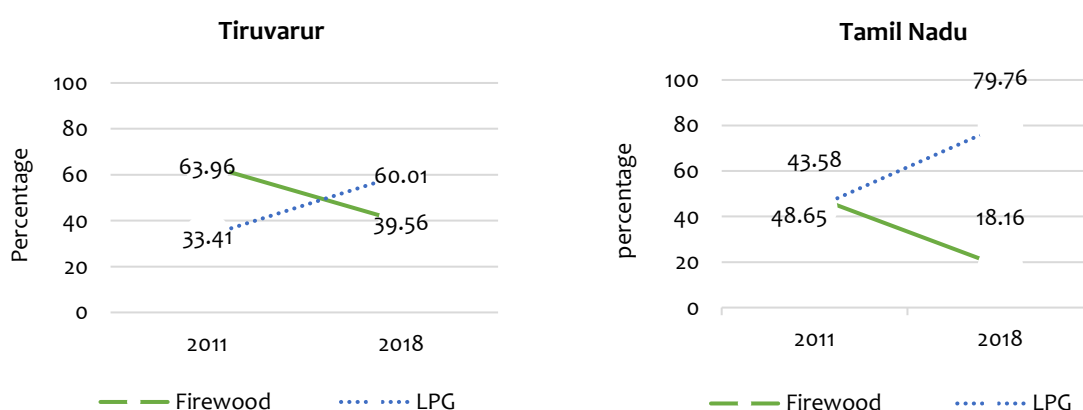


Chart 3.18 shows that, although the use of LPG as the primary cooking fuel had increased tremendously in the district from 2011 (Census, 2011) to 2018 encompassing around 60

<sup>7</sup> Primary Cooking Fuel: Fuel that is used for the greater part of the year

percent of the households, firewood was still used by around 40 percent of the households. Compared to other districts of Tamil Nadu, Tiruvarur district was ranked twenty-eighth in terms of LPG use and ranked fifth in terms of firewood use as primary cooking fuel (TNHPS-PBS, 2021).

Chart 3.19 Comparison of Primary Cooking Fuel – Rural and Urban

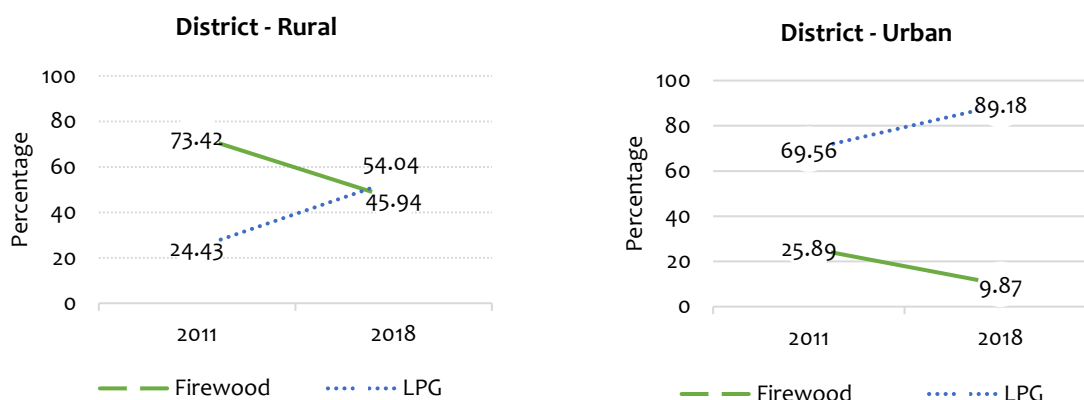


Chart 3.19 shows that the predominant usage of cooking fuel in rural areas in the district changed significantly from firewood to LPG in the period 2011-18. LPG uptake had increased further in urban areas, and that of firewood had dropped during the same period.

Table 3.23 shows the use of various fuels for cooking among households of different social groups in Tiruvarur district.

Table 3.23 Primary Cooking Fuel - Social Group-wise Percentages

Primary Cooking Fuel	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Firewood	53.26	14.33	21.65	30.30	46.85	7.94	39.56
Kerosene	0.10	0.00	0.15	0.22	0.26	0.00	0.14
LPG	46.37	85.67	77.84	69.31	52.65	92.06	60.01
Others	0.06	0.00	0.31	0.17	0.24	0.00	0.16
DK/RF	0.21	0.00	0.04	0.00	0.00	0.00	0.13
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

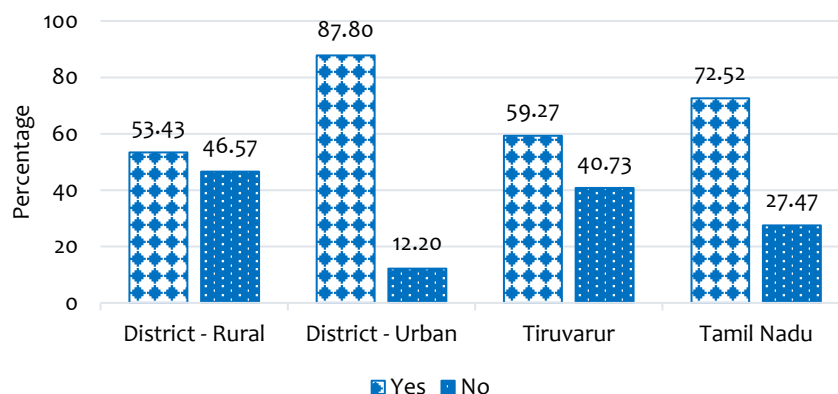
\*Others Include Electricity, Gobar Gas, Solar Energy, etc.

Table 3.23 shows that, around 92.06 percent General households used LPG as the primary cooking fuel, whereas more than half of the SC category households and around 46.85 percent of the DNC households still used firewood as the primary cooking fuel.

### 3.5.6 Sanitation

The PBS estimates on households with and without latrine is given in Chart 3.20.

Chart 3.20 Presence of Latrine within the Premises of the Household – Area-wise Percentages



The percentage of households with latrine within house premises had increased from 39.70 percent in 2011 (Census, 2011) to 59.27 percent in 2018. However, the percentage of households equipped with latrine facilities in the district was lower than the state level estimate. It is pertinent to note that around 46.57 percent of the rural households did not have access to a latrine within their house premises. As per the state estimates, Tiruvarur district was positioned twenty-fifth among the 32 districts in terms of this indicator (TNHPS-PBS, 2021).

Table 3.24 Presence of Latrine within the premises of the Household - Social Group-wise Percentages

Latrine within House Premises	Social Group						
	SC	ST	BC	MBC	DNC	General	Tiruvarur
Yes	39.17	78.70	80.25	73.42	75.43	98.70	59.27
No	60.83	21.30	19.75	26.58	24.57	1.30	40.73
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.24 shows the presence of latrine within the premises of the household across various social groups. While almost all the General category households had a latrine within the premises of the houses, around 60.83 percent of the SC households did not have latrine within the premises of the household.

The presence of latrine facilities in the premises of households owning different type of houses in total, rural and urban areas of Tiruvarur district was compared in Charts 3.21.

Chart 3.21 Presence of Latrine in the Premises of Different Type of Houses – Area-wise Percentages

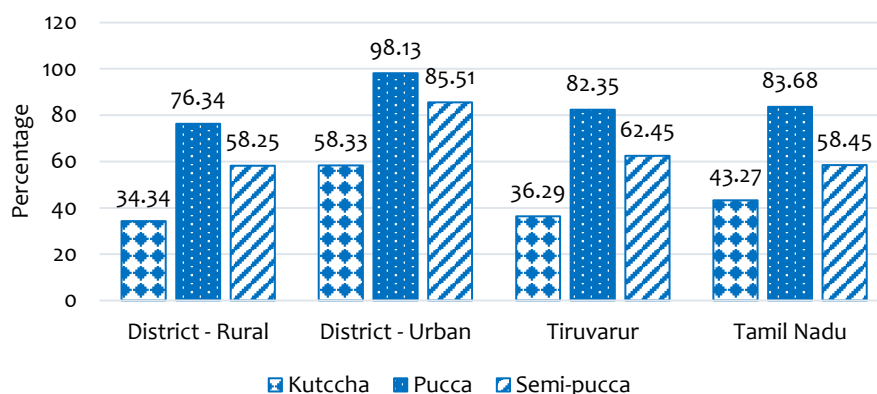


Chart 3.21 shows that the percentage of pucca houses with latrine facilities was higher than semi-pucca and kutccha houses with latrine facilities in the district. Except for semi-pucca houses, the percentages of latrine facilities in kutccha and pucca houses in the district were lower than their respective state estimates. A higher percentage of kutccha, pucca and semi-pucca houses in urban areas of the district had latrine facilities than rural areas.

The percentage of total households in the district following open defecation had declined from 56.82 percent in 2011 (Census, 2011) to 40.21 percent in 2018. The alternative practices of defecation followed by 40.73 percent of the district’s households (see Chart 3.20) that did not have a latrine within the premises of the house is shown in Chart 3.22.

Chart 3.22 Alternate Practices of Defecation by the Households without Latrine – Area-wise Percentages

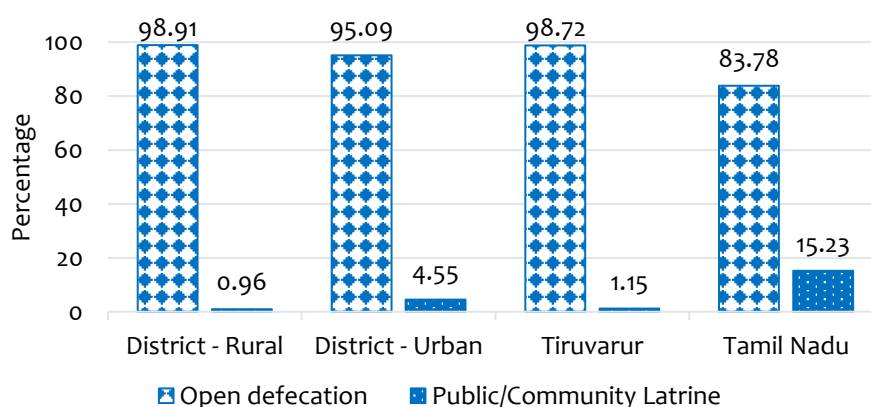


Chart 3.22 shows that 98.72 percent of households without latrine within the house premises in Tiruvarur district were following open defecation, which was significantly higher than the state level estimate. The practice of open defecation was higher in rural areas than `urban areas of the district. As per the state PBS report, Tiruvarur district was ranked sixth in terms of the percentage of total households following open defecation.



## 4. Conclusions and Recommendations

The Pre-Baseline Survey (PBS) 2018-19 of Tiruvarur district was conducted from the sample of 6,225 households in the district who were willing to participate in the survey. The survey focused on five major indicators: i) demographic indicators, ii) development indicators, iii) socio-economic indicators, iv) household income and v) basic infrastructure.

The PBS estimates reveal that Tiruvarur performed better than the state in terms of education status of the population, house ownership and lower level of income inequality. The district estimates on the literacy rate was marginally higher than the state estimate. The district was ranked fifth among all districts of Tamil Nadu in terms of the percentage of households living in their own houses. The income inequality in Tiruvarur district (0.531) was lower than the state estimate (0.563). In addition, amongst the households that owned agricultural land, the households owning irrigated agricultural land was higher in the district compared to the state estimate.

Although the district literacy rate was comparatively better, the growth in literacy rate between 2011 and 2018 in Tiruvarur district was only 2.71 percent, while the state had registered a growth rate of 5.27 percent. “The Chief Minister’s Breakfast Scheme for Primary School Children” will play a significant role, especially in rural areas of the district, in increasing the rate of formal schooling. As per the PBS estimates in 2018-19, Tiruvarur was largely a rural district as 83.40 percent of the households was residing in rural areas. However, the percentage of households owning agricultural land in the district was lower than the state estimates.

The district showed a minimal progress compared to the state in terms of employment level, household income, and infrastructure indicators. The district estimates on the percentages of employed population, female work participation rate, mean annual household income, household asset ownership, LPG use as primary cooking fuel, and households equipped with latrine facilities in the district were lower than the corresponding state estimates. The mean annual household income of the district was 49.89 percent lesser than the state estimate. Among the then 32 districts, Tiruvarur was positioned last in terms of mean annual household income. It is pertinent to note that, 46.31 percent of the employed population were casual labourers in agriculture sector. Effective implementation of “Naan Mudhalvan Scheme” will be helpful in upskilling the youth in terms of various employment opportunities, thereby supporting the livelihood enhancement of the rural poor.

Compared to other districts of Tamil Nadu, Tiruvarur was ranked twenty-eighth in terms of LPG use as the primary cooking fuel. The district was consequently ranked fifth in terms of higher firewood use as the primary cooking fuel. Due to a lesser percentage of the households equipped with latrine facilities, the district estimates on the percentage of households following open defecation was much higher than the state estimate. Tiruvarur district was ranked sixth in terms of high level of open defecation. Government policies targeting 100 percent LPG connection will help reduce the usage of firewood as the primary cooking fuel. Increased provision of latrine facilities at household level or at the community level should also be given due consideration to reduce the open defecation significantly.

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**A collaborative project between  
Department of Economics and Statistics &  
Madras Institute of Development Studies**

The Tamil Nadu Household Panel Survey (TNHPS) is designed as a longitudinal survey where a set of sample households in Tamil Nadu will be surveyed at specific intervals to analyse the change in their socio-economic conditions over time. The TNHPS aims to analyse how individuals, families, communities, and society are transforming in Tamil Nadu. Understanding this transformation is important for informed policy-making and for society in today's modern world where open links with other states and countries lead to enormous movement of people, ideas, technology, capital, and goods and services. The Pre-Baseline Survey (PBS) elicited information from 2,12,282 households across different districts of Tamil Nadu on a comprehensive set of socio-economic indicators. This serves as the sampling frame for the Baseline Survey (BLS) of subsequent rounds of comprehensive surveys of 7,45,653 individuals in the state.

Based on the information collected during the PBS 2018-19, this report provides a baseline on key socio-economic and demographic indicators of the district along with brief notes on the methods and processes followed in collecting, processing and analysis of data. As the first state-level initiative for collecting comprehensive household panel data through digital data collection methods, TNHPS emerges as an important source of information for evidence-based policymaking in the state.



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