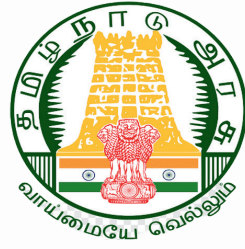
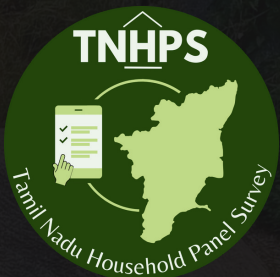


Department of
Economics
& Statistics



Viluppuram



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**

Viluppuram District

February 2024

**Principal Investigator
& Project Coordinator**

Prof. Kripa Ananthpur

Principal Investigator

Prof. L. Venkatachalam

Principal Investigator

Dr. K. Jafar

**In collaboration with
the Department of Economics and Statistics,
Government of Tamil Nadu**

Cover page image source: <http://tinyurl.com/5n9xwya9>

This work is licensed under a Creative Commons
Attribution-NonCommercial-NoDerivatives 4.0
International License



Madras Institute of Development Studies
79, Second Main Road, Gandhi Nagar
Adyar, Chennai 600020
Ph: 24411574 / 24412589
www.mids.ac.in

Suggested citation:

Ananthpur, K., Venkatachalam, L., & Jafar, K. (2024). 'Viluppuram - 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.10634927

Table of Contents

List of Tables	2
List of Figures	3
Acknowledgements	4
Summary of Findings	6
1. Introduction	10
1.1 Profile of Viluppuram District	10
1.2 About the TNHPS and Pre-Baseline Survey (PBS)	11
2. Survey Response	12
3. Key Findings	13
3.1 Demographic Indicators	13
3.2 Development Indicators	14
3.2.1 Education	14
3.2.2 Education Status of Population (Age 7 and above)	15
3.2.3 Employment Status	19
3.3 Socio-Economic Indicators	24
3.3.1 Ownership of Agricultural Land	24
3.3.2 Ownership of Agricultural, Allied Agricultural and Fishing Assets	26
3.3.3 Presence of Household Assets	27
3.3.4 Possession of Ration Card	28
3.3.5 Type of Ration Card	28
3.4 Household Income	29
3.4.1 Annual Household Income from Various Sources in the year 2017-2018	29
3.4.2 Income Inequality in Viluppuram District	30
3.4.3 Respondents' Expectation of Change in their Income in the Next 5 Years	31
3.5 Basic Infrastructure	32
3.5.1 House Ownership Status	32
3.5.2 House Type	34
3.5.3 Primary Drinking Water Source	34
3.5.4 Electricity	35
3.5.5 Primary Cooking Fuel	35
3.5.6 Sanitation	37
4. Conclusions and Recommendations	40
References	41

List of Tables

Table 2.1	Distribution of Sample Households – Response-wise	12
Table 3.1	Social Group-wise Distribution of Households	14
Table 3.2	Literacy Rates between the Census (2011) and the PBS (2018)	14
Table 3.3	Formal Schooling of Population - Social Group-wise Percentages	16
Table 3.4	Highest Formal Educational Attainment of Population - Area-wise Percentages	17
Table 3.5	Highest Formal Educational Attainment of Population - Gender-wise Percentages	17
Table 3.6	Highest Formal Educational Attainment of Population - Social Group-wise Percentages	18
Table 3.7	Functional Literacy Status of Population with No Formal Schooling – Area-wise Percentages	18
Table 3.8	Functional Literacy of Population with No Formal Schooling - Social Group-wise Percentages	19
Table 3.9	Work type of Employed Population – Area-wise Percentages	21
Table 3.10	Employed Population Engaged in Different Types of Livelihood Activities – Social Group-wise Percentages	22
Table 3.11	Composition of Population Not in the Labour force - Social Group-wise Percentages	23
Table 3.12	Type of Agricultural Land Owned by the Households – Area-wise Percentages	25
Table 3.13	Ownership of Agricultural Land - Social Group-wise Percentages	25
Table 3.14	Size of Agricultural Land Owned by Households – Area-wise Percentages	26
Table 3.15	Presence of at least one Household Asset - Social Group-wise Percentages	27
Table 3.16	Possession of Ration Card at the Household Level - Social Group-wise Percentages	28
Table 3.17	Mean Annual Household Income from Different Sources in the FY 2017-2018 (INR)	29
Table 3.18	Gini Coefficient of Income Inequality	30
Table 3.19	Households' Expectation of Change in Income in the Next 5 Years – Area-wise Percentages	31
Table 3.20	Households' Expectation of Change in Income in the Next 5 Years - Social Group-wise Percentages	32
Table 3.21	Ownership Status of the Households' Dwelling/House - Social Group-wise Percentages	33
Table 3.22	House Constructed Under a Government Scheme - Social Group-wise Percentages	33
Table 3.23	Primary Cooking Fuel - Social Group-Wise Percentages	37
Table 3.24	Presence of Latrine within the premises of the Household - Social Group-wise Percentages	38

List of Figures

Chart 3.1	Age-wise Distribution of Population	13
Chart 3.2	Formal Schooling of the Population (Age 7 and above) – Area-wise Percentages	15
Chart 3.3	Formal Schooling of the Population – Gender-wise Percentages	16
Chart 3.4	Employment Status of Population (Age 14 years and above) – Area-wise Percentages	20
Chart 3.5	Employment Status of the Population – Gender-wise Percentages	21
Chart 3.6	Composition of Population Not in the Labour Force – Area-wise Percentages	22
Chart 3.7	Composition of the Population Not in the Labour Force – Gender-wise Percentages	23
Chart 3.8	Ownership of Agricultural Land – Area-wise Percentages	24
Chart 3.9	Ownership of Agricultural, Allied Agricultural and Fishing Assets – Area-wise Percentages	26
Chart 3.10	Ownership of at least one Household Asset – Area-wise Percentages	27
Chart 3.11	Possession of Ration Card – Area-wise Percentages	28
Chart 3.12	Type of Ration Card at the Household Level – Area-wise Percentages	29
Chart 3.13	Lorenz Curve and Income Inequality	31
Chart 3.14	Ownership Status of the Households' Dwelling/House – Area-wise Percentages	32
Chart 3.15	Type of House – Area-wise	34
Chart 3.16	Primary Drinking Water Source of Households	34
Chart 3.17	Comparison of Households with Electricity between Census (2011) and PBS (2018)	35
Chart 3.18	Comparison of Primary Cooking Fuel – Viluppuram and Tamil Nadu	36
Chart 3.19	Comparison of Primary Cooking Fuel – Rural and Urban	36
Chart 3.20	Presence of Latrine within the Premises of the Household – Area-wise Percentages	37
Chart 3.21	Presence of Latrine in the Premises of Different Types of Houses – Area-wise Percentages	38
Chart 3.22	Alternate Practices of Defecation by the Households without Latrine – Area-wise Percentages	39

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 Jowel, 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 Viluppuram district who served during 2018-19—Ms. R. Latha, 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 Viluppuram 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 deserve 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 Findings

Demographic Indicators

- Viluppuram had a sample size of 6,755 households, of which 71.58 percent of households were from rural areas and 28.42 percent of households were from urban areas.
- The district had a huge demographic dividend with close to two-thirds of the population aged between 6 and 45 years. Almost one-third of the population was between 26-45 years of age.
- The MBC and SC social groups were the largest in number, together constituting around 74 percent of the total households in the district.

Education

- The literacy rate in the district had increased from 71.88 percent (Census, 2011) to 80.27 percent in 2018 but continued to be lesser than the state average of 85.40 percent.
- A wide gender gap in literacy rate at 15.67 percent prevailed in the district in 2018, which was higher than the state gender gap of 10.82 percent. The gender gap was almost twice as wider in rural areas at 17.28 percent than in urban areas at 9.20 percent.
- While more than 95 percent of the General category population in the district had received formal education, only around half the ST population had done so.

Employment

- The share of unemployed population at 3.79 percent was higher in the district compared to the state estimate of 3.50 percent. Around 48.70 percent of the population was employed and the rest at 47.46 percent were not in the labour force.
- While 68.77 percent of the male population was employed, the female work participation was only 29.41 percent.
- About 68.03 percent of the female population was not in the workforce, and among these, majority of them at 73.90 percent were associated with attending to domestic duties as a homemaker.
- Around 28.37 percent employed population depended on casual labour in the agricultural sector for employment. Around 63.61 percent of the ST population and

41.14 percent of the SC population were engaged as casual labourers in agriculture, which were considerably higher than their respective state level estimates.

- While self-employment in non-agriculture was predominant in urban areas, casual labour in the agricultural sector was most common in rural areas of the district.

Land Ownership and Assets

- The percentage of households owning agricultural land in the district at 28.59 percent was much higher than the state level estimate of 19.41 percent. MBC category households were predominant agricultural landholders in the district.
- Around 60.63 percent of the agricultural land-owning households in the district had access to irrigation facilities, which was higher than the state estimate of 50.03 percent.
- Around 92.53 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares.
- About 29.95 percent of the households in Viluppuram district owned at least one agricultural, allied agricultural or fishing asset. This was higher than the state PBS estimate of 20.92 percent.
- While all General category households owned at least one household asset, about 14.12 percent of SC and 16.06 percent of ST households did not even own a mobile phone.
- The percentage of households possessing priority ration cards in the district was higher compared to the state level estimate. A higher percentage of urban households possessed priority cards than rural households.

Household Income

- The mean annual household income of Viluppuram district was ₹1,12,156, which was lower than the state PBS estimate of ₹1,42,752; in the urban areas it was ₹1,54,711 and in rural areas it was ₹1,01,616. Viluppuram was ranked seventeenth out of 32 districts with respect to this parameter.
- The mean income from salaried work (₹2,02,855) was the highest, followed by self-employment (₹1,07,550), while that from allied agricultural activities was the lowest.

- The Gini coefficient for income inequality in Viluppuram district (0.559) was lower than the state estimate (0.563). Income inequality across households in rural areas of the district (0.557) was higher than the urban areas (0.535).
- While more than half the SC, BC MBC, and General category households in Viluppuram district expected an increase in their future income, only 36.50 percent of the ST households expected the same.

Basic Infrastructure

Housing and Drinking Water

- About 85.31 percent of the households in the district were living in their own house, which was higher than the state level estimate of 75.16 percent. In rural areas, about 90.92 percent of households lived in own house whereas in urban areas it was only around 61.49 percent.
- Out of the households that lived in an own house in the district, 18.80 percent of houses were built under a government scheme. SC and ST households had the highest percentage of houses built under a government scheme in the district compared to other social groups.
- Around 60.74 percent of the households in Viluppuram district were living in pucca houses, which was lower than the state 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. In Viluppuram district, piped water into the dwelling was predominantly used both in urban and rural households.

Electricity and Cooking Fuel

- Viluppuram district witnessed an increase in electrification between 2011 and 2018, with a greater increase in its rural areas from 92.54 percent in 2011 to 97.00 percent in 2018.
- Although the use of LPG as the primary cooking fuel had increased tremendously in the district from 2011 (Census, 2011) to 2018 encompassing 70.81 percent of the households, firewood was still used by 27.30 percent of the households.
- Around 62.83 percent of the ST households and 36.22 percent of the SC households still used firewood as the primary cooking fuel.

Sanitation

- The percentage of households with latrine within the house premises had increased from 21.11 percent in 2011 (Census, 2011) to 54.76 percent in 2018 as per the PBS estimates. Viluppuram district was positioned twenty-eighth in the state among the 32 districts in terms of this indicator.
- Around 50.99 percent the rural households and 61.76 percent of the SC households in the district did not have access to a latrine within the house premises.
- The percentage of total households in the district following open defecation had declined from 77.24 percent in 2011 to 44.80 percent in 2018.

1. Introduction

1.1 Profile of Viluppuram District

Viluppuram district in Tamil Nadu was formed in the year 1993 from the bifurcation of the erstwhile South Arcot district into Cuddalore and Viluppuram districts. In the year 2019, Viluppuram district was further bifurcated into Viluppuram and Kallakurichi districts. However, this report only includes data for the erstwhile Viluppuram district. It is in the Northern region of the state, with Tiruvannamalai and Kancheepuram in the north, Bay of Bengal and borders of Puducherry in the east, Cuddalore in the south, and Salem and Dharmapuri in the west.

According to Census (2011), Villupuram had a total population of 34.59 lakhs, accounting for approximately 4.8 percent of Tamil Nadu's total population, which was 7.21 crores. The district comprised 8 lakh households, with 84.99 percent residing in rural areas. The male population was 50.33 percent, and the female population was 49.67 percent. Villupuram demonstrated a child-sex ratio of 940.52 compared to the state average of 943.27. Within the social groups, 29.36 percent of the population belonged to the Scheduled Castes, while 2.16 percent belonged to the Scheduled Tribes. The literacy rate in Villupuram district stood at 71.88 percent, compared to the state's average of 80.09 percent. The male literacy rate was reported to be 80.55 percent, while the female literacy rate was reported to be 63.15 percent, highlighting the need for investment in women's education.

In the fiscal year 2018-19, Villupuram's Net District Domestic Product was ₹39,42,761 lakhs, ranking seventeenth among all districts. The district's per capita Net District Domestic Product was recorded at ₹1,02,224, ranking twenty-ninth among districts. Nonetheless, the per capita Net District Domestic Product of the district was significantly 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 16 percent to its domestic income, while the secondary (industry) and tertiary (service) sectors contribute approximately 24 percent and 60 percent, respectively (Department of Economics and Statistics, 2017).

According to the Tamil Nadu State Planning Commission (2017a), Villupuram ranked twenty-ninth in terms of the Human Development Index with a score of 0.561, indicating the need for improving the development of the general population. It ranked thirtieth in the Gender Inequality Index with a score of 0.113, demanding attention to expanding resources to close the gender divide. In terms of the Child Development Index, the district ranked twenty-sixth with a score of 0.553, calling for the need to invest more in developing

the youth. Additionally, Viluppuram ranked twenty-first in terms of the Multidimensional Poverty Index with a score of 0.58, considered to be a modest ranking.

Viluppuram district contends with economic challenges, marked by lower Net District Domestic Product and per capita income rankings. Addressing human development, gender inequality, child development, and multidimensional poverty is crucial for fostering a more balanced and inclusive progress in the district.

1.2 About the TNHPS and Pre-Baseline Survey (PBS)

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 Viluppuram district and presents the findings. Wherever possible, the report compares the district PBS estimates with the most recent census data of Viluppuram (Census, 2011) and the state PBS estimates (TNHPS-PBS, 2021) to assess the socio-economic development of Viluppuram district. The sample size for the district was 6,755 households, among which 4,835 households were from rural areas and 1,920 households were from urban areas. The blocks covered during the survey were: Chinnasalem, Kandamangalam, Koliyanur, Mailam, Marakkanam, Melmalayanur, Mugaiyur, Olakkur, Rshivandiyam, Thiruvannainallur, Thiagadurgam, Thirunavalur, Ulundurpet, Vallam and Vanur.

2. Survey Response

For the Pre-Baseline Survey (PBS) 2018-19, a total of 7,723 households were selected in Viluppuram district using a multi-stage stratified sampling design¹. The final sample size for PBS was 6,755 households, of which 71.58 percent of households were from rural areas and 28.42 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		Viluppuram	
	Number of HHs	Percentage	Number of HHs	Percentage	Number of HHs	Percentage
Response	4,835	87.40	1,920	87.63	6,755	87.47
Non-Response	107	1.93	78	3.56	185	2.40
Non-sample	590	10.67	193	8.81	783	10.14
Total	5,532	100	2,191	100	7,723	100

Viluppuram district had a lower response rate—willingness of households to participate in the TNHPS-PBS—of 87.47 percent compared to the state response rate of 96.5 percent. Around 2.40 percent of households were not willing to participate in the survey. About 10.14 percent of the selected samples were removed as they were not considered as households as per the definition used in the PBS².

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

² 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.

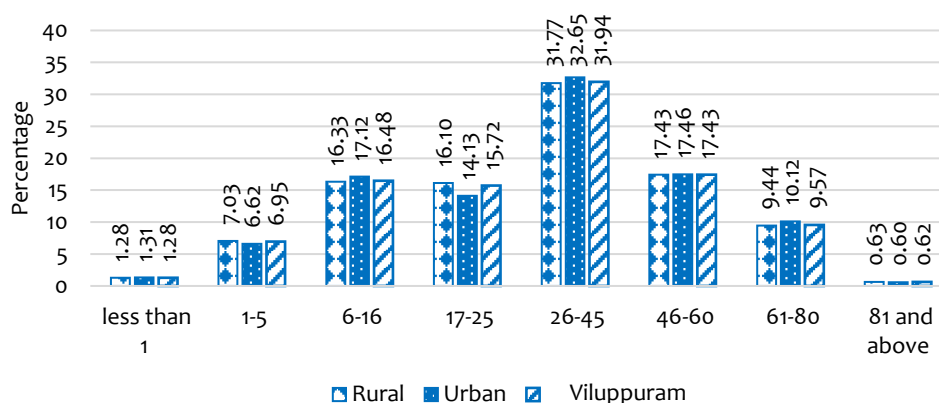
3. Key Findings

3.1 Demographic Indicators

As per the PBS estimates, the average household size³ in the district had reduced from 4.32 in 2011 (Census, 2011) to 3.81 in 2018. Around 49.86 percent of the population in the district were male, and 50.14 percent of the population were female. Around 18.76 percent of the households in Viluppuram district were headed by females, which was similar to the state estimate of 18.93 percent (TNHPS-PBS, 2021).

Chart 3.1 shows the age-wise distribution of the population in Viluppuram 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 65.09 percent, which was slightly lower than the state estimate of 66.00 percent (TNHPS-PBS, 2021).

The percentage of currently married population was similar in urban and 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 93.55 percent of the households practiced Hinduism, 3.65 percent practiced Islam and 2.72 percent followed Christianity.

³ 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	31.76
ST	1.17
BC	24.19
MBC	41.97
Denotified Communities (DNC)	0.02
General	0.77
DK/RF	0.12
Total	100

As per the PBS estimates, the highest percentage of households in Viluppuram district belonged to the MBC category. The percentages of SC and ST households in the district were 31.76 percent and 1.17 percent in 2018.

It is important to note that the percentage of DNC category households in Viluppuram district was only 0.02 percent and only two DNC households were sampled in the district. Hence, the results pertaining to the DNC category that are discussed in the report must be interpreted in this context.

3.2 Development Indicators

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

3.2.1 Education

The change in the literacy rate of Viluppuram 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 as 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		Viluppuram		Tamil Nadu	
	2011	2018	2011	2018	2011	2018	2011	2018
Male	78.50	86.82	90.71	94.07	80.55	88.18	86.77	90.97
Female	60.33	69.54	78.82	84.87	63.15	72.51	73.40	80.15
Total	69.59	78.13	84.74	89.35	71.88	80.27	80.09	85.40

*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 Viluppuram district at 71.88 percent was lesser than the state average of 80.09 percent. The PBS estimates shows that in the year 2018, the literacy rate in Viluppuram district increased to 80.27 percent, which continued to be lower than the state average of 85.40 percent. Nevertheless, the district registered an 8.39 percent increase in literacy rate in this period while the state registered a 5.31 percent increase. The difference in literacy rate between the state average and Viluppuram district was 8.21 percent in 2011, which declined to 5.13 percent in 2018 as per the PBS estimates. In terms of literacy rate, Viluppuram was ranked low at twenty-fifth among the then 32 districts in 2018 (TNHPS-PBS, 2021).

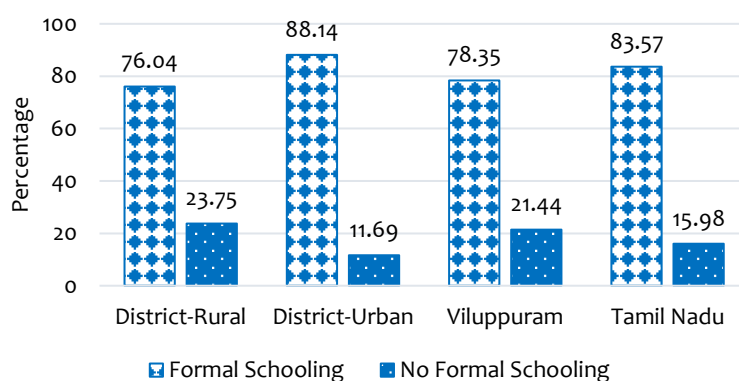
Both male and female literacy rates in Viluppuram district recorded an increase during the period under consideration, though a wide gender gap still prevailed. The gender gap in literacy rate declined from 17.40 percent in 2011 to 15.67 percent in 2018, which was still higher than the state gender gap of 10.82 percent in 2018.

Both rural and urban literacy rates recorded an increase between 2011 and 2018, though the rural literacy rate was still 11.22 percent lower than the urban literacy rate in 2018. The gender gap in literacy rate was much higher in rural areas at 17.28 percent than in urban areas at 9.20 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 Viluppuram district.

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 78.35 percent of the specified population in the district had attended formal schooling. However, the district estimate was lower compared 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

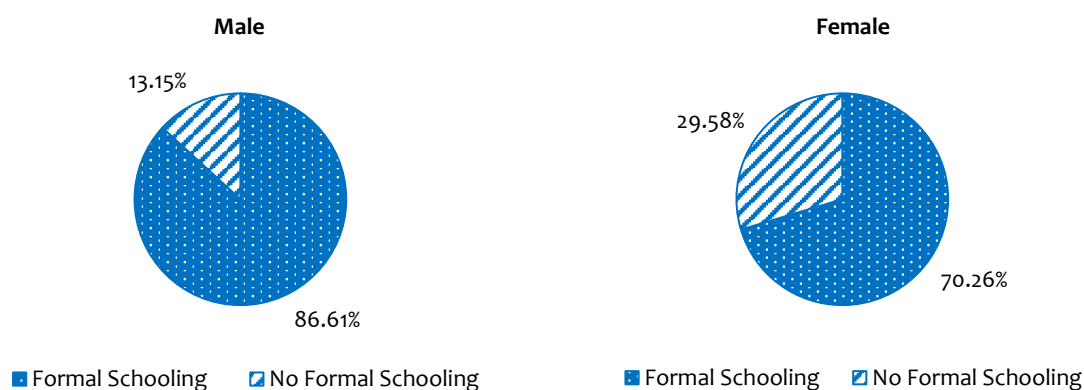


Chart 3.3 shows that the percentage of the population that acquired formal education in the district was much higher among males compared to females, again denoting a wide gender gap, like in literacy.

A district level analysis of the PBS on education attainment status of various social groups is shown below.

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

Education Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Viluppuram
Formal Schooling	75.05	51.54	87.33	76.20	100	97.83	78.35
No Formal Schooling	24.68	47.02	12.58	23.61	0.00	2.17	21.44
Others and DK/RF	0.27	1.44	0.10	0.18	0.00	0.00	0.20
Total	100	100	100	100	100	100	100

Table 3.3 shows a wide variation across social groups in attainment of formal schooling. While 97.83 percent of the General category population in the district had received formal education, only 51.54 percent of the ST population had done so. There were only six DNC respondents in the specified population—aged seven and above, with formal schooling—surveyed in the district and hence the results pertaining to this social group must be interpreted in this context, as discussed in Section 3.1.

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

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

Educational Attainment	Area Type		
	Rural	Urban	Viluppuram
Primary (I to V)	23.74	19.31	22.79
Middle School (VI to VIII)	20.35	17.59	19.76
High School (IX to X)	23.92	24.93	24.14
Higher Secondary (XI to XII)	15.11	15.02	15.09
Bachelor's degree	9.08	12.22	9.76
Diploma Degree	4.37	4.17	4.33
Post Graduate Degree	3.12	6.54	3.85
Other Higher Education	0.02	0.03	0.02
Others/DK/RF	0.28	0.19	0.26
Total	100	100	100

Around 81.78 percent of the district's population completed schooling up to higher secondary level. The population that completed tertiary education—such as bachelor's degree, diploma, or post graduate degree and above—was 17.96 percent, which was lower than the state estimate of 20.02 percent. Also, this estimate 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	Viluppuram
Primary (I to V)	21.33	24.55	22.79
Middle School (VI to VIII)	19.36	20.24	19.76
High School (IX to X)	25.54	22.44	24.14
Higher Secondary (XI to XII)	14.16	16.23	15.09
Bachelor's degree	10.30	9.09	9.76
Diploma Degree	5.62	2.77	4.33
Post Graduate Degree	3.38	4.42	3.85
Other Higher Education	0.03	0.02	0.02
Others/DK/RF	0.28	0.23	0.26
Total	100	100	100

Table 3.5 shows that a higher percentage of females at 83.46 percent had completed schooling up to higher secondary level, compared to males at 80.39 percent. In tertiary education, a higher percentage of females had completed post-graduate degree compared to males, whereas the case with respect to bachelor's and diploma degree percentages was 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	Viluppuram
Primary (I to V)	25.31	35.66	20.37	22.39	0.00	12.53	22.79
Middle School (VI to VIII)	19.88	21.65	18.73	20.57	16.44	7.75	19.76
High School (IX to X)	26.23	21.77	22.78	23.27	16.44	30.54	24.14
Higher Secondary (XI to XII)	14.77	11.18	14.59	15.72	34.24	16.96	15.09
Bachelor's degree	7.68	1.60	12.63	9.36	32.88	22.02	9.76
Diploma Degree	3.05	4.07	4.96	4.94	0.00	3.76	4.33
Post Graduate Degree	2.69	1.36	5.83	3.47	0.00	6.44	3.85
Other Higher Education	0.02	0.00	0.00	0.04	0.00	0.00	0.02
Others/DK/RF	0.36	2.71	0.11	0.24	0.00	0.00	0.26
Total	100	100	100	100	100	100	100

The social group-wise analysis in Table 3.6 shows that most of the SC and ST population in the district had completed only primary and secondary school. The percentage of population with tertiary education—bachelor’s degree and above—was quite high among the General category at 32.22 percent, followed by the BC category at 23.42 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. There were only six DNC respondents in the specified population surveyed in the district and hence the results pertaining to this category must be interpreted in this context, as discussed in Section 3.1.

About 21.44 percent of the population had not received formal education in Viluppuram 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 Status of Population with No Formal Schooling – Area-wise Percentages

Functional Literacy	Area Type		
	Rural	Urban	Viluppuram
Yes	8.78	10.34	8.95
No	91.08	89.66	90.93
DK/RF	0.14	0.00	0.12
Total	100	100	100

Table 3.7 shows the functional literacy status of the population with no formal schooling in the district. Only 8.95 percent of the population without formal schooling had functional

literacy. The specified population group in urban areas of the district had a slightly better functional literacy 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	General	Viluppuram
Yes	7.66	5.76	12.17	9.16	38.76	8.95
No	92.28	94.24	87.31	90.78	61.24	90.93
DK/RF	0.07	0.00	0.51	0.06	0.00	0.12
Total	100	100	100	100	100	100

Table 3.8 shows the functional literacy status of the population with no formal schooling, across various social groups. Functional literacy was low across most social groups, whereas 38.76 percent of General category population with no formal schooling possessed the ability to read and write a simple message.

3.2.3 Employment Status

This section looks at the employment status of the household members, types of employment that they are engaged in, the unemployment rate 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 force⁴.

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,

⁴ 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

- (vii) People who worked as casual labourers in other domains,
- (viii) People who worked as salaried employees in the government sector,
- (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 were actively seeking and/or available for work.

The not in the labour force category consists of the following persons aged 14 and above:

- (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

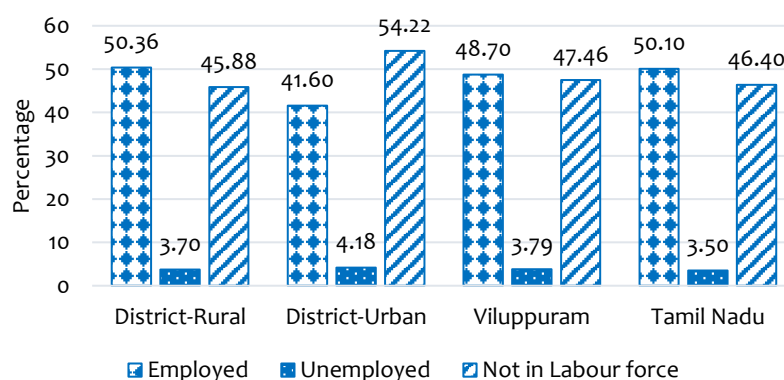


Chart 3.4 shows that the overall percentage of employed population—14 years and above—in the district was lower than the state estimate. The share of unemployed population was higher in the district compared to the state. The percentage of population that was employed was higher in rural parts of the district than the urban. The unemployment status in rural areas of the district at 3.70 percent was higher than the state rural estimate of 3.6 percent, and the district urban unemployment status at 4.18 percent was also higher than the state urban estimate of 3.3 percent. Viluppuram district was ranked twenty-first among all districts in Tamil Nadu in terms of employed population and ranked fourteenth in terms of the unemployed population.

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



Chart 3.5 shows the gender-wise employment status of the population aged 14 years and above. While 68.77 percent of the male population was employed, the female work participation was only 29.41 percent. Decreased female labour force participation has been well documented at the national level (Das et al., 2015; Desai, 2017; Desai & Joshi, 2019). While the district female work participation was higher than the national average of 23.3 percent in 2017-18 (National Statistical Office, 2019), it was slightly lesser than the state PBS estimate of 29.96 percent. Around 68.03 percent of the female population was not in the workforce, and among these, majority of them at 73.90 percent were associated with attending to domestic duties as homemakers (see Chart 3.7). As per the state PBS estimates, Viluppuram district was ranked twentieth in terms of employed female population and ranked twelfth in terms of female unemployment.

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

Work Type	Area Type		
	Rural	Urban	Viluppuram
Self Employed Agriculture	14.80	2.70	12.84
Self Employed Non-Agriculture	7.01	28.03	10.42
Self Employed Allied Agriculture	2.61	0.95	2.34
Casual Labourer Agriculture	33.47	2.05	28.37
Casual Labourer Industry	5.89	5.99	5.91
Casual Labourer Service	14.12	19.19	14.94
Casual Labourer (Others)	1.73	3.34	1.99
Salaried Worker Government	4.56	14.27	6.14
Salaried Worker Private	12.63	21.79	14.12
Multiple Occupation	2.98	0.77	2.62
Other	0.17	0.71	0.26
DK/RF	0.02	0.22	0.05
Total	100	100	100

More than a quarter of the employed population depended on casual labour in the agricultural sector for employment. While the greatest proportion of the working population in the state were salaried workers in the private sector at 21.82 percent (TNHPS-

PBS, 2021), majority of the working population in Viluppuram district were casual labourers in the agricultural sector at 28.37 percent. While self-employment in non-agriculture was predominant in urban areas, casual labour in the agricultural sector was most common in rural areas of the district.

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

Work Type	Social Group						
	SC	ST	BC	MBC	DNC	General	Viluppuram
Self Employed Agriculture	7.09	0.41	11.94	18.76	0.00	3.56	12.84
Self Employed Non-Agriculture	7.98	4.98	17.23	8.78	65.76	38.09	10.42
Self Employed Allied Agriculture	2.63	6.98	0.97	2.64	0.00	1.24	2.34
Casual Labourer Agriculture	41.14	63.61	9.80	25.88	0.00	2.22	28.37
Casual Labourer Industry	7.92	1.99	5.43	4.54	0.00	9.89	5.91
Casual Labourer Service	11.58	10.47	19.27	15.94	0.00	10.21	14.94
Casual Labourer (Others)	2.35	4.76	2.26	1.42	0.00	2.36	1.99
Salaried Worker Government	4.91	0.00	10.67	5.04	0.00	13.20	6.14
Salaried Worker Private	11.82	4.47	21.34	12.76	34.24	19.23	14.12
Multiple Occupation	2.16	2.33	0.73	4.04	0.00	0.00	2.62
Other	0.32	0.00	0.30	0.20	0.00	0.00	0.26
DK/RF	0.10	0.00	0.06	0.02	0.00	0.00	0.05
Total	100	100	100	100	100	100	100

Viluppuram being a rural district provided employment opportunities in the agriculture sector to more than 50 percent of the SC population and 70 percent of the ST population. The SC and ST population involved as casual labourers in agriculture in the district at 41.14 percent and 63.61 percent respectively were higher than the state estimates of 33.33 percent of SC population and 41.32 percent of ST population in the same occupation (TNHPS-PBS, 2021). Those belonging to the General and BC categories predominantly involved in self-employment in the non-agricultural sector and salaried work in the private sector, respectively. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

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

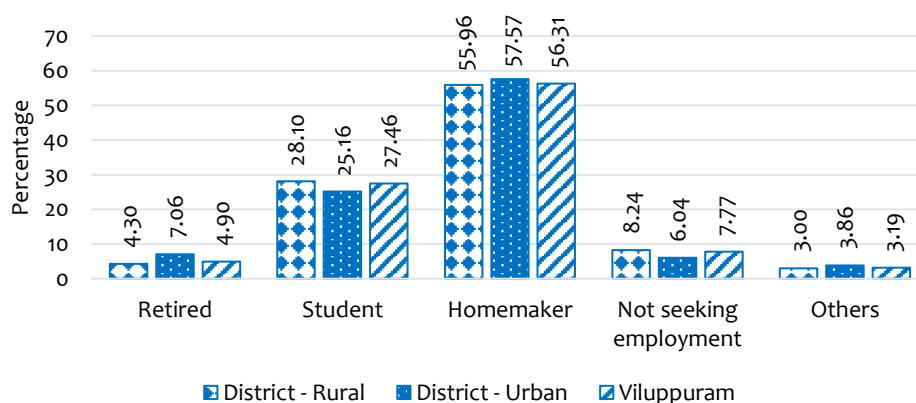
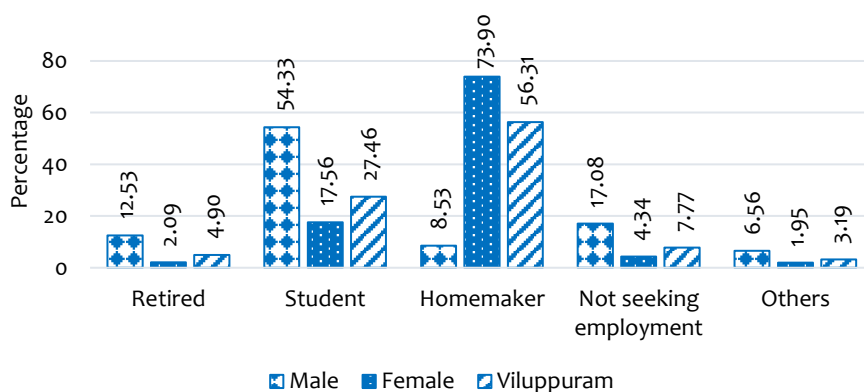


Chart 3.6 shows that, similar to the trend at the state level, more than half the population that was not in the labour force in the district comprised homemakers involved in unpaid domestic duties of the household, followed by students. The proportions of the population that were not seeking employment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



The gender-wise distribution of the population currently not in the labour force (aged 14 and above) is given in Chart 3.7. 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 17.56 percent of the female not-in-labour-force population were students. Similar to the state trend, majority of the male not-in-labour-force population were 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 Population Not in the Labour force - Social Group-wise Percentages

Current Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Viluppuram
Retired	3.64	0.00	7.24	4.17	0.00	12.72	4.90
Student	33.09	22.53	21.46	27.77	0.00	11.35	27.46
Homemaker	49.18	58.51	61.06	57.99	100	67.67	56.31
Not seeking employment	9.83	11.49	7.37	6.54	0.00	6.57	7.77
Others	3.67	7.47	2.66	3.19	0.00	0.86	3.19
DK/RF	0.58	0.00	0.21	0.34	0.00	0.82	0.38
Total	100	100	100	100	100	100	100

Table 3.11 shows that within all social groups, the percentage of homemakers was the largest compared to other categories in the district. The SC category had a higher

percentage of not-working population as students compared to the other social groups. Although majority of the employed SC and MBC population were casual labourers (refer Table 3.10), the not-working population belonging to the student category was high for these two social groups. There were only three DNC respondents in the specified population in the district, hence the results for this social group must be interpreted in this context, as discussed in Section 3.1.

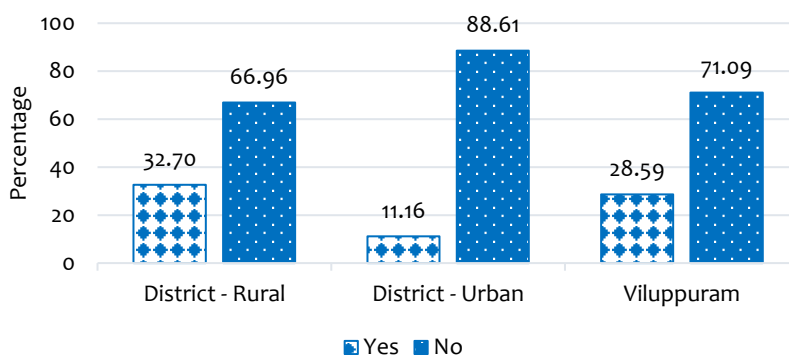
3.3 Socio-Economic Indicators

The PBS estimates for various socio-economic indicators of Viluppuram district such as ownership of agricultural land, household assets and income are discussed 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 Viluppuram 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 were collected on the ownership of agricultural land only. 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 much higher than the state level estimate of 19.41 percent. The district was ranked ninth in the state in terms of agricultural land ownership (TNHPS-PBS, 2021). Area-wise comparison shows that a higher proportion of households in rural and urban areas of the district owned agricultural land compared to the respective state level rural and urban estimates of 29.00 percent and 8.61 percent respectively.

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

Type of Agricultural Land	Area Type		
	Rural	Urban	Viluppuram
Only Irrigated Agriculture Land	60.32	64.50	60.63
Only Unirrigated Agriculture Land	31.67	30.96	31.62
Both Irrigated and Unirrigated Agriculture Land	7.72	3.53	7.41
DK/RF	0.29	1.01	0.34
Total	100	100	100

Table 3.12 shows that, as per the PBS estimates, 60.63 percent of the households that owned agricultural land in Viluppuram district depended on various irrigation sources for agriculture. A higher percentage of urban households owned irrigated agricultural land compared to the rural households in the district. Wells, tube wells, and tanks are the major sources of irrigation in Viluppuram district (Tamil Nadu State Planning Commission, 2017b). The proportion of households having irrigated agricultural land was higher in the district compared to the state PBS estimate of 50.03 percent.

An analysis of the social group-wise ownership of agricultural land by households in Table 3.13 shows that MBC and BC category households were the predominant agricultural landholders in the district. Though 34.35 percent of the DNC households in the state-owned agricultural land, neither of the two DNC households surveyed in the district owned agricultural land.

Table 3.13 Ownership of Agricultural Land - Social Group-wise Percentages

Ownership of Agriculture Land	Social Group						Viluppuram
	SC	ST	BC	MBC	DNC	General	
Yes	19.87	4.75	25.68	37.79	0.00	13.63	28.59
No	79.88	95.25	74.27	61.66	100	86.37	71.09
DK/RF	0.24	0.00	0.04	0.55	0.00	0.00	0.32
Total	100	100	100	100	100	100	100

Based on the size of agricultural 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 Agricultural Land Owned by Households – Area-wise Percentages

Size of Agriculture Land (in Hectares)	Area Type		
	Rural	Urban	Viluppuram
Marginal (0.01 - 0.99)	79.44	67.18	78.55
Small (1 - 1.99)	13.43	21.02	13.98
Semi Medium (2 - 3.99)	4.61	5.98	4.72
Medium (4 - 9.99)	1.88	5.13	2.11
Large (10 and above)	0.64	0.69	0.64
Total	100	100	100

Table 3.14 shows that 92.53 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares. This figure was higher than the state level estimate of 89.33 percent. The share of semi-medium, medium, and large landholdings was lesser 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 Viluppuram district.

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

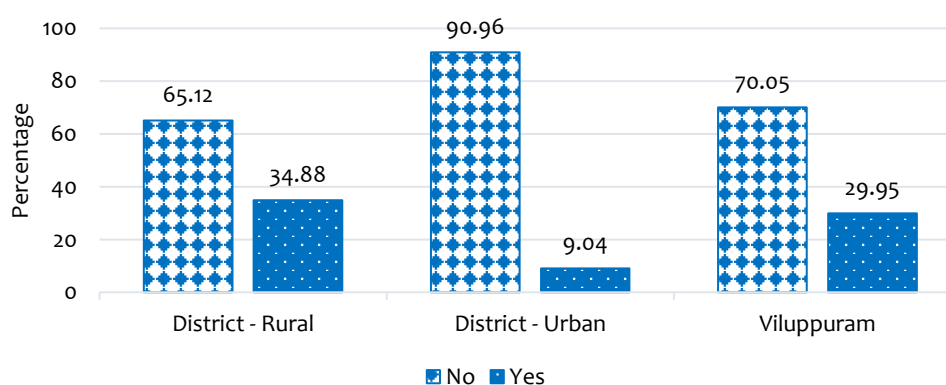
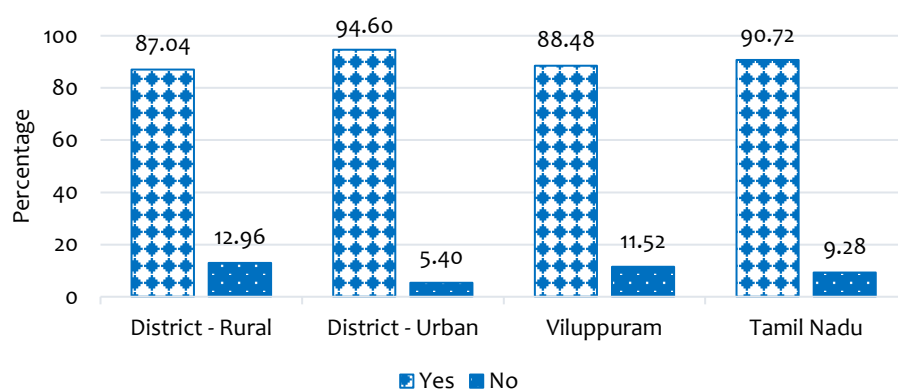


Chart 3.9 shows that 29.95 percent of the households in Viluppuram district owned at least one agricultural, allied agricultural or fishing asset. This estimate was higher than the state PBS estimate of 20.92 percent. The ownership of such assets was much higher in rural areas than urban areas. The ownership pattern was higher in both rural and urban areas of the district compared to the state rural and urban estimates of 32.69 percent in rural and 7.67 percent in urban areas (TNHPS-PBS, 2021).

3.3.3 Presence of Household Assets

Chart 3.10 shows the percentage of households in Viluppuram district that owned at least one household asset. Household assets include Air Conditioner (AC), refrigerator, two-wheeler, four-wheeler, and mobile phones. The state PBS estimates found that the combination of mobile phone and two-wheeler were 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 Viluppuram district was lower than the state estimate. Within the district, the urban areas had a higher percentage of households owning at least one household asset compared to the rural areas.

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

Presence of Household Assets	Social Group						
	SC	ST	BC	MBC	DNC	General	Viluppuram
Yes	85.88	83.94	92.78	87.94	100	100	88.48
No	14.12	16.06	7.22	12.06	0.00	0.00	11.52
Total	100	100	100	100	100	100	100

The social group-wise ownership of household assets in Viluppuram district is given in Table 3.15. While all General category households owned at least one household asset, only 83.94 percent of ST households and 85.88 percent of the SC households and in the district owned any such asset. This means that about 16.06 percent of ST and 14.12 percent of SC households did not even own a mobile phone. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

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 the Public Distribution System and subsidised LPG connection, for instance. The percentages of households that possessed a ration card in rural and urban areas of Viluppuram district are given in Chart 3.11.

Chart 3.11 Possession of Ration Card – Area-wise Percentages

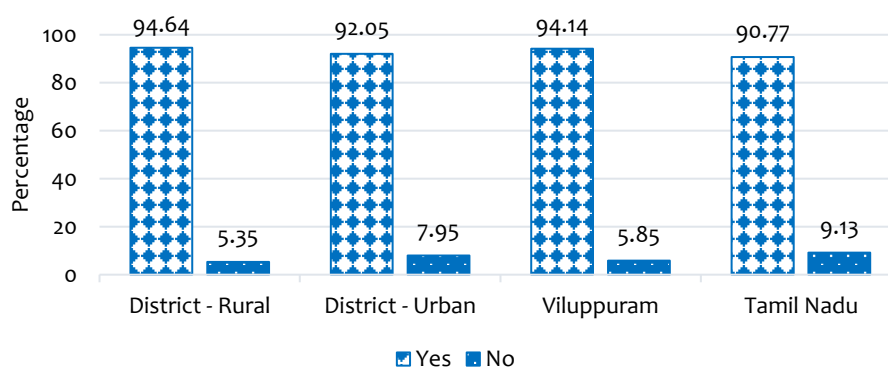


Chart 3.11 shows that the percentage of households that possessed a ration card in the district was higher than the state estimate. Within the district, a higher percentage of rural households possessed ration cards compared to urban households.

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	Viluppuram
Yes	94.31	86.84	92.85	94.86	48.99	100	94.14
No	5.66	13.16	7.15	5.14	51.01	0.00	5.85
DK/RF	0.03	0.00	0.00	0.00	0.00	0.00	0.01
Total	100	100	100	100	100	100	100

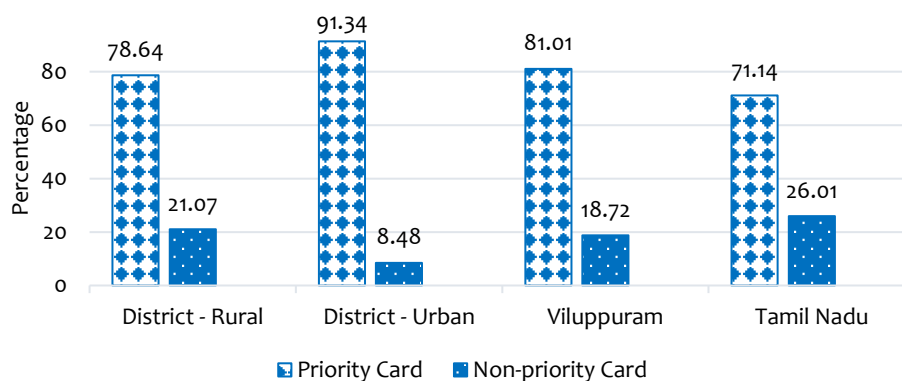
Social group-wise estimates on the possession of ration card at the household level is shown in Table 3.16. More than 80 percent of households belonging to most social groups possessed ration cards in the district. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

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 Viluppuram district is 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 urban households possessed priority cards than the rural households of the district.

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 Viluppuram district from various sources in the financial year (FY) 2017-2018. The sources of income include income earned from agriculture, allied agriculture, salaried work, self-employed labour, wage labour and other sources. The category ‘other sources’ consists of income sources such as pension, remittances, investments, and other mixed categories. Table 3.17 shows the mean income of households that depended on various sources of income in Viluppuram district.

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

Source	Rural	Urban	Viluppuram	Tamil Nadu
Agriculture	43,687	72,943	45,017	61,830
Allied Agriculture	25,023	60,256	26,823	38,576
Salaried	1,86,609	2,45,955	2,02,855	2,29,857
Self Employed	1,00,639	1,16,703	1,07,550	1,47,403
Wage Labour	55,933	51,854	55,448	47,734
Other Sources	64,159	1,14,076	75,539	97,646
Income from all Sources	1,01,616	1,54,711	1,12,156	1,42,752

The mean annual household income of Viluppuram district was 21.43 percent lower than the state PBS estimate of ₹1,42,752. The mean household income was higher among the households with salaried income and lower among the households that depended on allied agricultural activities. Among the then 32 districts, Viluppuram was ranked seventeenth in terms of mean annual household income (TNHPS-PBS, 2021).

In the rural areas of Viluppuram district, the mean household income was ₹1,01,616, which was higher than the state rural estimate of ₹92,765 (TNHPS-PBS, 2021). Yet, the mean annual household income from agriculture was lesser due to reasons such as high number of marginal landholders and households practicing non-irrigated agriculture. 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 agriculture and allied agriculture.

In the urban areas of Viluppuram district, the mean household income was ₹1,54,711, which was lower than the state urban estimate of ₹1,99,629 (TNHPS-PBS, 2021); but higher than the district rural estimate of ₹1,01,616. 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 wage labour.

3.4.2 Income Inequality in Viluppuram District

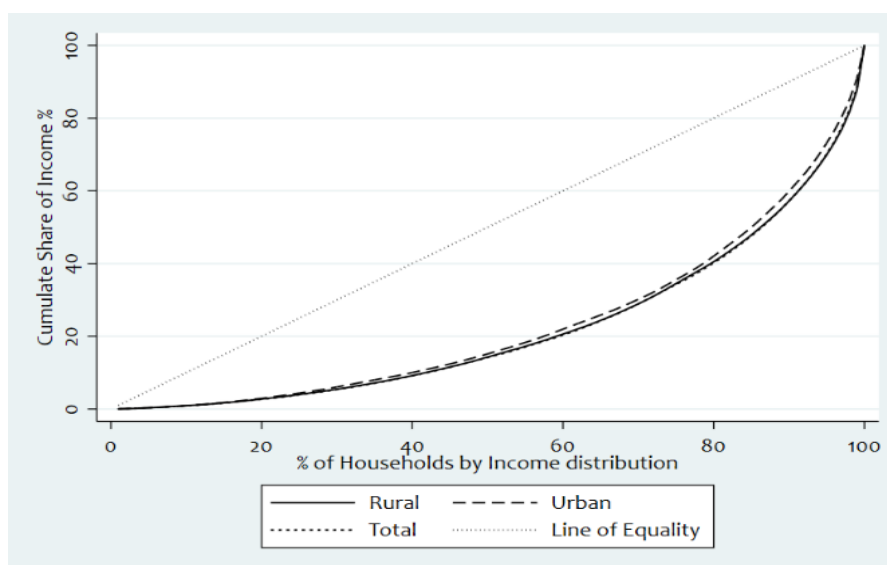
The Gini coefficient measures inequality levels in income or wealth where the coefficient value of 0 denotes perfect equality and 1 denotes perfect inequality (across households). The income inequality in Viluppuram district (0.559) was lower than the state estimate (0.563)⁵. Income inequality across households in rural areas of the district (0.557) was found to be higher than the urban areas (0.535).

Table 3.18 Gini Coefficient of Income Inequality

Area	Gini Coefficient
Rural	0.557
Urban	0.535
Viluppuram	0.559
Tamil Nadu	0.563

⁵ 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).

Chart 3.13 Lorenz Curve and Income Inequality



The Lorenz curve is a graphical representation of inequality in the distribution of income or wealth of households. Chart 3.13 shows that in Viluppuram, the bottom 60 percent of the households held around 20 percent of the total income; the bottom 80 percent of households held around 40 percent of the total income and the top 20 percent of households held around 60 percent of total income.

3.4.3 Respondents' 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 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 Households' Expectation of Change in Income in the Next 5 Years – Area-wise Percentages

Expectation of Change in Household Income	Area Type			
	Rural	Urban	Viluppuram	Tamil Nadu
Higher	58.26	58.94	58.39	50.06
Lower	9.29	9.76	9.38	8.17
About the same	27.24	28.86	27.55	31.66
DK/RF	5.21	2.43	4.68	10.11
Total	100	100	100	100

Table 3.19 shows that a majority of the rural and urban 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 was similar to rural areas. More than a quarter of the households in the district anticipated that 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	Viluppuram
Higher	61.29	36.50	59.19	56.46	51.01	55.82	58.39
Lower	11.42	8.68	8.63	8.42	0.00	2.68	9.38
About the same	20.21	42.47	28.81	31.70	48.99	41.50	27.55
DK/RF	7.09	12.35	3.36	3.42	0.00	0.00	4.68
Total	100	100	100	100	100	100	100

While more than half the SC, BC, MBC, and General category households in Viluppuram district expected an increase in their future income, only 36.50 percent of the ST households expected the same. A relatively higher percentage of SC category households at 11.42 percent reported a decreased future income. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

3.5 Basic Infrastructure

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

3.5.1 House Ownership Status

The area-wise percentages of households that lived in their own house or stayed at a rented house are given in Chart 3.14.

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

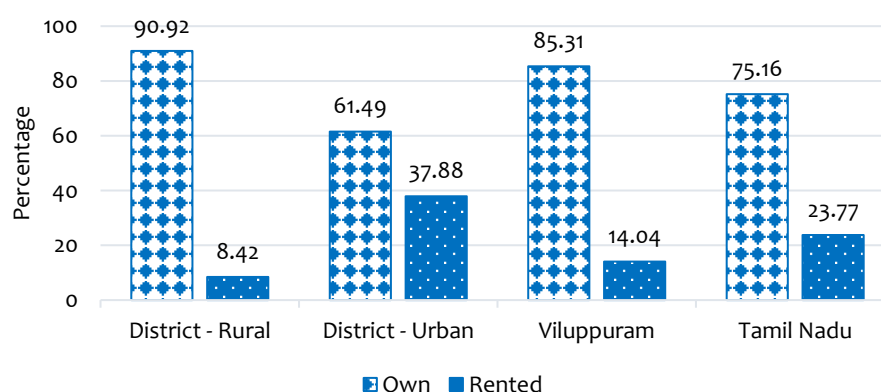


Chart 3.14 shows that the proportion of households living in their own house in the district was much higher than the state level estimate. Viluppuram district was ranked seventh among the then 32 districts of Tamil Nadu in terms of percentage of households living in their own house (TNHPS-PBS, 2021). While 90.92 percent of the households in rural areas lived in their own house, a large proportion of urban households at 37.88 percent were relying on rented houses for their stay. Only less than one percent of households were 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 Households' Dwelling/House - Social Group-wise Percentages

Ownership Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Viluppuram
Own	91.33	97.49	74.75	87.00	0.00	63.60	85.31
Rented	8.17	2.51	24.38	12.33	100	36.40	14.04
Others	0.51	0.00	0.82	0.67	0.00	0.00	0.64
DK/RF	0.00	0.00	0.04	0.00	0.00	0.00	0.01
Total	100	100	100	100	100	100	100

Table 3.21 shows that more than 90 percent of SC and ST households in the district lived in their own house, whereas only 63.60 percent of the General category households were doing the same. Neither of the two DNC households surveyed in the district were living in their own house.

A detailed analysis of ownership of houses shows that out of the 85.31 percent households (see Chart 3.14) that lived in own house in the district, 18.80 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	General	Viluppuram
Yes	32.20	34.78	7.38	13.59	1.93	18.80
No	67.58	65.22	92.62	86.34	98.07	81.09
DK/RF	0.23	0.00	0.00	0.08	0.00	0.11
Total	100	100	100	100	100	100

In Viluppuram district, SC and ST households had the highest percentage of houses built under a government scheme compared to other social groups. However, only 1.93 percent of the General category households that owned a house had built their house under a government scheme.

3.5.2 House Type

Based on the material used for wall/roof or the quality of the house, the PBS classifies a house as kutccha, pucca or semi-pucca. The percentage of houses that come under each type are given below.

Chart 3.15 Type of House – Area-wise

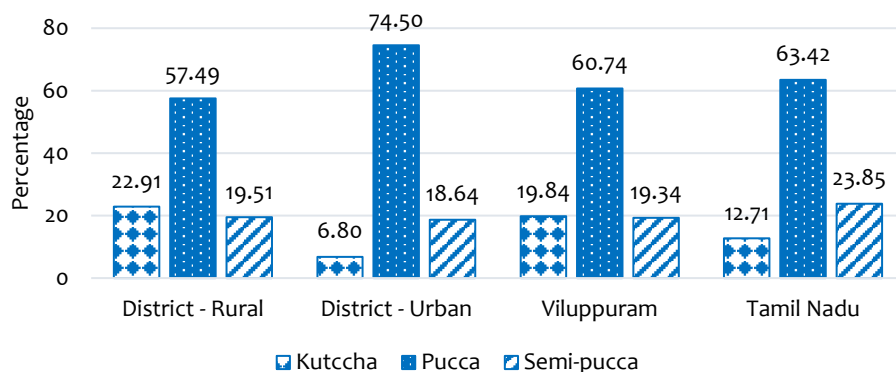
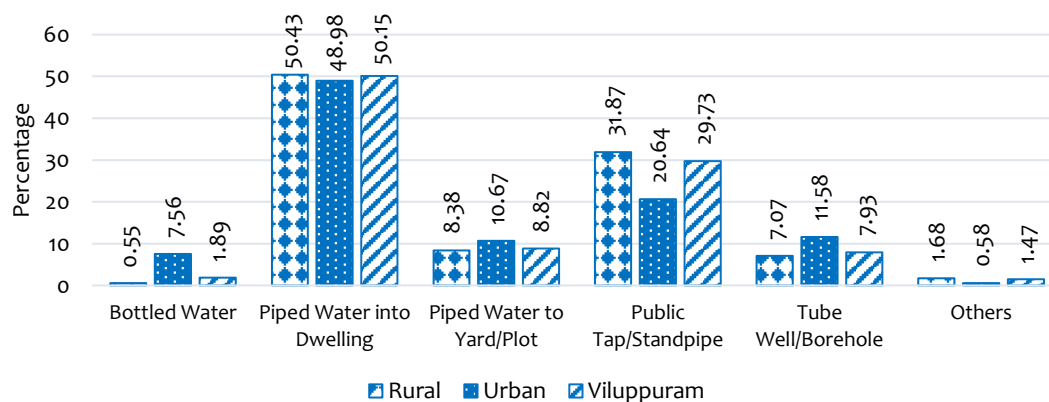


Chart 3.15 shows that 60.74 percent of the households in Viluppuram district were living in pucca houses. This was lower than the corresponding state estimate. The percentage of urban households living in pucca houses in the district was much higher than rural households, but lower than the state urban estimate of 75.22 percent (TNHPS-PBS, 2021).

3.5.3 Primary Drinking Water Source

In this section, we discuss the PBS findings on the primary drinking water source of the households in the district. The primary sources⁶ of water are: bottled water, piped water into dwelling, piped water to yard or plot, public tap or standpipe and 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



⁶ Primary source - Water that is availed for the greater part of the year

Chart 3.16 shows that 50.15 percent of the households in Viluppuram district were using piped water into the dwelling as their primary source of drinking water, which was considerably higher than the state estimate of 32.04 percent. While the state PBS estimates show 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), piped water into the dwelling was predominantly used both in urban and rural households in Viluppuram district.

3.5.4 Electricity

Tamil Nadu had witnessed mass electrification during the last decade. A comparison of households with an electricity connection between Census (2011) and the state PBS estimates in 2018 (TNHPS-PBS, 2021) showed that the state was close to achieving complete electrification in case of urban areas. The electrification status had improved in rural areas as well.

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

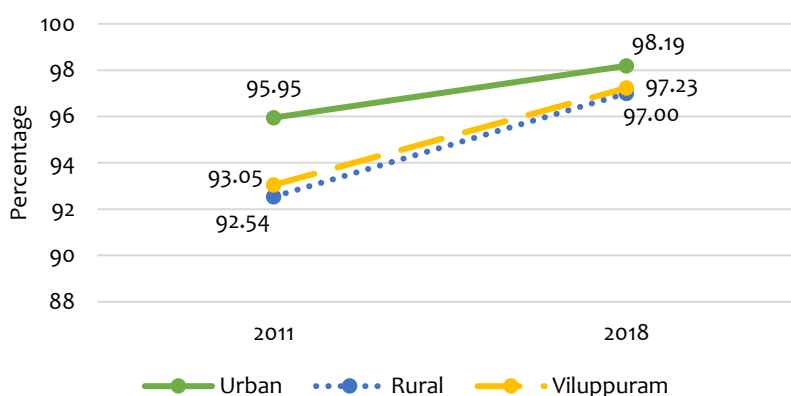


Chart 3.17 shows that the rate of growth of households with electricity was higher in rural areas compared to the urban areas. The electrification status in the district at 97.23 percent was slightly lower than the state estimate of 97.6 percent. Viluppuram was ranked eighteenth among the then 32 districts 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 fuel⁷ used by the households in the district is given in Chart 3.18.

⁷ Primary Cooking Fuel: Fuel that is used for the greater part of the year

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

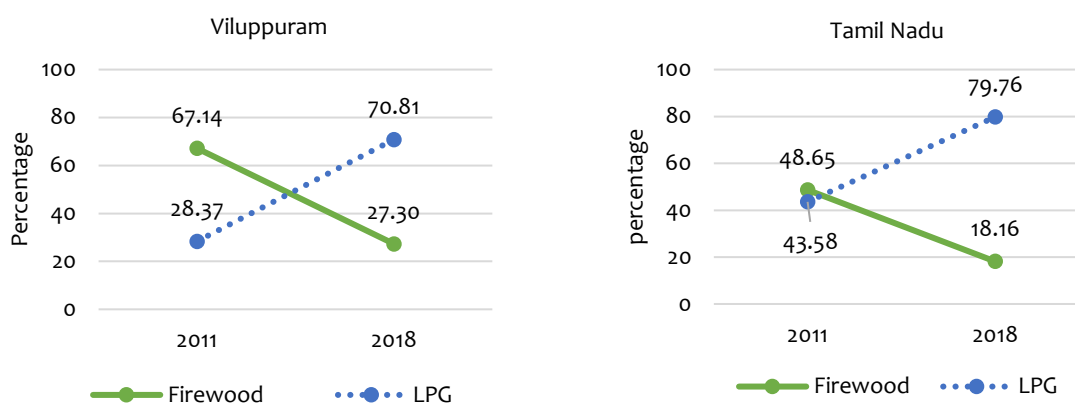


Chart 3.18 shows that, although the use of LPG as the primary cooking fuel had increased tremendously in the district from 2011 (Census, 2011) to 2018 encompassing 70.81 percent of the households, firewood was still used by 27.30 percent of the households. Compared to other districts of Tamil Nadu, Viluppuram district was ranked twenty-third in terms of LPG use and ranked tenth in terms of firewood use as the primary cooking fuel (TNHPS-PBS, 2021).

Chart 3.19 Comparison of Primary Cooking Fuel – Rural and Urban

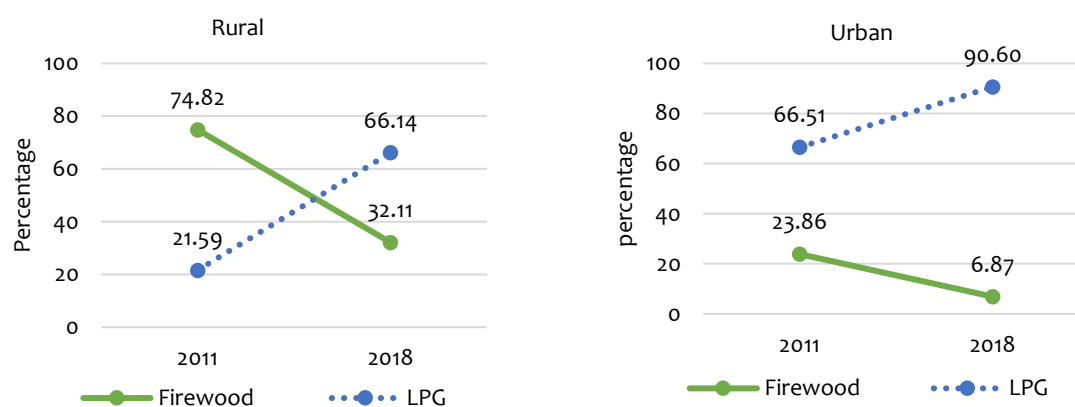


Chart 3.19 shows that the predominant cooking fuel in rural areas in the district had changed drastically from firewood to LPG in the period 2011-2018. However, 32.11 percent of the rural households still used firewood as the main fuel. LPG use had increased from 66.51 percent in 2011 to 90.60 percent in 2018 in urban areas, and of the use of firewood had dropped to a minuscule amount during the same period.

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

Table 3.23 Primary Cooking Fuel - Social Group-Wise Percentages

Primary Cooking Fuel	Social Group						
	SC	ST	BC	MBC	DNC	General	Viluppuram
Firewood	36.22	62.83	11.69	29.03	0.00	1.23	27.30
Kerosene	1.23	0.00	2.09	0.93	0.00	0.00	1.29
LPG	61.51	37.17	85.67	69.70	100	98.77	70.81
Others	0.95	0.00	0.37	0.27	0.00	0.00	0.51
DK/RF	0.09	0.00	0.17	0.07	0.00	0.00	0.10
Total	100	100	100	100	100	100	100

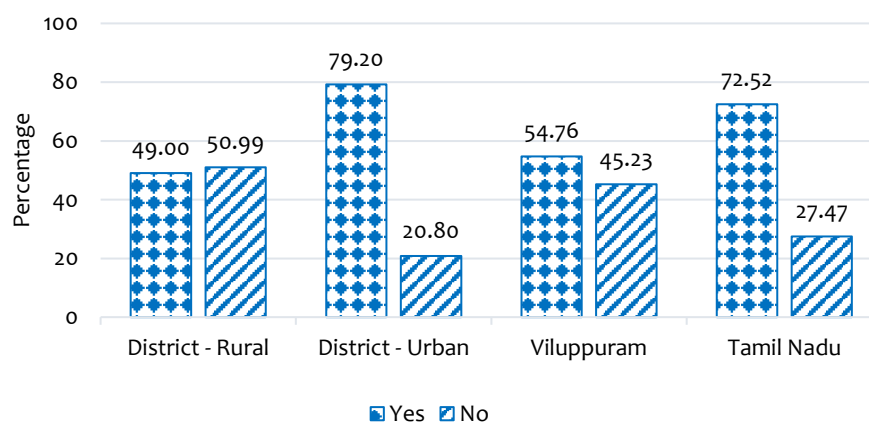
*Others Include Electricity, Gobar Gas, Solar Energy, etc.

Table 3.23 shows that, while 98.77 percent of the General category households used LPG as the primary cooking fuel, around 62.83 percent of the ST households and 36.22 percent of the SC households still used firewood as the primary cooking fuel. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

3.5.6 Sanitation

The PBS estimates on households with and without latrine in the district 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 the house premises had increased from 21.11 percent in 2011 (Census, 2011) to 54.76 percent in 2018 as per the PBS estimates. Viluppuram district was positioned twenty-eighth in the state among the 32 districts in terms of this indicator (TNHPS-PBS, 2021). The percentage of households equipped with latrine facilities in the district was much lower than the state level estimate. It is pertinent to note that 50.99 percent of the rural households did not have access to a latrine within their house premises.

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	Viluppuram
Yes	38.24	45.01	77.42	53.69	100	97.50	54.76
No	61.76	54.99	22.58	46.29	0.00	2.50	45.23
Total	100	100	100	100	100	100	100

Table 3.24 shows the presence of latrine within the premises of the household across various social groups. The percentages of SC, ST, and MBC households with latrine access in the district were lower than their respective state level estimates of 52.20 percent, 56.00 percent and 67.50 percent respectively (TNHPS-PBS, 2021). Around 61.76 percent of the SC households and 54.99 percent of the ST households did not have a latrine within the house premises. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

The presence of latrine facilities in the premises of households residing in different types of houses in the rural and urban areas of Viluppuram district are compared in Chart 3.21.

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

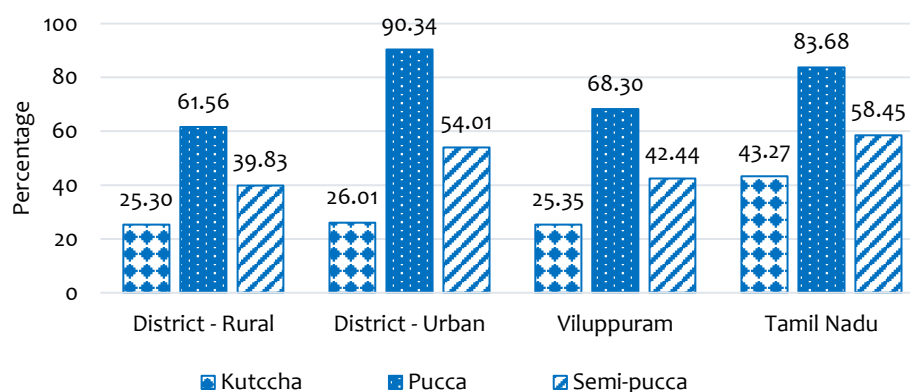


Chart 3.21 shows that the percentage of pucca houses with latrine facilities was much higher than that of semi-pucca and kutccha houses in the district. The percentages of latrine facilities in kutccha, pucca and semi-pucca houses in the district were lower than their respective state estimates. A much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

The percentage of total households in the district following open defecation had declined considerably from 77.24 percent in 2011 (Census, 2011) to 44.80 percent in 2018, but was still significantly high. The alternative practices of defecation followed by 45.23 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

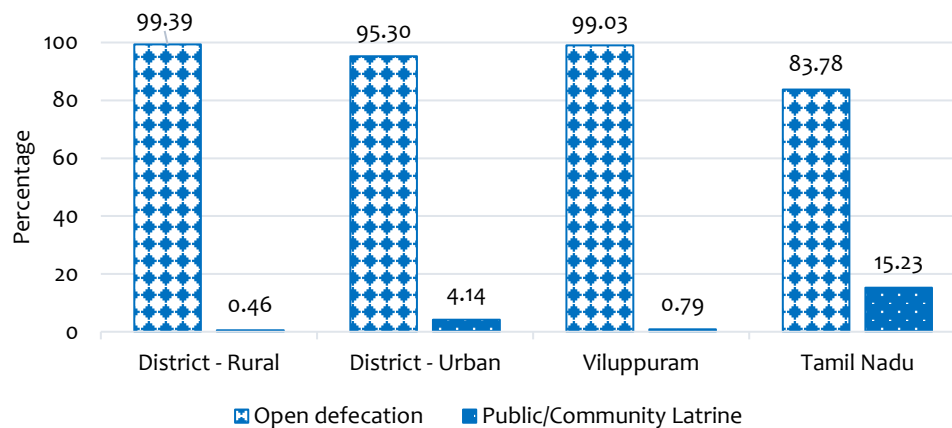


Chart 3.22 shows that 99.03 percent of households without latrine within the house premises in the district were following open defecation, which was significantly higher than the state level estimate. The practice of open defecation by these households was higher in rural areas compared to urban areas of the district. As per the state PBS report, Viluppuram district was ranked fourth in terms of the percentage of total households following open defecation.

4. Conclusions and Recommendations

The Pre-Baseline Survey (PBS) 2018-19 of Viluppuram district was conducted from the sample of 6,755 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.

As per the PBS estimates in 2018-19, Viluppuram was one of the top ten districts in terms of the percentage of total households owning agricultural land and the percentage of households living in their own houses. Among the agricultural land-holding households, the households having irrigated agricultural land was higher in the district compared to the state estimate. Similarly, the district estimates on the percentage of households owning at least one agricultural, allied agricultural and fishing assets were higher than the state estimates. While less than one-third of households (32.04 percent) in the state were using piped water into dwelling as their primary source of drinking water, around half of the households (50.15 percent) in Viluppuram district were using piped water into the dwelling as their primary source of drinking water. The electrification and income inequality level were almost on par with the state estimates.

There are certain indicators in the district that require government's attention for further development. The performance of the district in terms of education, employment, mean annual household income, LPG use as primary cooking fuel and the availability of latrine within house premises were lower than the state's performance. Among the then 32 districts, Viluppuram was ranked twenty-fifth in terms of literacy rate and was ranked twenty-first in terms of the percentage of employed population. The mean annual household income of the district was 21.43 percent lesser than the state estimate. The district percentages of households owning at least one household asset and the households owning pucca houses were also comparatively lesser than the state estimate. The efforts to improve the educational infrastructure and to generate employment opportunities will subsequently increase the level of household income and boost the purchasing power on household amenities.

Minimal percentages of households using LPG as primary cooking fuel and having access to latrine within house premises are coupled with increased firewood use and open defecation. Around 27.30 percent of households in the district was still using firewood as the primary fuel for cooking and around 44.80 percent of the households were still following open defecation in 2018. Viluppuram was one of the top ten districts in terms of high use of firewood as primary cooking fuel and high open defecation rate. The government may promote LPG use as primary cooking fuel and curb open defecation through awareness programmes. Provision of latrine facilities either at household level or at community level should also be ensured.

References

- Census. (2011). *District Census Handbook- Series-34 - Part XII-B -Viluppuram*. Directorate of Census Operations. Government of Tamil Nadu. <https://censusindia.gov.in/nada/index.php/catalog/1105>
- Chandrasekhar, S., Naraparaju, K., & Sharma, A. (2021). Spatial Disparities in Household Earnings in India: Role of Urbanization, Sectoral Inequalities, and Rural-Urban Differences. *Indira Gandhi Institute of Development Research*, WP-2021-009. <http://www.igidr.ac.in/pdf/publication/WP-2021-009.pdf>
- Das, S., Jain-Chandra, S., Kochhar, K., & Kumar, N. (2015). Women Workers in India: Why So Few Among So Many? *International Monetary Fund*, WP/15/55. <https://www.imf.org/external/pubs/ft/wp/2015/wp1555.pdf>
- Department of Economics and Statistics. (2017). *Statistical Handbook of Tamil Nadu-2016-17*. Government of Tamil Nadu.
- Department of Economics and Statistics. (2023). *Statistical Handbook of Tamil Nadu-2020-21*. Government of Tamil Nadu.
- Desai, S. (2017, March 7). *Declining female labour force participation in rural India: The demand side*. Ideas for India. <https://www.ideasforindia.in/topics/social-identity/declining-female-labour-force-participation-in-rural-india-the-demand-side.html>
- Desai, S., & Joshi, O. (2019). The Paradox of Declining Female Work Participation in an Era of Economic Growth. *The Indian Journal of Labour Economics*, 62, 55–71. <https://doi.org/10.1007/s41027-019-00162-z>
- National Statistical Office. (2019). *Annual Report, Periodic Labour Force Survey, July 2017-June 2018*. https://mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf?download=1
- Tamil Nadu State Planning Commission. (2017a). *Tamil Nadu Human Development Report - 2017*. Government of Tamil Nadu. <https://spc.tn.gov.in/tnhdr2017.html>
- Tamil Nadu State Planning Commission. (2017b). *District Human Development Report – 2017, Villupuram District*. https://spc.tn.gov.in/DHDR/Vlupuram_dt.pdf
- TNHPS-PBS. (2021). *Tamil Nadu Household Panel Survey- Pre-Baseline Survey: 2018-19*. Draft report submitted to the Government of Tamil Nadu.

**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.



For more information, please contact:
TNHPS Research Manager
Madras Institute of Development Studies
79, Second Main Road, Gandhi Nagar, Adyar
Chennai 600020 Ph: 24411574 / 24412589
www.mids.ac.in
Email : researchmanager.tnhps@gmail.com