Department of Economics & Statistics









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

Cuddalore District

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In collaboration with the Department of Economics and Statistics,
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Summary of PBS Findings

Demographic Indicators

- Cuddalore had a sample size of 7,490 households, of which 63.10 percent of households were from rural areas and 36.90 percent of households were from urban areas.
- The district had a huge demographic dividend with 73.38 percent of the population in the age group up to 45 years. Around one-third of the population was between 26-45 years of age. The percentage of people above 60 years of age was 9.46 percent.
- Around 90 percent of the households in the district followed Hinduism.
- The BC and MBC category were the largest in number, together constituting around 70 percent of the total population in the district and around 30 percent of the households belonged to the SC category.

Education

- The district had a literacy rate of 84.14 percent, which was lower than the state estimates of 85.40 percent.
- The gender gap in literacy rate of the district was higher in rural areas at 13.99 percent than urban areas at 11.45 percent.
- Around 80 percent of the population had formal schooling in the district. Among the population with no formal schooling, around 85 percent did not have functional literacy.

Employment

- The unemployment rate was at 5.16 percent in the district. Only 50.18 percent of the total population were employed and 44.66 percent were not in the labour force.
- Around 70 percent of the males were employed and only around 30 percent of the females were employed, which shows the prevailing gender gap in employment.
- Most males who were currently not working were students—about 58.25 percent— whereas most females—about 72.18 percent—in this category were homemakers.

- The majority of the population in the district were casual labourers in the agriculture sector.
- Around 70 percent of the ST population were casual labourers in the agriculture sector.
- The population employed as casual labourers in the service sector dominated in urban areas, while casual labourers in agriculture sector were higher in rural areas of the district.

Land Ownership and Assets

- Around 20 percent of households owned agricultural land, which was higher among rural households than urban households. General category households were predominant agricultural land owners in the district.
- Households that depended on rain -fed irrigation in the district were 32.90 percent. A higher percentage of rural households owned unirrigated land than urban households.
- Around 89 percent of the agricultural land owners had marginal or small (less than 2 hectares) land.
- A quarter of the households owned agriculture, allied or fishing assets in the district. The number was higher among rural households than urban households.
- Around 90 percent the households in the district owned at least one household asset.

Household Income

- The annual mean income of the households in the financial year 2017-18 was ₹1,04,156 in the district; in the urban areas it was ₹1,37,397 and rural areas it was ₹90,495.
- The mean income from salaried work was the highest at ₹1,60,662.
- The income inequality in the district (0.502) was lower than the state estimate (0.563).
- Around 45 percent of the households in the district expected their income to increase or remain the same in the next five years. Less than two percent of the households expected their income to decrease in the next five years. Rural households were more optimistic than the urban households about the increase in their future income.

Housing

- In the district, 85.25 percent of households reside in their own houses. A higher percentage of rural households resided in their own houses compared to urban households of the district.
- Out of the 85.25 percent that owned houses in the district, only a quarter of houses were built under a government scheme and SC and ST households were the main beneficiaries of the government housing schemes.
- Around 45 percent of the households in the district lived in Pucca houses, around 30 percent lived in Semi-Pucca and less than 25 percent lived Kutccha houses.

Access to Drinking Water

• In both urban and rural areas, most commonly used primary source of drinking water in the district was public tap or standpipe at around 60 percent. Similar in both urban and rural areas of the district.

Electricity

• Around 97.12 percent of households in the district had domestic electricity connection as compared to the state estimate of 97.60 percent.

Cooking Fuel

- Around 75 percent of the households used LPG as primary cooking fuel.
- Less than a quarter of the households in the district used firewood as primary cooking fuel.

Sanitation

- More than 50 percent of the households had a latrine within the premises of the household. Latrine facilities were higher among urban households than rural households of the district.
- The percentage of total households in the district following open defecation had declined from 61.82 percent in 2011 (Census, 2011) to 46.14 percent in 2018 (PBS 2018-19). The district ranked third in terms of this parameter.
- Out of the 46.66 percent households which did not have latrine within the premises of the household, almost all the households practiced open defecation.

1. Introduction

1.1 Profile of Cuddalore District

Cuddalore district in Tamil Nadu was formed in the year 1993 from the bifurcation of the erstwhile South Arcot district into Cuddalore and Viluppuram districts. It is in the Northern region of the state, with Viluppuram on the North, Bay of Bengal in the East, Nagapattinam, Ariyalur and Perambalur on the South, and Viluppuram and parts of Perambalur on the West.

According to Census (2011), Cuddalore had a total population of 26 lakhs, accounting for approximately 3.6 percent of Tamil Nadu's total population, which was 7.21 crores. The district comprised 6.36 lakh households, with 66.03 percent residing in rural areas. The male population was 50.34 percent, and the female population was 49.66 percent. Cuddalore demonstrated a child-sex ratio of 896.11 as compared to the State average of 943.27. Within the social groups, 31.1 percent of the population belonged to the Scheduled Castes, while 1.12 percent belonged to the Scheduled Tribes. The literacy rate in Cuddalore district stood at 78.04 percent, compared to the State's average of 80.09 percent. The male literacy rate was 85.93 percent, while the female literacy rate was 70.14 percent, highlighting the need for investment in women's education.

In the fiscal year 2018-19, Cuddalore's Net District Domestic Product was ₹41,23,198 lakh, ranking at fifteenth position among all districts. The district's per capita Net District Domestic Product was recorded at ₹1,44,336, ranking it at twenty-first position among 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 16 percent to its domestic income, while the secondary (industry) and tertiary (service) sectors contribute approximately 18 percent and 66 percent, respectively (Department of Economics and Statistics, 2017).

According to the Tamil Nadu State Planning Commission (2017), Cuddalore ranked thirteenth in terms of the Human Development Index with a score of 0.719, a relatively mediocre score. It ranked twentieth in the Gender Inequality Index with a score of 0.083, which is a moderate score. In terms of the Child Development Index, the district ranked twenty-fourth with a score of 0.578, calling for the need to invest more in developing the youth. Additionally, Cuddalore ranked third in terms of the Multidimensional Poverty Index with a score of 0.38, pointing to a relatively good performance in the eradication and prevention of poverty.

Cuddalore district exhibits moderate economic indicators, with notable contributions from industry and services. While its human development and gender equality efforts reflect average performance, the district's commendable progress in multidimensional poverty reduction underscores its commitment to inclusive development.

1.2 About the TNHPS and the 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 analyze the patterns of change in various socioeconomic 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. 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 project. In the absence of Census 2021, the PBS estimates act as a valid benchmark for the state 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 1476 Primary Sampling Units—684 rural PSUs and 792 urban PSUs.

This report analyzes data from the PBS for the Cuddalore district and presents the findings. Wherever possible, the report compares the district PBS estimates with the most recent census data of Cuddalore (Census, 2011) and the state PBS estimates (TNHPS-PBS, 2021) to assess the socio-economic development of Cuddalore district. The sample size for the district was 7,490 households, among which 4,726 households were from rural areas and 2,764 households were from urban areas. The blocks covered during the survey were: Annagramam, MelBhuvanagiri, Cuddalore, Kammapuram, Keerapalayam, Kumaratchi, Kurinjipadi, Mangalore, Panruti, Parangipettai, and Vridhachalam

2. Survey Response

For the Pre-Baseline Survey (PBS) 2018-19, a total of 7,957 households in Cuddalore district were selected using a multi-stage stratified sampling design¹. The final sample size, comprising those who participated in the survey was 7,490 households, among which 63.10 percent of households were from rural areas and 36.90 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

	Area Type								
Response of	Rural		U	rban	Cuddalore				
Households	Number of HHs	Percentage	Number of HHs	Percentage	Number of HHs	Percentage			
Response	4726	94.67	2764	93.22	7490	94.13			
Non-Response	144	2.88	116	3.91	260	3.27			
Non-sample	122	2.44	85	2.87	207	2.60			
Total	4992	100	2965	100	7957	100			

Cuddalore district had a slightly lower response rate—willingness of households to participate in the TNHPS-PBS—of 94.13 percent compared to the state response rate of 96.5 percent. Around 3.27 percent of households were not willing to participate in the survey. About 2.60 percent of the selected samples were removed as they were not considered as households as per the definition used in the PBS².

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¹ Detailed explanation of the Sampling Methodology is 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 4.10 in 2011 (Census, 2011) to 3.76 in 2018 as per the PBS estimates. PBS estimates also show that 48.74 percent of the population in the district were male, and 51.24 percent of the population were female. Around 18.63 percent of the households in the district were headed by females, which was similar to the state estimate of 18.93 percent (TNHPS-PBS, 2021).

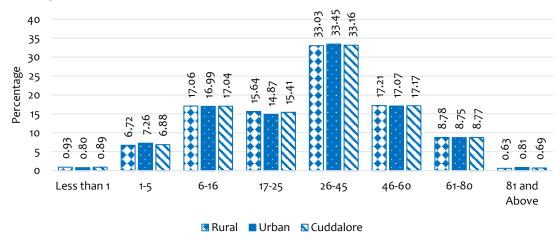


Chart 3.1 Age-wise Distribution of Population

Chart 3.1 shows that around one-third of the population in the district were in the age group of 26 to 45 years. The population—between 17 to 60 years—in the district was 65.74 percent, which was similar to the state estimate of 66.00 percent (TNHPS-PBS, 2021).

The percentage of currently married population was higher in urban areas as compared to the rural areas of the district. A higher percentage of males at 70.55 percent were currently married as compared to females at 67.86 percent. The widowed female population at 18.90 percent was notably higher than the widowed male population at 2.81 percent.

The religion-wise distribution of the households in the district, shows that 93.18 percent of the households practiced Hinduism, 4.03 percent practiced Islam and 2.78 percent followed Christianity.

TNHPS - PBS District Report - Cuddalore

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

Table 3.1 Social Group-wise Distribution of Households

Social Group	Percentage
SC	31.10
ST	1.12
BC	21.60
MBC	45.59
General	0.53
DK/RF	0.06
Total	100.00

^{*}DNC category was not covered in the sample as there was minuscule population

As per the PBS estimates, the highest percentage of households in Cuddalore district belonged to the MBC category. The percentages of SC and ST households in the district were 31.10 percent and 1.12 percent respectively in 2018-19.

3.2 Development Indicators

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

3.2.1 Education

The literacy rate of Cuddalore district during the period 2011 and 2018 is given in Table 3.2. As per Census (2011), a person—age 7 and above—who can both read and write with understanding in any language, is treated as literate. In the PBS, literacy rate is measured by including those that have formal schooling and those that can read and write a simple sentence.

Table 3.2 Literacy Rates between Census 2011 and PBS 2018

	Distric	t- Rural	District- Urban		ict- Urban Cuddalore		Tamil Nadu	
Gender	2011	2018	2011	2018	2011	2018	2011	2018
Male	82.85	90.06	91.89	93.13	85.93	90.96	86.77	90.97
Female	64.48	76.07	80.9	81.68	70.14	77.75	73.40	80.15
Total	73.69	82.88	86.38	87.14	78.04	84.14	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 Cuddalore district was at 78.04 percent, whereas the state average was 80.09 percent. The PBS estimates show that in the year 2018, the literacy rate in Cuddalore district—about 84.14 percent—was still lesser than the state estimate of 85.40 percent. The difference in literacy rate between state estimate and Cuddalore district was 2.05 percent in 2011, which had reduced to 1.22 percent in 2018. Both

male literacy as well as female literacy in Cuddalore district had recorded an increase during the period under consideration. The gender gap in literacy rate has declined from 15.79 percent in 2011 to 13.21 percent in 2018. As per the state PBS estimates, Cuddalore was ranked sixteenth among the 32 districts studied in terms of literacy rate (TNHPS-PBS, 2021).

The literacy rate in rural areas of the district was only 73.69 percent in the year 2011 (Census, 2011) which was less than the overall percentage of the district. According to PBS estimates, the literacy rate in rural areas of the district had increased to 82.88 percent in 2018. The rural male and female literacy rate had also recorded a notable increase during the period 2011-18. The literacy rate in urban areas of Cuddalore district had also increased from 86.38 percent in the year 2011 (Census, 2011) to 87.14 percent in the year 2018. Yet, the urban areas of the district recorded only 0.76 percent of growth in literacy rate during this period. There had been an increase in both male literacy as well as female literacy in the urban areas of the district during 2011 and 2018.

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 Cuddalore district. The area-wise education status of the population in Cuddalore district is given in Chart 3.2.

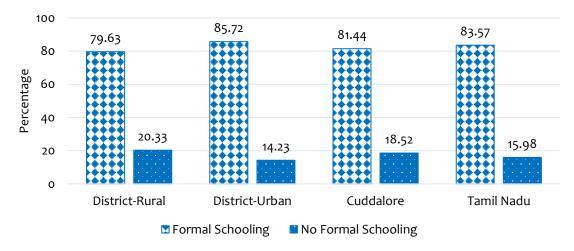


Chart 3.2 Formal Schooling of the Population – Area-wise

Chart 3.2 shows that 81.44 percent of the population in Cuddalore district had attended formal schooling compared to higher state estimates of 83.57 percent. The percentage of the population with formal education in urban areas were higher than rural areas of the district.

^{*}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 3.3 Formal Schooling of the Population – Gender-wise

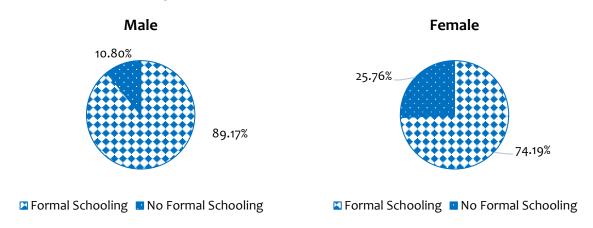


Chart 3.3 shows that the percentage of the population that acquired formal education was higher among the male population compared to the female population. Only 10.8 percent of the male population did not have formal education compared to the 25.76 percent of the female population.

A district-level analysis on education attainment status showed greater divergence across various social groups, as discussed below.

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

Education Status	Social Group						
Education Status	SC	ST	ВС	MBC	General	Cuddalore	
Formal Schooling	79.56	65.05	85.63	81.13	96.50	81.44	
No Formal Schooling	20.42	34.91	14.27	18.83	3.50	18.52	
Others and DK/RF	0.02	0.04	0.10	0.04	0.00	0.04	
Total	100	100	100	100	100	100	

Table 3.3 shows the percentage of the population who had attended formal schooling across various social group categories in Cuddalore district. A majority of the general population, followed by BC and MBC population in the district had formal education, while a higher percentage of ST and SC households did not have formal education.

Table 3.4 shows more precise information on the highest level of formal educational attainment of the specified population.

Table 3.4 Highest Formal Educational Attainment of Population (Age 7 and above): Areawise Percentages

		Area Type	
Educational Attainment	Rural	Urban	Cuddalore
Primary (I to V)	24.60	21.07	23.50
Middle (VI to VIII)	21.67	20.27	21.23
High School (IX to X)	25.94	26.15	26.01
Higher Secondary (XI to XII)	12.90	14.37	13.36
Bachelor's degree	7.26	9.51	7.96
Diploma Degree	5.30	4.90	5.18
Post Graduate Degree	2.27	3.61	2.69
Other Higher Education	0.00	0.05	0.02
Others/DK/RF	0.05	0.06	0.05
Total	100	100	100

The PBS estimates show that around 84.10 percent of the district's population had completed schooling up to higher secondary schooling. Tertiary education comprises bachelor's degree, diploma, postgraduate degree and other higher education. The district estimates show that 15.85 percent of the population (age 7 and above) had completed tertiary education compared to higher state estimates of 20.02 percent. The percentage of the specified population, who had completed tertiary education was higher in urban areas at 18.07 percent compared to the rural areas with 14.83 percent.

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

	Gender						
Educational Attainment	Male	Female	Cuddalore				
Primary (I to V)	21.51	25.75	23.50				
Middle (VI to VIII)	20.69	21.84	21.23				
High School (IX to X)	28.41	23.29	26.01				
Higher Secondary (XI to XII)	11.42	15.55	13.36				
Bachelor's degree	8.10	7.81	7.96				
Diploma Degree	7.24	2.85	5.18				
Post Graduate Degree	2.56	2.84	2.69				
Other Higher Education	0.03	0.00	0.02				
Others/DK/RF	0.04	0.07	0.05				
Total	100	100	100				

Table 3.5 shows that a higher percentage of males at 17.93 percent from the stated population had completed tertiary education compared to the females at 13.50 percent. However, a higher percentage of females had completed post-graduation. There was gender gap in the level of educational attainment in the district.

In order to see the social group-wise disparity in educational attainment in Cuddalore district, the percentage of population under each category across various education levels is estimated.

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

	Social Group					
Educational Attainment	SC	ST	ВС	мвс	General	Cuddalore
Primary (I to V)	23.15	22.99	22.26	24.63	4.52	23.50
Middle (VI to VIII)	20.82	24.93	19.04	22.62	17.43	21.23
High School (IX to X)	27.98	31.57	25.00	24.83	29.34	26.01
Higher Secondary (XI to XII)	13.19	10.52	14.86	12.88	6.85	13.36
Bachelor's degree	6.71	4.00	10.10	7.74	22.78	7.96
Diploma Degree	5.84	5.93	4.91	4.81	5.40	5.18
Post Graduate Degree	2.28	0.00	3.73	2.41	13.68	2.69
Other Higher Education	0.01	0.00	0.00	0.04	0.00	0.02
Others/DK/RF	0.03	0.06	0.12	0.04	0.00	0.05
Total	100	100	100	100	100	100

Table 3.6 shows that a higher percentage of the population across all social groups had completed high school. The percentage of population, who had completed tertiary education, was higher among the General category at 41.86 percent, followed by BC at 18.74 percent. The SC and ST population had a lower percentage at 14.84 percent and 9.93 percent respectively, of those who were either pursuing or had completed tertiary education. The proportion of population that had completed tertiary education within all social groups in the district was lower than the corresponding state level estimates

About 18.52 percent of the population had not received formal education in Cuddalore district (refer Chart 3.2). The PBS had 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 Percentage

	Area Type				
Functional Literacy	Rural	Urban	Cuddalore		
Yes	15.96	10.01	14.60		
No	84.00	89.89	85.34		
DK/RF	0.04	0.10	0.05		
Total	100	100	100		

Table 3.7 shows that only 14.60 percent of the population without formal schooling had functional literacy. The functional literacy rate of the specified population group in rural areas was higher than in urban areas of the district.

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

Functional Literacy	Social Group						
i diletional Literacy	SC ST BC MBC General Cudd						
Yes	11.90	1.96	14.01	17.67	0.00	14.60	
No	88.02	98.04	85.85	82.33	100.00	85.34	
DK/RF	0.08	0.00	0.14	0.00	0.00	0.05	
Total	100	100	100	100	100	100	

Table 3.8 shows the functional literacy status of population with no formal schooling, across various social group categories. Functional literacy was relatively higher among MBC category and lower among ST category. None of the five General category respondents without formal schooling surveyed in the district possessed functional literacy.

3.2.3 Employment Status

This section looks at the employment status of the household members, types of employment that the household members were engaged in, the unemployment rate at the district level and compare the findings with state estimates. In the PBS, the population of 14 years and above is classified as employed, unemployed and not in the labour force⁴.

The category employed consists of following categories:

- (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,

⁴Percentage 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 labour force = (Number of persons 14 years and above not in workforce/Total population of the district 14 years and above) *100

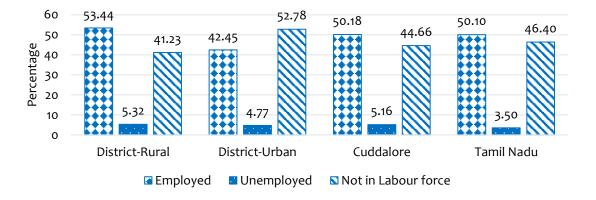
- (ix) People who worked as salaried employees in the private sector,
- (x) People who are involved in multiple occupations, and
- (xi) People who are involved in other types of work.

Unemployed group was defined as the population aged 14 years and above, who did not work but were seeking and/or available for work.

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

- (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 – Area-wise



The overall percentage of employed population—14 years and above—in the district was similar to the state estimates. The percentage of population employed in rural areas were higher than the urban areas of the district. The percentage of unemployed population in the district was higher than the state estimates. The unemployment status in rural areas of the district was at 5.32 percent, which was higher than the state rural estimate of 3.60 percent, whereas the district urban unemployment status stood at 4.77 percent, which was also higher than the state urban estimate of 3.30 percent. Cuddalore district was positioned thirteenth among all districts in Tamil Nadu in terms of employed population and ranked second in terms of the unemployed population , preceded by Thoothukkudi at 5.21 percent (TNHPS-PBS, 2021).



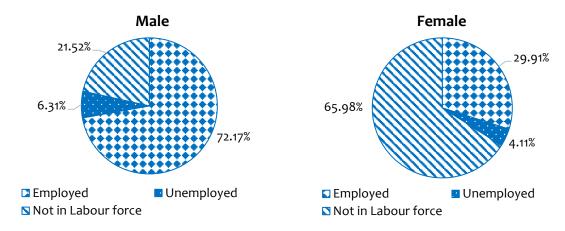


Chart 3.5 shows the gender-wise employment status of the population in the age 14 years and above. While 72.17 percent of the male population were employed, only 29.91 percent of the female population were employed. Decreased female labour force participation have been well documented at the national level (Das et al., 2015; Desai, 2017; Desai & Joshi, 2019). The female work participation in the district was higher than the national average of 23.3 percent in 2017-18 (National Statistical Office, 2019), and similar to the state estimates of 29.96 percent (TNHPS-PBS, 2021).

Among the 65.98 percent of the female population that were not in the workforce, the majority of—about 72.18 percent—homemaker (see Chart 3.7). Unemployment status was higher among the male compared to that of female population. Cuddalore district was positioned seventeenth in terms of female work participation and ranked third in terms of female unemployment status (TNHPS-PBS, 2021).

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

Work Type	Area Type						
work rype	Rural	Urban	Cuddalore				
Self Employed Agriculture	6.84	2.14	5.66				
Self Employed Non-Agriculture	6.60	18.33	9.54				
Self Employed Allied Agriculture	3.93	0.44	3.05				
Casual Labourer Agriculture	37.13	16.92	32.05				
Casual Labourer Industry	5.88	12.49	7.54				
Casual Labourer Service	20.49	20.57	20.51				
Casual Labourer (Others)	1.26	0.31	1.02				
Salaried Worker Government	3.72	6.65	4.46				
Salaried Worker Private	11.83	20.15	13.92				
Multiple Occupations	2.12	1.81	2.04				
Other	0.15	0.06	0.13				
DK/RF	0.05	0.13	0.07				
Total	100	100	100				

Table 3.9 shows that the highest proportion of the working population in the district were casual labourers in the agriculture sector at 32.05 percent, followed by casual labourer in

service sector at 20.51 percent. The highest proportion of the working population in the state were was salaried private workers at 21.82 percent (TNHPS-PBS, 2021). Casual labourers in the agriculture sector were predominant in rural areas at 37.13 percent, while casual labourer in service sector and salaried private work were predominant in urban areas at 20.57 percent and 20.15 percent respectively.

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

Moule Type	Social Group						
Work Type	SC	ST	ВС	MBC	General	Cuddalore	
Self Employed Agriculture	1.98	0.86	7.48	7.73	38.16	5.66	
Self Employed Non-Agriculture	8.13	8.88	15.80	8.15	5.57	9.54	
Self Employed Allied Agriculture	1.50	2.57	1.34	5.05	0.00	3.05	
Casual Labourer Agriculture	48.05	70.59	18.89	23.88	4.44	32.05	
Casual Labourer Industry	7.43	4.73	8.35	7.32	14.00	7.54	
Casual Labourer Service	13.91	4.02	19.08	26.94	14.32	20.51	
Casual Labourer (Others)	0.97	1.71	0.85	1.12	0.00	1.02	
Salaried Worker Government	3.90	0.86	6.41	4.18	8.56	4.46	
Salaried Worker Private	12.32	4.93	18.53	13.47	14.96	13.92	
Multiple Occupations	1.62	0.86	2.93	2.03	0.00	2.04	
Other	0.19	0.00	0.15	0.08	0.00	0.13	
DK/RF	0.00	0.00	0.18	0.08	0.00	0.07	
Total	100	100	100	100	100	100	

Table 3.10 shows that majority of the population from SC and ST category were engaged as casual labourers in agriculture sector. A higher percentage of BC and MBC population were engaged as casual labourers in service sector. General category population were self-employed in agriculture sector. The state estimates show that majority of the population from SC, ST, MBC and DNC category were casual labourers in agricultural sector and higher percentage of BC and general population were salaried workers in private sector (TNHPS-PBS, 2021).

Chart 3.6 Composition of the population not in the labour force -Area-wise

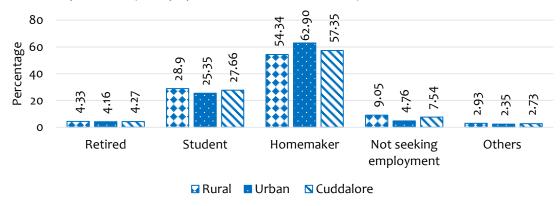


Chart 3.6 shows that, similar to the trend at the state level, more than half the population that was not in the labour force in the district comprised homemakers, followed by

students. The proportions of the population that were not seeking employment, students and retired people were higher in rural areas than urban areas, whereas the percentages of homemakers were higher in urban areas than rural areas.

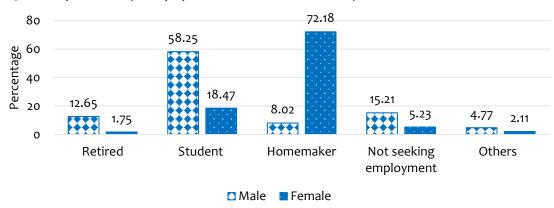


Chart 3.7 Composition of the population not in the labour force – Gender-wise

The gender-wise distribution of the population currently not in the labour force 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 as compared to men as only 18.47 percent of the female that were not in the labour force, were students. Similar to the state trend, the majority of the male not-in-labour-force population were students, whereas a majority of females were homemakers. 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										
Current Status	SC	ST	ВС	MBC	General	Cuddalore					
Retired	3.56	3.55	7.28	2.83	19.98	4.27					
Student	35.08	45.87	20.88	26.42	9.68	27.66					
Homemaker	47.49	38.69	61.05	62.09	66.25	57.35					
Not seeking employment	10.50	9.37	7.16	5.80	2.98	7.54					
Others	3.08	0.88	3.23	2.25	1.11	2.73					
DK/RF	0.28	1.64	0.40	0.60	0.00	0.46					
Total	100	100	100	100	100	100					

Table 3.11 shows that within all social groups, the percentage of homemakers was highest compared to other categories except ST category in the district. The ST and SC category had a higher percentage of not-working population as students compared to the other social groups.

3.3 Socio-Economic Indicators

The PBS estimates for various socio-economic indicators of the Cuddalore 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—namely irrigated, unirrigated or combination of both—in the rural and urban areas of Cuddalore 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 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.

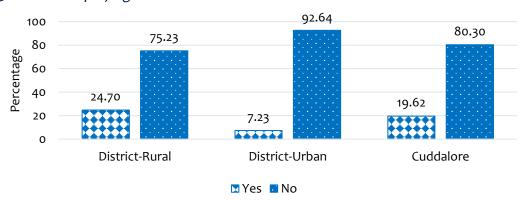


Chart 3.8 Ownership of Agricultural Land

As per the state estimates, the percentage of total households owning agricultural land in Tamil Nadu was 19.41 percent. The district was ranked sixteenth on the percentage of total households owning agricultural land (TNHPS-PBS, 2021). Chart 3.8 shows that 19.62 percent of the households in Cuddalore district owned agricultural land, The percentage of households owing agricultural land was higher in rural areas than urban areas of the district.

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

Type of Agriculture Land		Area Type	
Type of Agriculture Land	Rural	Urban	Cuddalore
Only Irrigated Agriculture Land	60.61	77.62	62.41
Only Unirrigated Agriculture Land	34.81	16.76	32.90
Both Irrigated and Unirrigated Agriculture Land	4.58	5.62	4.69
Total	100	100	100

Table 3.12 shows that, majority of the households who owned agricultural land in Cuddalore district—about 62.41 percent—depended on the various irrigation sources.

Canal irrigation, tank irrigation and tube well irrigation are the major sources of irrigation in Cuddalore district (Department of Economics and Statistics, 2023). Around 34.81 percent of agricultural land-owning households in rural areas and 16.76 percent of agricultural land-owning households in urban areas depend on rainfed irrigation alone. Among the agricultural land-holding households, the households having irrigated agricultural land in the district was at 62.41 percent—higher than the state estimate at 50.03 percent.

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

Agriculture Land	Social Group							
Ownership	SC	ST	General	Cuddalore				
Yes	9.33	4.55	21.59	25.74	50.36	19.62		
No	90.46	95.45	78.41	74.22	49.64	80.30		
DK/RF	0.22	0.00	0.00	0.04	0.00	0.09		
Total	100	100	100	100	100	100		

Table 3.13 shows that MBC category households at 25.74 percent and BC category households at 21.59 percent were predominant landholders in Cuddalore district compared to other social groups. Only 4.55 percent of ST category households and 9.33 percent of SC households owned agricultural land in the district.

Based on the size of agricultural land, the PBS classified the land owned by the households into marginal, small, semi-medium, medium and large. The percentage of households—that owned agricultural land—under each size category is given below.

Table 3.14 Size of Agricultural Land Owned by Households – Area-wise Percentages

Sing of Agricultura Land (in Hastores)	Area Type						
Size of Agriculture Land (in Hectares)	Rural	Urban	Cuddalore				
Marginal (0.01 - 0.99)	77.24	67.01	76.17				
Small (1 - 1.99)	12.94	12.24	12.87				
Semi Medium (2 - 3.99)	7.87	12.52	8.36				
Medium (4 - 9.99)	1.84	8.16	2.51				
Large (10 and above)	0.10	0.07	0.10				
Total	100	100	100				

Table 3.14 shows that 89.04 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands (less than 2 hectares). This estimate is similar to the state level estimate of 89.54 percent. The shares of semi-medium and medium landholdings were higher than that of the state- which was 7.49 percent and 2.22 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, mechanized and non-mechanized boats, amongst the households of Cuddalore district.

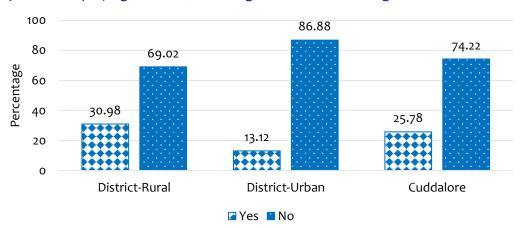


Chart 3.9 Ownership of Agricultural, Allied Agricultural and Fishing Assets – Area-wise

Chart 3.9 shows that 25.78 percent of the households in Cuddalore district owned at least one agricultural, allied agricultural and fishing assets. The estimate was higher than the state estimate of 20.92 percent (TNHPS-PBS, 2021). The proportion of households owning at least one agricultural, allied agricultural and fishing asset was higher in rural areas at 30.98 percent than in urban areas at 13.12 percent of the district.

3.3.3 Presence of Household Assets

This section discusses the percentage of households in Cuddalore district that owned 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 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.

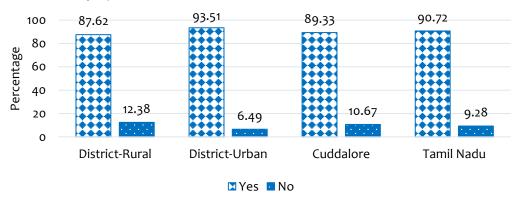


Chart 3.10 Ownership of at least one Household Asset - Area wise

The percentage of households owning at least one household asset in Cuddalore district was at 89.33 percent, which was lower than the state estimate of 90.72 percent. Within the district, the urban areas had a higher percentage of households owning at least one household asset than the rural areas (Chart 3.10).

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

Presence of Household	Social Group									
Assets	SC	ST	ВС	MBC	General	Cuddalore				
Yes	84.96	82.12	93.26	90.51	98.57	89.33				
No	15.04	17.88	6.74	9.49	1.43	10.67				
Total	100	100	100	100	100	100				

The PBS estimates show that 98.57 percent of General category households owned at least one household asset. ST category had the lowest percentage of households owning at least one household asset at 82.12 percent compared to other social groups in the district.

3.3.4 Possession of Ration Card

Having a ration card is a key indicator of household socio-economic status, influencing inclusion or exclusion from government welfare schemes like subsidized items from the Public Distribution System and LPG connections.

Chart 3.11 Possession of Ration Card

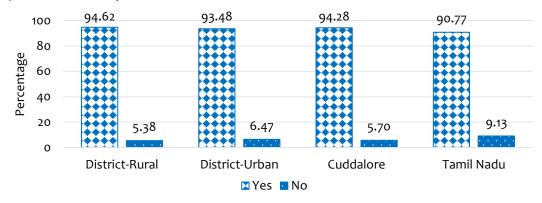


Chart 3.11 shows that the percentage of households in Cuddalore district that possessed ration cards was higher than the state estimate. A higher percentage of rural households possessed ration cards as compared to the urban households.

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

Possession of	Social Group									
Ration Card	SC	ST	General	Cuddalore						
Yes	92.85	95.33	95.10	95.02	87.15	94.28				
No	7.15	4.67	4.83	4.98	12.85	5.70				
DK/RF	0.00	0.00	0.07	0.00	0.00	0.01				
Total	100	100	100	100	100	100				

The PBS estimates found that more than 85 percent of households across all social groups possessed a ration card in the district. Possession of ration cards was highest among the ST category households at 95.33 percent and lowest among the General category households at 87.15 percent.

3.3.5 Type of Ration Card

According to the National Food Security Act (NFSA) 2013, ration cards are broadly categorized into Priority Households (PHH) and Non-Priority Households (NPHH). Households with priority ration cards are the target group of various social welfare schemes such as Antyodaya Anna Yojana (AAY) among others.

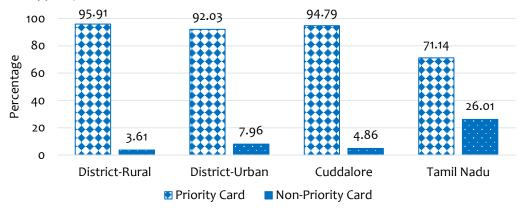


Chart 3.12 Type of Ration Card at the Household Level

The percentage of households possessing priority ration cards in the district was notably higher than the state estimates. Higher percentage of rural households possessed priority ration cards than urban households of the district (Chart 3.12).

3.4 Household Income

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

In this section we analyze the annual income of households in Cuddalore district from various sources in the year 2017-2018. The sources of income are income earned from activities such as agriculture, allied agriculture, salaried work, self-employment, 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 Cuddalore district.

Table 3.	.17	7 Mean Annual Household Income :	from Di	ff	erent Sou	irces	in	the	FΥ	201	7-2018 ('INR)

Source	Rural	Urban	Cuddalore	Tamil Nadu
Agriculture	66,974	81,513	68,453	61,830
Allied Agriculture	47,272	42,253	46,538	38,576
Salaried	1,43,738	1,89,046	1,60,662	2,29,857
Self Employed	84,576	1,30,499	1,06,987	1,47,403
Wage Labour	41,715	54,305	44,660	47,734
Other Sources	64,697	1,14,622	81,551	97,646
Income from all Sources	90,495	1,37,397	1,04,156	1,42,752

The mean household income was higher among the households with salaried income and lower among the households that depended on wages. On the whole, the mean annual household income of Cuddalore district was 27.04 percent lesser than the state estimates. Among the then 32 districts, Cuddalore was at twenty-third position in terms of mean annual household income (TNHPS-PBS, 2021).

The mean household income in the rural areas of Cuddalore district was similar to the rural state estimate of ₹92,765 (TNHPS-PBS, 2021). The rural mean household income was higher among the households who depended on salaried income. Lower rural mean income was reported among the rural households that engaged in wage labour as a source of income. The mean household income in the urban areas of Cuddalore district was lower than the urban state estimate of ₹1,99,629 (TNHPS-PBS, 2021). The urban mean household income was higher among the households who depended on salaried income. Lower urban mean income was reported among the urban households that engaged in allied agricultural actives as a source of income.

3.4.2 Income Inequality in Cuddalore District

Table 3.18 represents the area wise Gini coefficient values. The Gini coefficient measures the inequality levels where the Gini coefficient value of o represent perfect equality and 1—or 100 percent—represent perfect inequality across households. The income inequality in Cuddalore district (0.502) was marginally lower than the state estimate (0.563)⁵. The income inequality across households in rural areas of Cuddalore district was found to be higher than in the urban areas of the district. However, the difference is quite small.

Table 3.18 Gini Coefficient of Income Inequality- Area wise

Area	Gini Coefficient
Rural	0.496
Urban	0.485
Cuddalore	0.502
Tamil Nadu	0.563

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).

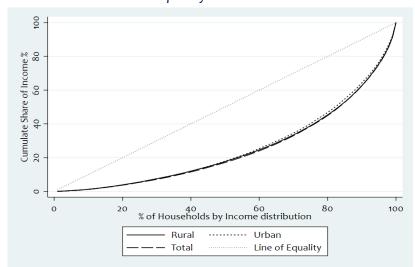


Chart 3.13 Lorenz Curve and Income Inequality

Lorenz curve is a graphical representation of inequality in the distribution of income or wealth of the population. Chart 3.13 represents that the bottom 60 percent of the households have around 20 percent of total income; the bottom 80 percent of households have 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 rural areas.

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 expectation of change in household income in the following five years. The expectation of a household head on the change in household income in future depends highly on various factors such as the probability of a household member's entry (or exit) to (from) the labour market, expected possession of financial and non-financial assets and so on. These variables are capable of capturing the level of optimism—or pessimism—that each household have about their future economic status. Table 3.19 shows the area-wise percentage of households expecting increase, decrease or no change in income in Cuddalore 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							
Expectation of Change in Household Income	Rural	Urban	Cuddalore	Tamil Nadu				
Higher	50.22	37.65	46.56	50.06				
Lower	1.49	2.44	1.77	8.17				
About the same	44.66	47.88	45.60	31.66				
DK/RF	3.63	12.03	6.07	10.11				
Total	100	100	100	100				

While 50.22 percent of the total households in rural areas expected an increase in

household income in the coming five years, around 47.88 percent of the urban households in Cuddalore district expected that their income would remain same.

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

Expectation of Change in Household Income	Social Group						
	SC	ST	ВС	MBC	General	Cuddalore	
Higher	53.32	87.47	47.43	40.34	63.96	46.56	
Lower	1.61	0.00	2.67	1.51	1.18	1.77	
About the same	42.76	11.95	34.33	53.89	28.05	45.60	
DK/RF	2.31	0.58	15.58	4.27	6.81	6.07	
Total	100	100	100	100	100	100	

The percentage of households expecting an increase in their future income was higher among the ST households—about 87.47 percent—than any other social group. Majority of MBC households—about 53.89 percent—expected that their income would remain same in the future. While 2.67 percent of BC households expected that their income would decline compared to other social categories. Interestingly, none of the ST households expected a decline in their income (table 3.20).

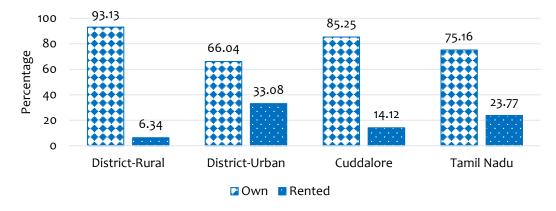
3.5 Basic Infrastructure

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 live in their own house or stay at rented a house are given below.

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



Around 85.25 percent of the households lived in their own houses and, 14.12 percent of the households in the district were living in rented houses in Cuddalore district. The

percentage of households living in their own houses in the district was higher than the state estimates. The district was ranked eighth among all districts of Tamil Nadu in terms of the percentage of households living in their own houses (TNHPS-PBS, 2021). There existed a wide range of disparity between the ownership of houses in rural and urban areas. While most of the households lived in their own houses in rural areas, around one-third of urban households were relying on rented houses for their stay. Only less than one percent of households were living in other houses such as relative's houses, 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	ВС	MBC	General	Cuddalore		
Own	93.21	97.55	73.88	84.96	89.07	85.25		
Rented	6.14	0.69	25.20	14.61	10.93	14.12		
Others	0.65	1.75	0.92	0.43	0.00	0.63		
Total	100	100	100	100	100	100		

Table 3.21 shows that most of the SC, ST, MBC and General category—at 93.21 percent, 97.55 percent, 84.96 percent and 89.07 percent respectively—households in Cuddalore district lived in their own houses. The percentage of General category households living in their own houses was much higher than the state estimates for the general category at 62.55 percent (TNHPS-PBS, 2021). On the other hand, only 73.88 percent of the BC households lived in their own houses and 25.20 percent were staying in rented houses. Still, the percentage of BC households living in rented houses were lesser than the state estimates of 30.62 percent (TNHPS-PBS, 2021). Likewise, the estimate on the percentage of General category households living in rented houses—about 10.93 percent—was lesser compared to the state estimates of 36.40 percent (TNHPS-PBS, 2021).

A detailed analysis of ownership of houses showed that out of 85.25 percent households that owned houses in Cuddalore district, 26.01 percent of houses were built under a government scheme (See Table 3.22).

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

House Constructed under	Social Group						
the Government Scheme	SC	ST	ВС	MBC	General	Cuddalore	
Yes	34.68	40.38	11.08	25.58	0.00	26.01	
No	65.26	59.62	88.92	74.26	100.00	73.90	
DK/RF	0.06	0.00	0.00	0.15	0.00	0.09	
Total	100	100	100	100	100	100	

Among the owned houses, the percentage of houses constructed under a government scheme was higher in the Cuddalore district at 26.01 percent compared to the state estimates of 14.00 percent (TNHPS-PBS, 2021). The SC households at 34.68 percent and ST households at 40.38 percent had the highest percentage of houses built under a government scheme compared to other social groups. None of the General category households constructed house under government scheme.

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.

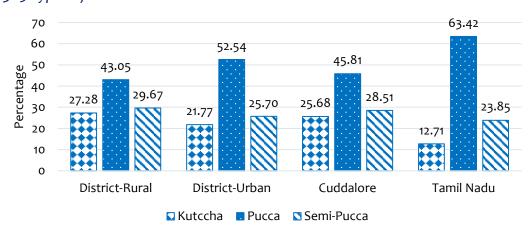


Chart 3.15 Types of House - Area-wise

Chart 3.15 shows that majority of the households—about 45.81 percent—in the Cuddalore district were living in pucca houses. The percentage of households living in pucca houses were lower than the state estimates of 63.42 percent. The percentage of people living in pucca houses was higher in urban areas compared to the rural areas of the district. While 75.22 percent of state urban households lived in pucca houses (TNHPS-PBS, 2021), only 52.54 percent of urban households in the district lived in pucca houses. The percentage of people living in semi-pucca and kutcha houses were similar in the district, whereas the difference in the state was wider.

3.5.3 Primary Drinking Water Source

In this section we discuss the findings of the PBS on primary source of drinking water of the households in Cuddalore district. The primary sources⁶ of water are: bottled water,

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

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).

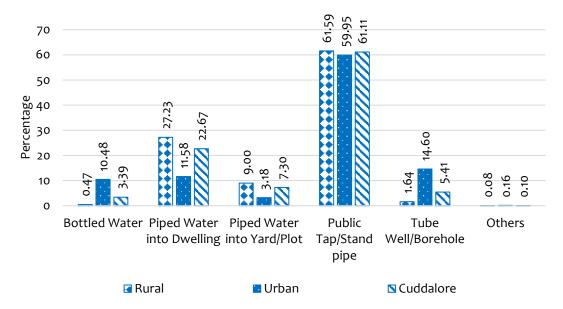


Chart 3.16 Primary Source of Drinking Water of Households

Chart 3.16 shows that 61.11 percent of households in Cuddalore district were using public tap or standpipe as their primary source of drinking water followed by piped water into dwelling, whereas 32.84 percent households in the state were using public tap or standpipe and 32.00 percent were using piped water into dwelling (TNHPS-PBS, 2021). The state estimates showed that piped water into the dwelling in urban areas—37.02 percent and public tap/standpipe in rural areas (44.51 percent) were the primary water sources of households (TNHPS-PBS, 2021). In the district, public tap/standpipe were mostly used both in urban and rural households at 59.95 percent and 61.59 percent respectively.

3.5.4 Electricity

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



Rural

···· Cuddalore

- Urban

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

Chart 3.17 shows that a mass electrification had happened in both rural and urban area of Cuddalore district during the period from 2011 to 2018, increase in households with electricity was higher in rural areas. Cuddalore district was ranked twenty-second among the then 32 districts in terms of electrification (TNHPS-PBS, 2021). Around 97.12 percent of households in the district had domestic electricity connection compared to the state estimate of 97.6 percent (TNHPS-PBS, 2021).

3.5.5 Primary Cooking Fuel

A comparison of Census (2011) and the 2018 PBS estimates on the primary cooking fuel used in the district is given below.

Chart 3.18 Comparison of Primary Fuel used for Cooking – Cuddalore and Tamil Nadu

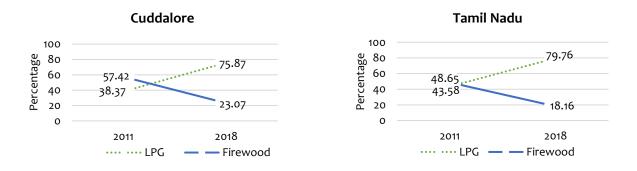
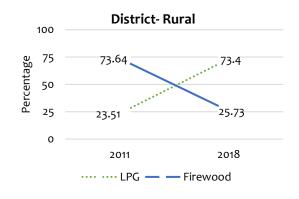


Chart 3.18 shows that, although the use of LPG as primary fuel for cooking in Cuddalore district has increased tremendously from 38.37 percent in 2011 (Census 2011) to 75.87 percent in 2018, around 23.07 percent of households were still using firewood as primary cooking fuel. Compared to other districts of Tamil Nadu, Cuddalore district stood eighteenth in terms of LPG use and fourteenth in terms of firewood use (TNHPS-PBS, 2021).

Chart 3.19 Comparison of Primary Cooking Fuel – Rural and Urban



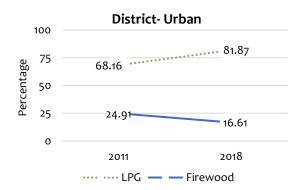


Chart 3.19 indicates that, while the percentage of households using LPG as primary fuel was higher in urban areas compared to the rural areas, the percentage of households using firewood as primary fuel was higher in rural areas compared to the urban areas of the district. The usage of firewood had reduced drastically and there was a notable increase in LPG as the primary cooking fuel in both urban and rural areas.

Table 3.23 Primary Fuel for Cooking in Household – Social Group wise Percentages

Primary Cooking Fuel	Social Group						
	SC	ST	ВС	МВС	General	Cuddalore	
Firewood LPG	36.57 62.03	41.75 58.25	12.93 85.97	18.50 80.82	1.43 88.91	23.07 75.87	
Kerosene	0.96	0.00	1.00	0.54	0.00	0.79	
Others	0.42	0.00	0.10	0.14	9.66	0.27	
DK/RF	0.02	0.00	0.00	0.00	0.00	0.01	
Total	100	100	100	100	100	100	

^{*}Others Include Electricity, Gobar Gas, Solar Energy, etc.

Table 3.23 shows that the percentage of households using firewood as primary cooking fuel was higher among SC and ST households compared to the other social groups, similar to the state estimates (TNHPS-PBS, 2021). Majority of the General, BC and MBC households in the district used LPG as primary fuel for cooking, similar to the state estimates (TNHPS-PBS, 2021). Around 41.75 percent of the ST households and 36.57 percent of the SC households used firewood as the primary fuel. Around 4.28 percent of the General category households used electricity as the primary cooking fuel.

3.5.6 Sanitation

The PBS estimates on households with and without latrine is given below.

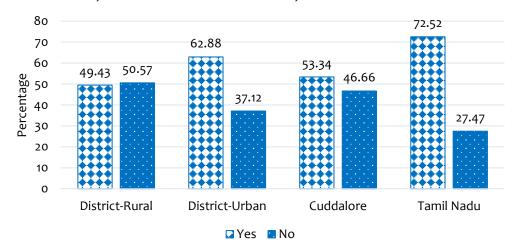


Chart 3.20 Presence of Latrine within the Premises of the Household

The percentage of households with a latrine within house premises increased from 42.00 percent in 2011 (Census, 2011) to 53.34 percent in 2018 as per the PBS estimates. Cuddalore district was positioned thirtieth among the 32 districts in terms of the presence of latrine facilities within the premises of the household (TNHPS-PBS, 2021). The households equipped with latrine facilities in the district were significantly lower than the state estimate. However, the rural-urban disparity in sanitation prevailed as the percentage of rural households with latrine facilities was only 49.43 percent compared to the percentage of urban households with latrine facilities of 62.88 percent.

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

Latrine within	Social Group							
House Premises	SC	ST	ВС	MBC	General	Cuddalore		
Yes	34.16	62.58	71.12	57.31	92.02	53.34		
No	65.84	37.42	28.88	42.69	7.98	46.66		
Total	100	100	100	100	100	100		

The PBS estimates show that majority of General, BC and ST households had latrine within the premises of the household in the district. Majority of SC and MBC households did not have latrine within the premises, compared to 47.70 percent and 32.50 percent state estimates.

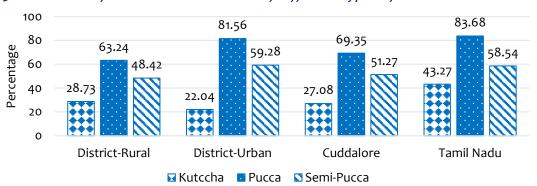


Chart 3.21 Presence of Latrine in the Premises of Different Types of Houses – Area-wise

Chart 3.21 depicts presence of a latrine in the premises of different types of houses. The majority of the pucca houses had latrine facilities within the premises of the house. The percentage of semi-pucca and kutcha houses with latrine facilities within the premises of the house were lower compared to the pucca houses of the district. The percentage of households with latrine facilities in pucca and semi-pucca houses were higher in urban areas compared to rural areas of the district, the percentage of households with latrine facilities in kutcha houses are higher in rural areas. The estimates of the district were lower than the state estimates for kutcha and semi-pucca houses.

The percentage of total households in the district following open defecation had declined from 61.82 percent in 2011 (Census, 2011) to 46.14 percent in 2018 as per the PBS estimates. Compared to other districts of Tamil Nadu, Cuddalore district was positioned third in terms of percentage of total households following open defecation. The alternative practices followed by the households without latrine within the premises of the house is shown below.

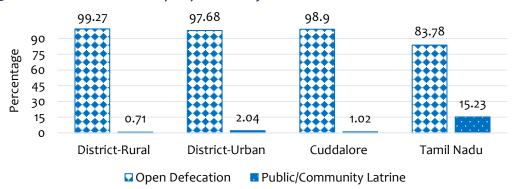


Chart 3.22 Alternate Practices of Defecation by the Households without Latrine

Chart 3.22 shows that 98.90 percent of households without latrine within the premises of the houses in Cuddalore district were following open defecation. The practice of open defecation was higher in rural areas compared to urban areas of the district. The percentage of households without latrine within the premises of the houses following open defecation was significantly higher than the state estimates.

4. Conclusion and Recommendations

The Pre-Baseline Survey (PBS) 2018-19 of Cuddalore district was conducted from a sample of 7,490 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.

Cuddalore is one of the agrarian districts of Tamil Nadu. A majority – 32.05 percent – of the population was engaged in casual labour in the agriculture sector and 8.71 percent was engaged in self-employment in agriculture and allied agriculture. To maximize the potential of its 68-kilometer coastline, the district must prioritize the refinement and expansion of the existing marine and aquaculture fishing initiatives. Around 25.78 percent of the households in the Cuddalore district owned at least one agricultural, allied agricultural and fishing assets. To uplift the district, it is imperative to focus on enhancing agricultural practices and improving rural livelihoods.

Only 18.38 percent of the population had salaried jobs. Cuddalore district also ranked second in terms of unemployed population. To combat unemployment and underemployment, tailored skill development programs aligned with local industries' demands should be implemented. Emphasis should be placed on vocational training, entrepreneurship development, and job placement services, especially targeting youth and women. Furthermore, fostering a conducive environment for small and medium enterprises (SMEs) and promoting agro-based industries can create diverse employment opportunities in the district.

The percentage of households possessing a priority ration card in the district was 94.79 percent which was much higher than the state estimate of 71.14. The mean annual household income of Cuddalore district was approximately 27 percent lesser than the state average. The susceptibility of Cuddalore to cyclones, coupled with its heavy reliance on agriculture, particularly fishing for employment, underscores the district's vulnerability and may contribute significantly to its low income levels. Providing relief funds to the farmers affected by cyclone, facilitating access to credit and market linkages can boost agricultural productivity and income among small farmers thereby improving overall economic conditions in the district.

Around 18.5 percent of the population in the district had not received formal education with a significant portion of them lacking functional literacy. Given the literacy gap, particularly among females and rural residents, prioritizing investment in education is imperative. Strategies should focus on improving school infrastructure, enhancing access to quality education, and promoting adult literacy programs, especially in rural areas.

Around 23 percent of the households in the district still used firewood as the primary cooking fuel. It is crucial to facilitate universal access to LPG connections to promote cleaner and safer cooking practices. Regarding sanitation, the district ranked thirtieth out of thirty-two districts in terms of latrine facilities within the household premises. Moreover, the percentage of households practicing open defecation was second highest in Cuddalore district compared to other districts of Tamil Nadu. Therefore, efforts to improve sanitation and public health infrastructure are essential for promoting community well-being. Initiatives should target the construction of household latrines and public toilets, particularly in areas with high open defecation rates. Furthermore, promoting hygiene education, waste management practices, and access to clean drinking water can mitigate the spread of diseases and improve overall sanitation standards in the district.

Collaborative efforts between government agencies, civil society organizations, and local communities can help the district overcome its socio-economic challenges and ensure inclusive growth and prosperity for all residents of the district.

References

- Census. (2011). District Census Handbook Series-34 Part XII-B Cuddalore. Directorate of Census Operations. Government of Tamil Nadu. https://censusindia.gov.in/nada/index.php/catalog/1113
- 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 Hand Book of Tamil Nadu-2016-17. Government of Tamil Nadu.
- Department of Economics and Statistics. (2023). Statistical Hand Book 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%20 Report%2C%20PLFS%202017-18 31052019.pdf?download=1
- Tamil Nadu State Planning Commission. (2017). Tamil Nadu Human Development Report 2017. Government of Tamil Nadu. https://spc.tn.gov.in/tnhdr2017.html
- TNHPS-PBS. (2021). Tamil Nadu Household Panel Survey- Pre-Baseline Survey: 2018-19.

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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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