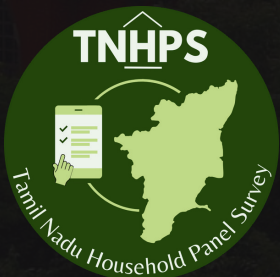


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Chennai



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**

Chennai District

February 2024

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

Demographic Indicators

- Chennai is entirely an urban district as of 2018.
- The district had a huge demographic dividend with almost two-thirds of the population aged between 6 and 45 years. More than one-third of the population was between 26-45 years of age.
- The BC social group, comprising nearly half of all households in the district, was the largest in number, followed by the SC and MBC categories.

Education

- The PBS estimates showed that the literacy rate in the district had increased from 90.18 percent (Census 2011) to 93.79 percent in 2018 and was higher than the state estimate of 85.40 percent. Chennai was ranked second in the state among all the districts in terms of literacy rate.
- The gender gap in literacy rate in the district had declined from 7.06 percent in 2011 to 5.42 percent in 2018, which was lower than the state gender gap of 10.82 percent in 2018.
- More than 90 percent of the population—aged seven and above—in the district attended formal schooling, which was higher compared to the state estimate.

Employment

- The share of the unemployed population at 2.39 percent was lower in the district compared to the state at 3.45 percent. About 47.15 percent of the population aged 14 and above were employed and the rest at 50.44 percent were not in the labour force.
- While more than 70 percent of the male population were employed, the female work participation was at 23.35 percent.
- About 77.95 percent of women that did not participate in the workforce were homemakers. Since Chennai is an urban district, more than half the employed population were salaried workers in the private sector, followed by self-employed in non-agriculture.

Land Ownership and Assets

- Chennai district was ranked last in terms of agricultural land ownership since the district is urban. More than 90 percent of households across social groups did not own agricultural land in the district.
- More than half the households that owned agricultural land in the district depended on irrigation for agriculture.
- About 70.67 percent of the agricultural land-owning households in the district were holding marginal or small agricultural land—less than two hectares.
- Only 2.03 percent of the households in Chennai district owned at least one agricultural, allied agricultural and fishing asset. This was lesser than the state estimates of 20.92 percent.
- The PBS estimates show that almost all General category households in Chennai district owned at least one household asset. The percentage of ST households owning at least one household asset—about 97.81 percent—was higher than that of the MBC and SC category households.

Household Income

- The mean annual household income of Chennai district was ₹3,18,329, which was 123 percent higher than the state PBS estimate of ₹1,42,752. Chennai was ranked first out of 32 districts with respect to this parameter.
- The mean household income was the highest among the households with salaried income (₹3,53,430) and the lowest among the households that depended on wage labour (₹64,233).
- The Gini coefficient for income inequality in the Chennai district (0.514) was lower than the state estimate (0.563).
- While more than 50 percent of households belonging to most social groups expected an increase in income in the next five years, only around 36 percent of ST households expected the same.

Housing

- About 49.51 percent of the households in the district were living in their own house, which was much lower than the state level estimate of 75.16 percent.
- Out of the households that lived in an own house in the district, only 3.69 percent of houses were built under a government scheme. SC households had the highest

percentage of houses built under a government scheme compared to other social groups in the district.

- Almost 85 percent of households in Chennai district were living in pucca houses, while less than five percent were living in kutccha houses.

Drinking Water, Electricity, and Cooking Fuel

- Most of the households in Chennai district at 47.45 percent were using bottled water as their primary source of drinking water, whereas most of the households—about 32.84 percent—in the state were using public tap or standpipe and piped water into dwellings at 32.04 percent.
- The district was close enough to achieving complete electrification. As per the state estimates, Chennai district was ranked second at 98.82 percent, only next to Kanniyakumari district at 99.05 percent, among the then 32 districts in terms of electrification.
- The percentage of households using LPG as the primary cooking fuel in Chennai district at 96.23 percent was higher than the state estimate of 79.76 percent.
- More than 90 percent of the households across social groups were using LPG as the primary cooking fuel.

Sanitation

- The percentage of households with latrine within the premises of the house had increased from 95.59 percent in 2011 (Census, 2011) to 97.4 percent in 2018. Chennai district was positioned second in the state among the 32 districts in terms of this indicator.
- All General category households had a latrine within the premises of their household. Comparatively, only 89.30 percent of SC households had a latrine within the premises of the household.
- The percentage of total households in the district practicing open defecation increased from 0.59 percent in 2011 (Census, 2011) to 1.01 percent in 2018.

1. Introduction

1.1 Profile of Chennai District

Chennai district in the state of Tamil Nadu was formed in the year 1956. It is in the Northern region of the State, with Tiruvallur in the North, Bay of Bengal in the East, Kancheepuram in the South, and Tiruvallur and Kancheepuram in the West.

According to Census (2011), Chennai had a total population of 46.47 lakhs, accounting for approximately 6.45 percent of Tamil Nadu's total population, which was 7.21 crores. The district comprised 11.55 lakh households. The male population was 50.27 percent, and the female population was 49.73 percent. Chennai demonstrated a child-sex ratio of 950.26 compared to the state average of 943.27. Within the social groups, 16.8 percent of the population belonged to the Scheduled Castes, while 0.2 percent belonged to the Scheduled Tribes. The literacy rate in Chennai district stood at 90.18 percent, compared to the state's average of 80.09 percent. The male literacy rate was reported to be 93.7 percent, while the female literacy rate was reported to be 86.64 percent.

In the fiscal year 2018-19, Chennai's Net District Domestic Product was ₹1,22,55,049 lakh, ranking at second highest amongst districts. The district's per capita Net District Domestic Product was recorded at ₹2,51,572, ranking it at fifth among districts and surpassed Tamil Nadu's average of ₹1,83,884 (Department of Economics and Statistics, 2023). In terms of sectoral distribution, the primary sector (agriculture and allied) contributes approximately one percent to its domestic income, while the secondary (industry) and tertiary (service) sectors contribute approximately 13 percent and 86 percent, respectively (Department of Economics and Statistics, 2017).

According to the Tamil Nadu State Planning Commission (2017), Chennai ranked fourth in terms of the Human Development Index with a score of 0.847, pointing to an above-average performance in overall development. It ranked twenty-eighth in the Gender Inequality Index with a score of 0.111, demanding attention to expanding resources to close the gender divide. In terms of the Child Development Index, the district ranked nineteenth with a score of 0.642, indicative of an average performance in developing the youth. Additionally, Chennai ranked second in terms of the Multidimensional Poverty Index with a score of 0.34, pointing to a relatively good performance in the eradication and prevention of poverty.

Chennai district demonstrates robust economic prowess, driven primarily by its thriving service sector, leading to a high per capita income exceeding the state average. Notably excelling in human development and poverty alleviation, the district showcases a comprehensive approach towards enhancing well-being and socio-economic conditions.

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 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. 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 Chennai district and presents the findings. Wherever possible, the report compares the district PBS estimates with the most recent census data of Chennai (Census, 2011) and the state PBS estimates (TNHPS-PBS, 2021) to assess the socio-economic development of Chennai district. The sample size for the district was 7,030 households.

2. Survey Response

For the Pre-Baseline Survey (PBS) 2018-19, a total of 10,247 households in the Chennai district were selected using a multi-stage stratified sampling design¹. The final sample size comprising those who participated in the PBS survey was 7,030 households. The survey response is given in Table 2.1.

Table 2.1 Distribution of Sample Households – Response-wise

Response of Households	Frequency	Percent
Response	7,030	68.61
Non-Response	1,611	15.72
Non-sample	1,606	15.67
Total	10,247	100

Chennai district had a very low response rate—willingness of households to participate in the TNHPS-PBS—of 68.61 percent compared to the state response rate of 96.5 percent. Around 15.72 percent of households were not willing to participate in the survey. About 15.67 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 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.

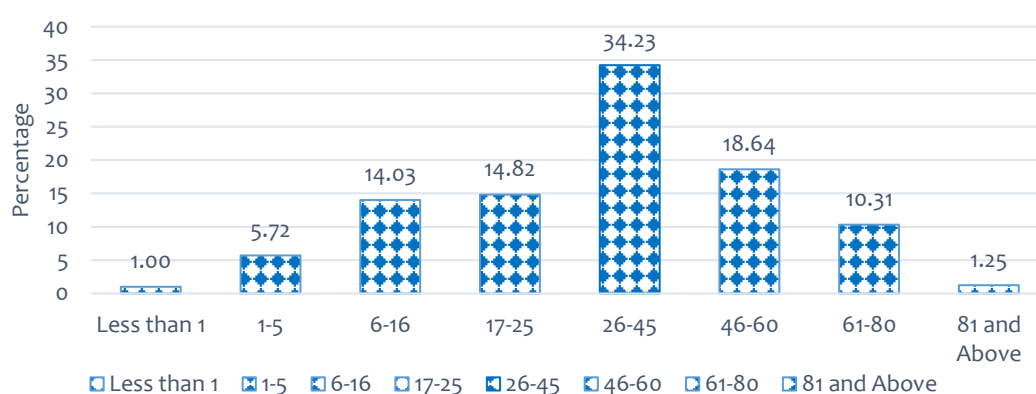
3. Key Findings

3.1 Demographic Indicators

Chennai is a fully urbanized district. The average household size³ in the district had reduced from 4.02 in 2011 (Census, 2011) to 3.64 in 2018. As per the PBS estimates, 49.64 percent of the population in the district were male, and 50.33 percent of the population were female. Around 13.68 percent of the households in the Chennai district were headed by females, which was lower than the state estimate of 18.93 percent (TNHPS-PBS, 2021).

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

Chart 3.1 Age-wise Distribution of Population



As per the PBS estimates, the proportion of the population in the 17 to 45 years' age bracket in the district at 49.05 percent was higher than the state PBS estimates of 48 percent. Similarly, the proportion of senior citizens—above 60 years—in the district's population at 11.56 percent was higher than that of the state estimate at 11 percent (TNHPS-PBS, 2021).

A higher percentage of the male population in the district at 71.35 percent was currently married compared to the female population at 69.50 percent. The widowed female population at 14.76 percent was much higher than the widowed male population at 2.32 percent. The percentage of males that never married—about 25.79 percent—was significantly higher than their female counterparts at 14.28 percent.

The religion-wise distribution of the households in the district as per the PBS estimates shows that 84.85 percent of the households practiced Hinduism, 9.96 percent practiced Christianity and 4.26 percent followed Islam.

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	19.04
ST	0.41
BC	47.57
MBC	18.26
Denotified Communities (DNC)	0.37
General	12.27
DK/RF	2.08
Total	100

As per the PBS estimates, the highest percentage of households in Chennai district belonged to BC category. The percentages of SC and ST households in the district were 19.04 percent and 0.41 percent respectively in 2018.

It is important to note that the percentage of DNC category households in Chennai district was only 0.37 percent and only twenty-three DNC households were sampled in the district. Hence, the results pertaining to the DNC social group 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 the Chennai district.

3.2.1 Education

The literacy rate of Chennai 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 who have formal schooling and those who can read and write a simple sentence.

Table 3.2 Literacy Rate between Census 2011 and PBS 2018

Gender	Chennai		Tamil Nadu	
	2011	2018	2011	2018
Male	93.70	96.53	86.77	90.97
Female	86.64	91.11	73.40	80.15
Total	90.18	93.79	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 Chennai district at 90.18 percent was higher than the state average of 80.09 percent. The PBS estimates showed that in the year 2018, the literacy rate in Chennai district had increased to 93.79 percent, which continued to be higher than the state average of 85.40 percent. The district had registered a 3.61 percent increase in literacy rate in this period while the state had registered a 5.31 percent increase. The difference in literacy rate between Chennai district and the state average was 10.09 percent in 2011, which had declined to 8.43 percent in 2018 as per the PBS estimates.

Both male and female literacy rates in Chennai district had recorded an increase during the period under consideration. The gender gap in literacy rate had declined from 7.06 percent in 2011 to 5.42 percent in 2018, which is lower than the state gender gap of 10.82 percent in 2018. In terms of literacy rate, Chennai was ranked second among the then 32 districts in 2018 (TNHPS-PBS, 2021).

3.2.2 Education Status of Population (Age 7 and above)

In this section, we discuss the educational status of the population aged seven and above in the Chennai district.

Chart 3.2 Formal Schooling of the Population

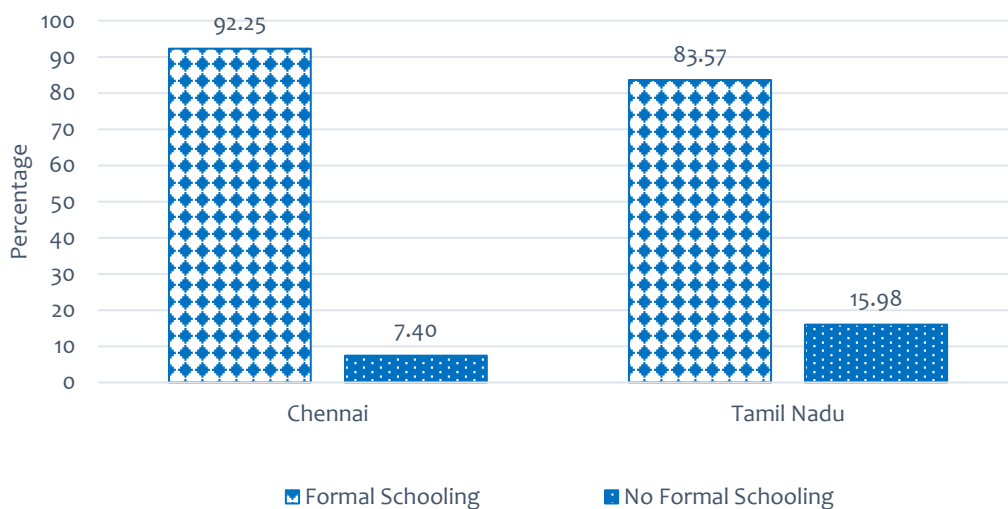


Chart 3.2 shows that more than 90 percent of the specified population in the district had attended formal schooling, which was higher compared to the state estimate.

Chart 3.3 Formal Schooling of the Population – Gender-wise

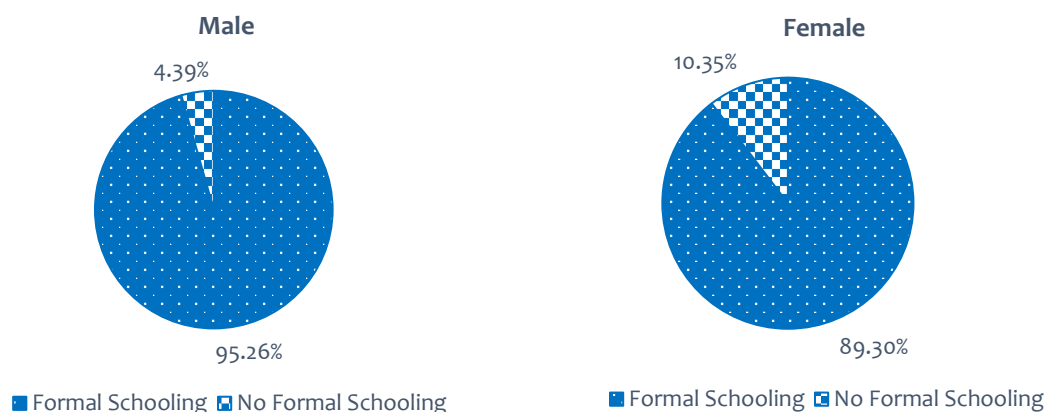


Chart 3.3 shows that the percentage of the population that had acquired formal education in the district was higher among males compared to females.

A district level analysis of the PBS on educational 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	Chennai
Formal Schooling	88.84	79.92	93.79	88.74	98.02	97.61	92.25
No Formal Schooling	10.86	19.44	5.96	10.93	1.98	1.81	7.40
Others and DK/RF	0.30	0.64	0.26	0.33	0.00	0.58	0.35
Total	100	100	100	100	100	100	100

Table 3.3 shows that more than 80 percent of the population across the social group categories had received formal education⁴.

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

Educational Attainment	Male	Female	Chennai
Primary (I to V)	11.94	14.80	13.34
Middle School (VI to VIII)	13.50	16.11	14.78
High School (IX to X)	22.92	21.41	22.18
Higher Secondary (XI to XII)	12.83	15.46	14.11
Bachelor's degree	23.79	20.77	22.31
Diploma Degree	5.13	1.95	3.57
Post Graduate Degree	9.35	9.02	9.18
Other Higher Education	0.18	0.11	0.15
Others/DK/RF	0.37	0.38	0.38
Total	100	100	100

⁴ The results pertaining to the DNC category in the report must be interpreted in the context of their sample size, as discussed in Section 3.1.

Table 3.4 shows that a higher percentage of females at 67.78 percent had completed schooling up to higher secondary level compared to males at 61.19 percent. The specified population that had completed tertiary education—such as bachelor’s degree, diploma, or post graduate degree and above—was 35.21 percent, which was much higher than the state estimate of 20.02 percent. In tertiary education, there was a higher percentage of males with a post-graduate and diploma degrees compared to females.

Table 3.5 Highest Educational Attainment of Population with Formal Education – Social-Group wise

Educational Attainment	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Primary (I to V)	16.38	15.33	13.41	15.55	15.61	5.14	13.34
Middle (VI to VIII)	19.81	20.74	14.31	16.17	23.27	6.85	14.78
High School (IX to X)	27.90	28.77	21.76	23.48	19.65	14.42	22.18
Higher Secondary (XI to XII)	14.82	10.32	14.34	15.06	7.88	11.65	14.11
Bachelor's degree	14.10	11.58	22.15	19.15	24.57	38.76	22.31
Diploma Degree	3.67	9.74	3.89	3.43	1.97	2.20	3.57
Post Graduate Degree	2.95	2.74	9.79	6.79	7.06	19.61	9.18
Other Higher Education	0.04	0.00	0.08	0.00	0.00	0.77	0.15
Others/DK/RF	0.34	0.79	0.27	0.37	0.00	0.59	0.38
Total	100	100	100	100	100	100	100

The social group-wise analysis in Table 3.5 shows that most of the SC and ST population in the district had completed only schooling up to higher secondary level. The percentage of population with tertiary education—bachelor’s degree and above—was quite high among the General category at 61.34 percent, followed by the BC category at 35.91 percent.

Table 3.6 Functional Literacy of Population with No Formal Schooling

Functional Literacy	Percentage of Population
Yes	20.85
No	79.05
DK/RF	0.10
Total	100

About 7.4 percent of the population had not received formal education in the Chennai 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 3.6 shows that only 20.85 percent of the population without formal schooling had functional literacy.

Table 3.7 Functional Literacy of Population with No Formal Schooling - Social Group-wise Percentages

Functional Literacy	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Yes	20.12	23.99	22.48	18.58	0.00	34.22	20.85
No	79.82	76.01	77.30	81.42	100	65.78	79.05
DK/RF	0.06	0.00	0.22	0.00	0.00	0.00	0.10
Total	100	100	100	100	100	100	100

Table 3.7 shows the literacy status of the population with no formal schooling, across various social groups. Functional literacy was below 35 percent across all social groups.

3.2.3 Employment Status

This section looks at the employment status of the household members, the 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 force⁵.

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

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

⁵ 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

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 (Age 14 years and above)

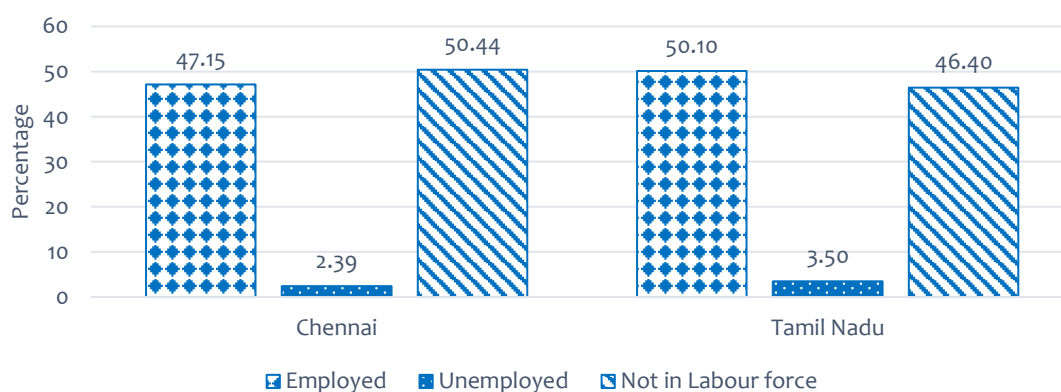


Chart 3.4 shows that the overall percentage of employed population—14 years and above—in the district was lesser than the state estimate. The share of unemployed population was also lower in the district compared to the state. Chennai district was ranked twenty-sixth among all districts in Tamil Nadu in terms of employed population and ranked fourth lowest in terms of the unemployed population.

Chart 3.5 Employment Status of the Population – Gender-wise

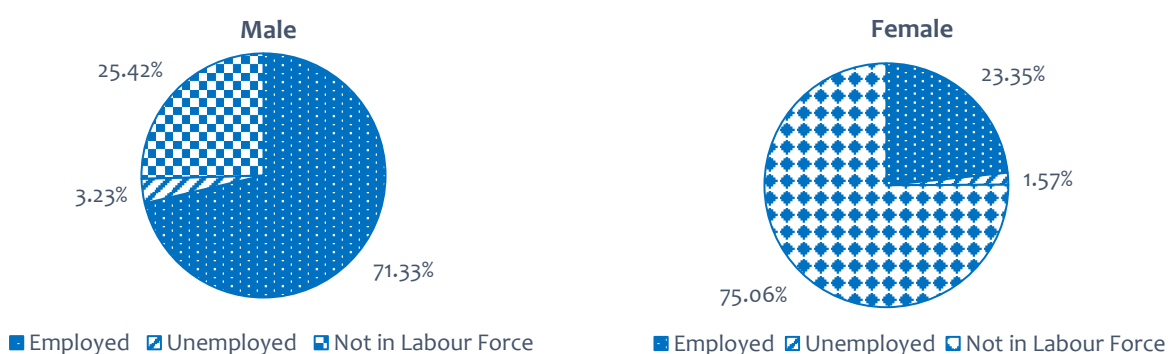


Chart 3.5 shows the gender-wise employment status of the population aged 14 years and above. While 71.33 percent of the male population—was employed, the percentage of working females was only 23.35 percent. Decreased female labour force participation has been well documented at the national level (Das et al., 2015; Desai, 2017; Desai & Joshi, 2019). While the district’s female working population was almost the same as the national

average of 23.3 percent in 2017-18 (National Statistical Office, 2019), it was lesser than the state PBS estimate of 29.96 percent. About 75.06 percent of the specified female population did not participate in the workforce. Among these, a majority of 77.95 percent were homemakers (refer Chart 3.6). Among the districts, Chennai ranked twenty-eighth in terms of employed female population and ranked fifth lowest in terms of female unemployment.

Table 3.8 Work Type of Population

Work Type	Percentage of Population
Self Employed Agriculture	0.22
Self Employed Non-Agriculture	21.39
Self Employed Allied Agriculture	0.58
Casual Labourer Agriculture	0.22
Casual Labourer Industry	7.89
Casual Labourer Service	10.64
Casual Labourer (Others)	0.62
Salaried Workers Government	7.14
Salaried Workers Private	50.57
Multiple Occupations	0.45
Other	0.24
DK/RF	0.03
Total	100

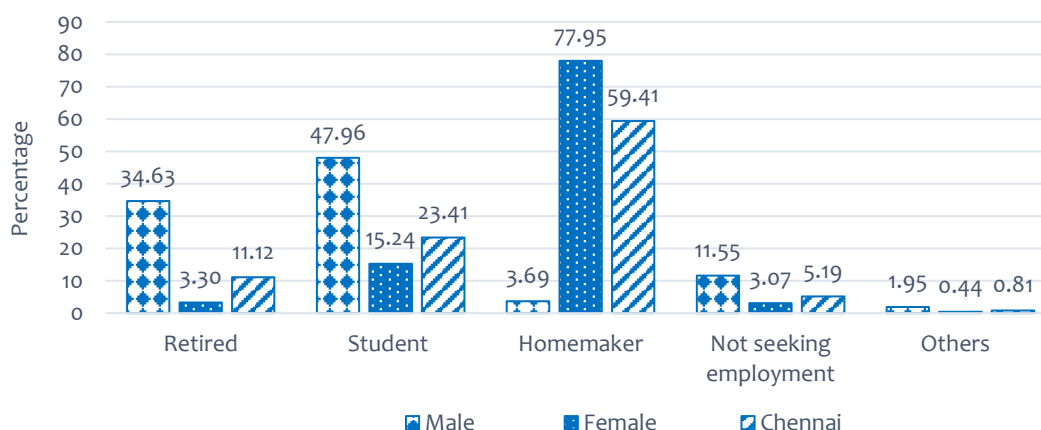
Since Chennai is an urban district, more than half the employed population at 50.57 percent were engaged in salaried work in the private sector. This was followed by self-employment in non-agriculture at 21.39 percent. The labour force depending on salaried work in the private sector was higher in the district compared to the state estimate of 21.82 percent. A mere 0.8 percent of the employed population were engaged in agricultural and allied agricultural activities (table 3.8).

Table 3.9 Percentage of Employed Population Engaged in Different Types of Livelihood Activities - Social Group-wise Percentages

Work Type	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Self Employed Agriculture	0.00	0.85	0.25	0.17	0.00	0.47	0.22
Self Employed Non-Agriculture	14.30	22.11	23.36	21.09	22.06	27.40	21.39
Self Employed Allied Agriculture	0.29	3.46	0.61	0.71	3.73	0.68	0.58
Casual Labourer Agriculture	0.38	0.85	0.14	0.30	0.00	0.00	0.22
Casual Labourer Industry	9.86	10.40	8.08	9.61	0.00	1.44	7.89
Casual Labourer Service	15.70	32.27	8.24	15.86	24.15	1.35	10.64
Casual Labourer (Others)	2.21	0.00	0.23	0.22	0.00	0.00	0.62
Salaried Workers Government	6.87	5.50	7.30	6.77	14.33	8.27	7.14
Salaried Workers Private	49.78	24.56	51.00	44.85	29.77	59.10	50.57
Multiple Occupations	0.46	0.00	0.42	0.32	5.94	0.79	0.45
Other	0.13	0.00	0.33	0.03	0.00	0.50	0.24
DK/RF	0.03	0.00	0.03	0.08	0.00	0.00	0.03
Total	100	100	100	100	100	100	100

According to table 3.9, more than half of the General and BC category population are engaged in salaried private work. The SC and MBC category population was also primarily involved in salaried employment in the private sector. Next to salaried employment in the private sector, self-employment in the non-agricultural sector was the most prominent employment type among the General and BC categories in the district.

Chart 3.6 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 3.6. It shows that only 15.24 percent of the females that were not in the labour force were students. Similar to the state trend, majority of the males that were not in the labour force were students, whereas the 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.

The composition of the population not in the labour force analyzed according to social groups is given in Table 3.10.

Table 3.10 Composition of Population Not in the Labour Force – Social Group-wise Percentages

Current Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Retired	6.84	8.17	9.74	5.88	11.60	26.57	11.12
Student	26.05	19.50	23.77	25.31	27.95	17.96	23.41
Homemaker	59.27	70.76	60.15	63.19	60.45	52.23	59.41
Not seeking employment	6.73	1.18	5.45	4.88	0.00	2.84	5.19
Others	0.93	0.39	0.84	0.75	0.00	0.41	0.81
DK/RF	0.18	0.00	0.06	0.00	0.00	0.00	0.06
Total	100	100	100	100	100	100	100

Table 3.10 shows that within all social groups, the percentage of homemakers was the largest compared to other categories in the district. More than a quarter of the SC and MBC not-working respondents belonging to the student category.

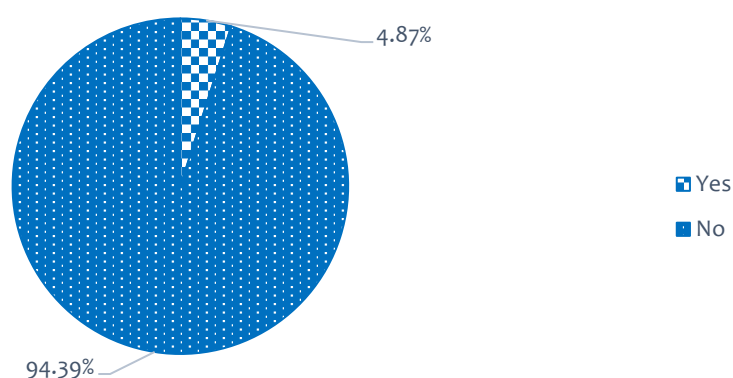
3.3 Socio-Economic Indicators

The PBS estimates for various socio-economic indicators of Chennai 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, namely irrigated, unirrigated or combination of both, in Chennai district is given in Chart 3.7. 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 3.7 Ownership of Agricultural Land



Since Chennai is an urban district, only 4.87 percent of the households owned agricultural land. As per the state estimates, the percentage of total households owning agricultural land in Tamil Nadu was 19.41 percent. Chennai district was positioned last among the 32 districts with respect to the percentage of total households owning agricultural land followed by Coimbatore district at 8.14 percent and Kancheepuram district at 9.01 percent (TNHPS-PBS, 2021).

Table 3.11 Type of Agricultural Land Owned by the Households

Type of Agricultural Land	Percentage of Households
Only Irrigated Agriculture Land	51.76
Only Unirrigated Agriculture Land	38.02
Both Irrigated and Unirrigated Agriculture Land	8.04
DK/RF	2.18
Total	100

Table 3.11 shows that, as per the PBS estimates, about 51.76 percent of the households that owned agricultural land in Chennai district depended on irrigation for agriculture. The

proportion of households having irrigated agricultural land was higher in the district compared to the state PBS estimate of 50.03 percent (TNHPS-PBS, 2021).

An analysis of the social group-wise ownership of agricultural land by households in Table 3.12 showed that a relatively higher percentage of MBC households owned agricultural land in the district.

Table 3.12 Ownership of Agricultural Land - Social Group-wise Percentages

Agricultural Land Ownership	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Yes	3.32	5.46	4.47	8.50	32.57	2.79	4.87
No	95.05	93.53	95.09	91.15	67.43	96.03	94.39
DK/RF	1.63	1.01	0.44	0.35	0.00	1.18	0.74
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 3.13.

Table 3.13 Size of Agricultural Land Owned by the Households

Size of Agricultural Land (in Hectares)	Percentage of Households
Marginal (0.01 - 0.99)	51.11
Small (1 - 1.99)	19.56
Semi Medium (2 - 3.99)	20.79
Medium (4 - 9.99)	6.62
Large (10 and above)	1.91
Total	100.00

Table 3.13 shows that 70.67 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares. This figure is lesser than the state level estimate of 89.54 percent. The shares of semi-medium, medium, and large landholdings in the district were higher than that of the state - at 7.49 percent, 2.22 percent and 0.75 percent respectively.

3.3.2 Ownership of Agricultural, Allied and Fishing Assets

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

Chart 3.8 Ownership of Agricultural, Allied Agricultural and Fishing Assets

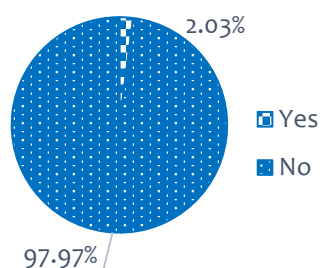


Chart 3.8 shows that only 2.03 percent of the households in Chennai district owned at least one agricultural, allied agricultural and fishing assets compared to the state estimates of 20.92 percent (TNHPS-PBS, 2021).

3.3.3 Presence of Household Assets

Household assets include Air Conditioner (AC), refrigerator, two-wheeler, four-wheeler, and mobile phones owned by the households in the Chennai district. 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 3.9 shows that the percentage of households owning at least one household asset in Chennai district was 97.86 percent, which was higher than the state estimate of 90.72 percent (TNHPS-PBS, 2021).

Chart 3.9 Ownership of at least one Household Asset

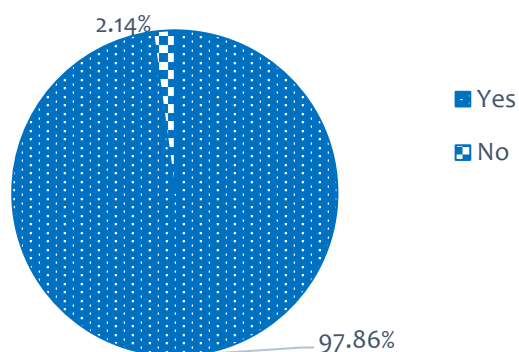


Table 3.14 Presence of at least one Household Asset - Social Group-wise Percentages

Presence of Household Assets	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Yes	96.66	97.81	98.67	95.53	100	99.76	97.86
No	3.34	2.19	1.33	4.47	0.00	0.24	2.14
Total	100	100	100	100	100	100	100

Table 3.14 shows that almost all General category households in Chennai district owned at least one household asset. The percentage of ST households owning at least one household asset at 97.81 percent which was higher than MBC and SC category households.

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 3.10 Possession of Ration Card

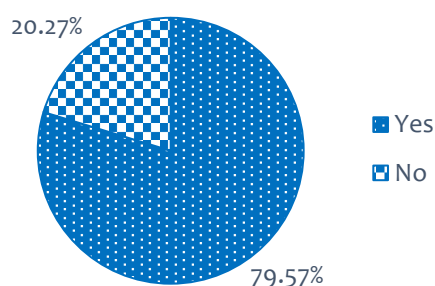


Chart 3.10 shows that 79.57 percent of households in Chennai district possessed a ration card which was lower when compared to the state estimate of 90.77 percent (TNHPS-PBS, 2021).

Table 3.15 shows that 81.75 percent of BC households possessed a ration. This was higher than the ownership by other social groups

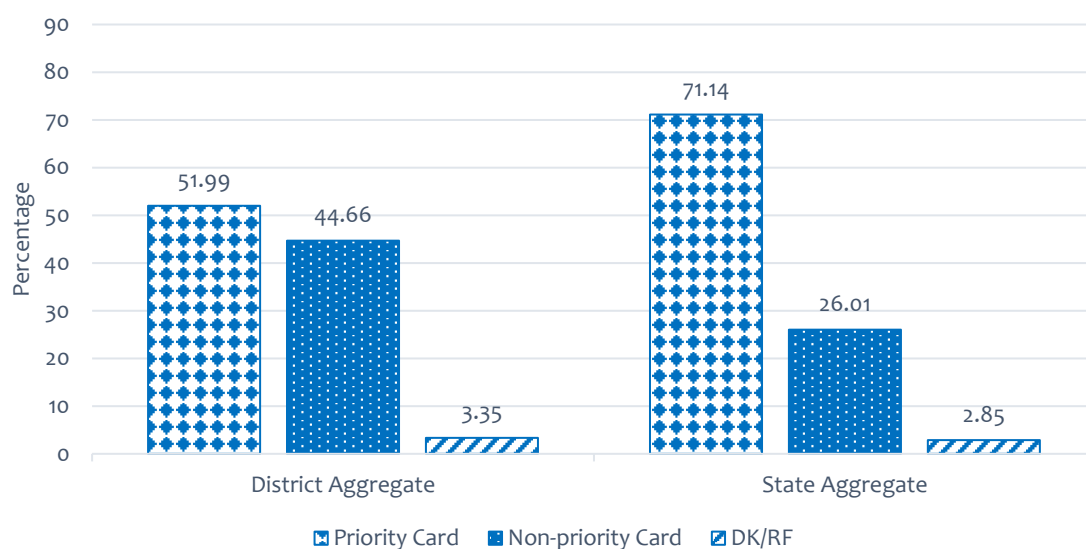
Table 3.15 Possession of Ration Card at the Household Level - Social Group wise

Possession of Ration Card	Social Group						
	SC	ST	BC	MBC	DNC	General	Total
Yes	78.42	71.52	81.75	79.31	78.68	76.37	79.57
No	21.57	26.45	18.05	20.69	21.32	23.59	20.27
DK/RF	0.01	2.03	0.20	0.00	0.00	0.04	0.16
Total	100	100	100	100	100	100	100

3.3.5 Type of Ration Card

According to National Food Security Act (NFSA) 2013, ration cards are broadly categorized 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.

Chart 3.11 Type of Ration Card at the Household Level



The percentage of households possessing priority ration cards in the district was much lesser compared to the state level estimates. (Chart 3.11,)

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 Chennai district from various sources in the financial year 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 3.16 shows the mean income of households that depended on various sources of income in Chennai district.

Table 3.16 Annual Household Income from Various Sources in the FY 2017-2018

Source	Chennai	Tamil Nadu
Agriculture	2,07,258	61,830
Allied Agriculture	1,42,163	38,576
Salaried	3,53,430	2,29,857
Self Employed	2,68,027	1,47,403
Wage Labour	64,233	47,734
Other Sources	2,35,644	97,646
Income from all Sources	3,18,329	1,42,752

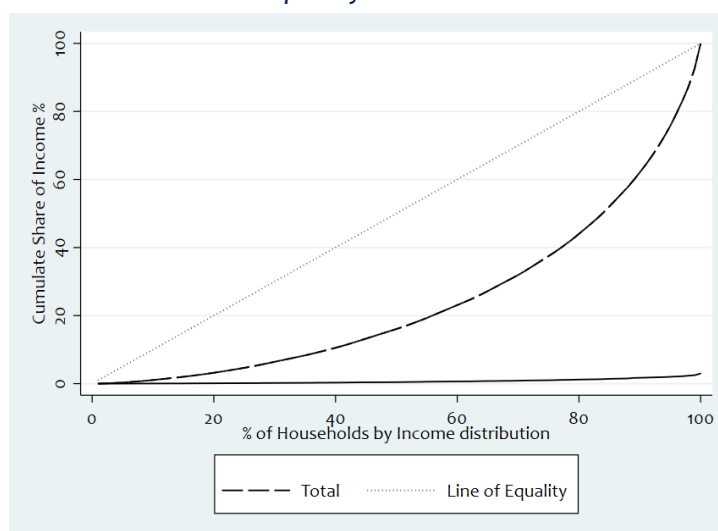
The mean household income was the highest among the households with salaried income and the lowest among the households that depended on wage labour. Overall, the mean

annual household income of Chennai district was 123 percent higher than the state PBS estimate of ₹1,42,752. Among the then 32 districts, Chennai was ranked first in terms of mean annual household income (TNHPS-PBS, 2021).

3.4.2 Income Inequality in Chennai 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 Chennai district (0.514) was slightly lower than the state estimate (0.563)⁶.

Chart 3.12 Lorenz Curve and Income Inequality



The Lorenz curve is a graphical representation of inequality in the distribution of income or wealth of households. Chart 3.12 shows that in Chennai, the bottom 60 percent of the households held around 22.5 percent of the total income; the bottom 80 percent of households held around 45 percent of the total income and the top 20 percent of households held around 55 percent of total income.

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

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

⁶ 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).

(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 3.17 Households' Expectation of Change in Income in the Next 5 Years

Expectation of Change in Household Income	Percentage of Households	
	Chennai	Tamil Nadu
Higher	58.37	50.06
Lower	7.19	8.17
About the same	19.42	31.66
DK/RF	15.02	10.11
Total	100	100

While a majority of 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 only 7.19 percent. About 19.42 percent of the households in the district anticipated their future income to remain the same. Around 15 percent of the households refused to respond to the question (table 3.17).

Table 3.18 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	Chennai
Higher	58.30	35.55	59.79	56.17	51.57	59.39	58.37
Lower	5.65	5.21	7.91	7.10	4.58	6.68	7.19
About the same	21.04	33.97	18.00	21.25	20.86	18.04	19.42
DK/RF	15.01	25.27	14.30	15.49	22.98	15.88	15.02
Total	100	100	100	100	100	100	100

While close to 60 percent of the BC and General category households in the Chennai district expected an increase in their future income, only about 35.55 percent of the ST households expected the same. A higher percentage of BC households expected their income to decrease in the future compared to other social categories (table 3.18)

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 percentages of households that lived in an own house or stayed at a rented house are given in Chart 3.13.

Chart 3.13 Ownership Status of the Households' Dwelling/House

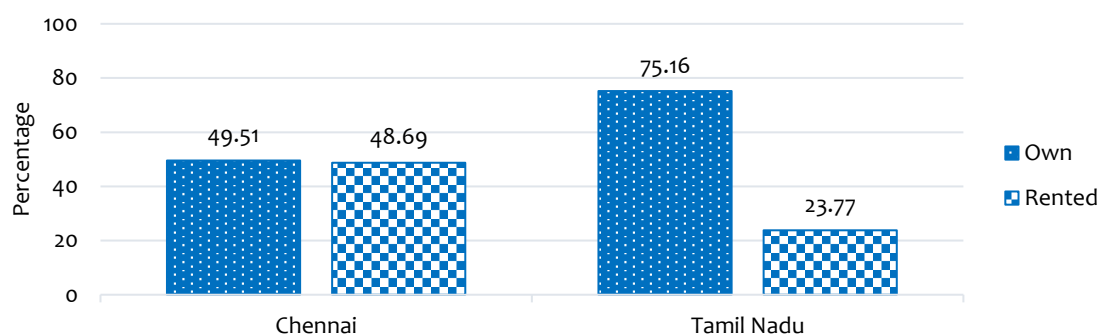


Chart 3.13 shows that the proportion of households living in their own house in the district was much lesser than the state level estimate. Chennai district was ranked last among the then 32 districts of Tamil Nadu in terms of percentage of households living in their own house (TNHPS-PBS, 2021). About 1.79 percent of households were living in other houses such as relative's house, encroached property, etc. This data does not capture the ownership of a house in a different geographical location.

Table 3.19 Ownership Status of the Households' Dwelling/House - Social Group-wise Percentages

Ownership Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Own	52.50	47.87	47.10	46.64	21.26	59.30	49.51
Rented	45.55	46.92	50.98	51.16	67.43	40.34	48.69
Others	1.95	5.21	1.92	2.20	11.31	0.36	1.79
DK/RF	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100	100	100	100	100	100	100

Table 3.19 shows that more than 50 percent of the General and SC households in the district lived in their own house, while less than half the ST, BC and MBC households did so.

A detailed analysis of ownership of houses showed that out of the 49.51 percent households (refer Chart 3.13) that lived in their own house in the district, only 3.69 percent of houses were built under a government scheme, which was lower than the state estimate of 14.12 percent (TNHPS-PBS, 2021).

Table 3.20 House Constructed Under Government Scheme - Social Group-wise Percentages

House Constructed Under a Government Scheme	Social Group						
	SC	ST	BC	MBC	DNC	General	Chennai
Yes	10.57	2.47	2.20	3.08	0.00	0.11	3.69
No	87.20	95.42	97.70	96.52	100	99.57	95.70
DK/RF	2.23	2.12	0.10	0.40	0.00	0.32	0.62
Total	100	100	100	100	100	100	100

The social group-wise analysis shows that in the Chennai district, SC households had the highest percentage of houses built under a government scheme compared to other social groups.

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 3.14 Type of House

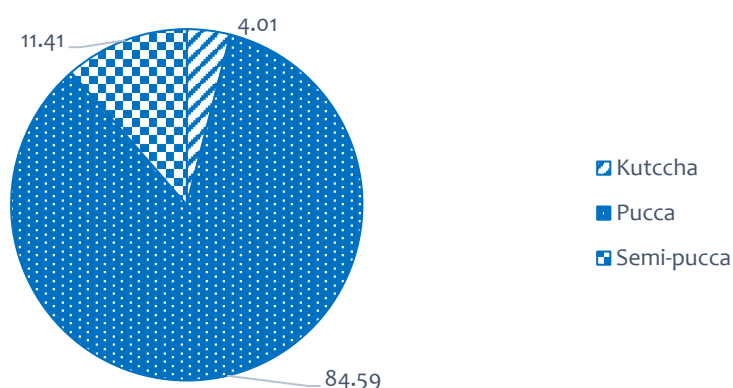


Chart 3.14 shows that more than 80 percent of households in Chennai district were living in pucca houses, while less than five percent were living in Kutccha houses.

3.5.3 Primary Drinking Water Source

In this section, we discuss the PBS findings on the primary source of drinking water of the households in the district. The primary sources⁷ of water are: bottled water, piped water into dwelling, piped water to yard or plot, public tap or standpipe and tube well or

⁷ Primary source - Water that is availed for the greater part of the year

borehole. Other water sources include protected well, unprotected well, rainwater collection and surface water (tank/pond/river/dam).

Chart 3.15 Primary Source of Drinking Water of Households

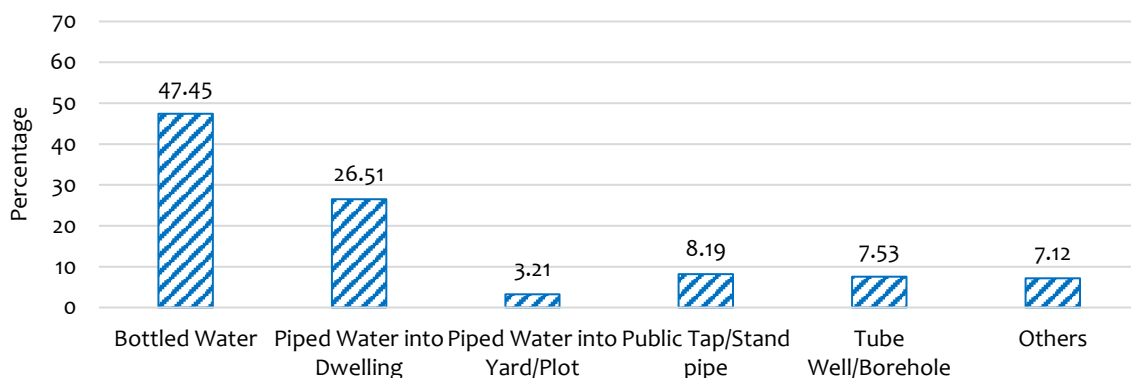
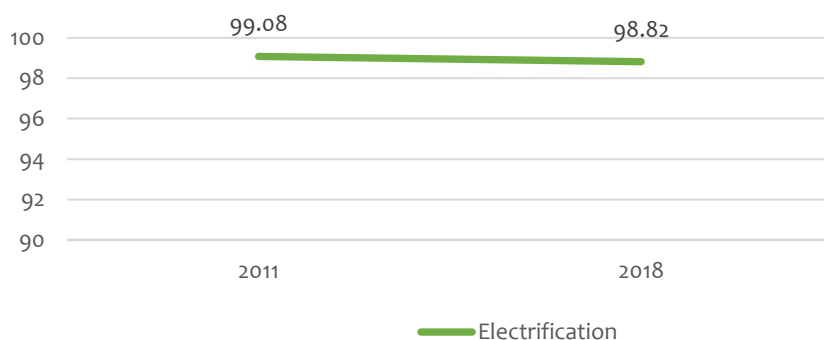


Chart 3.15 shows that most of the households in Chennai district at 47.45 percent were using bottled water as their primary source of drinking water, whereas most of the households in the state were using public tap or standpipe at 32.84 percent and piped water into dwelling at 32.04 percent (TNHPS-PBS, 2021).

3.5.4 Electricity

Chart 3.16 Comparison of Households with Electricity between Census (2011) and PBS 2018



The state of Tamil Nadu had witnessed mass electrification during the last decade. A comparison of households with electricity connection between Census, 2011—about 99.08 percent—and the PBS estimates—98.82 percent—shows that the district was close enough to achieving complete electrification. Chennai district was ranked second, only next to Kanniyakumari district—99.05 percent—among the then 32 districts in terms of electrification (TNHPS-PBS, 2021).

3.5.5 Primary Cooking Fuel

A comparison of Census (2011) and the PBS estimates on the primary cooking fuel by the households in the district is given in Chart 3.17.

Chart 3.17 Comparison of Primary Cooking Fuel – Chennai and Tamil Nadu

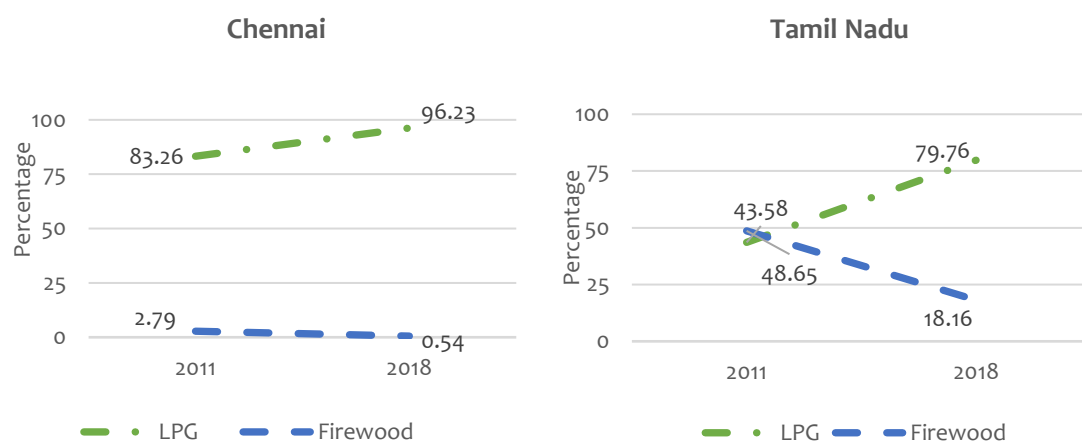


Chart 3.17 shows that LPG was the most commonly used fuel for cooking in the Chennai district. The percentage of households using LPG as the primary fuel in Chennai district at 96.23 percent was higher than the state estimate of 79.76 percent. Among all the districts of Tamil Nadu, Chennai was ranked first in terms of using LPG as the primary cooking fuel and positioned last in terms of using firewood use as the primary cooking fuel (TNHPS-PBS, 2021).

Table 3.21 Primary Cooking Fuel in Household - Social Group-wise Percentages

Primary Cooking Fuel	Social Group						Chennai
	SC	ST	BC	MBC	DNC	General	
Firewood	1.59	10.16	0.19	0.55	0.00	0.00	0.54
LPG	91.61	89.84	97.05	96.67	98.87	99.59	96.23
Kerosene	5.37	0.00	1.71	1.88	0.00	0.00	2.19
Others	1.26	0.00	0.87	0.89	1.13	0.22	0.90
DK/RF	0.17	0.00	0.18	0.01	0.00	0.19	0.15
Total	100	100	100	100	100	100	100

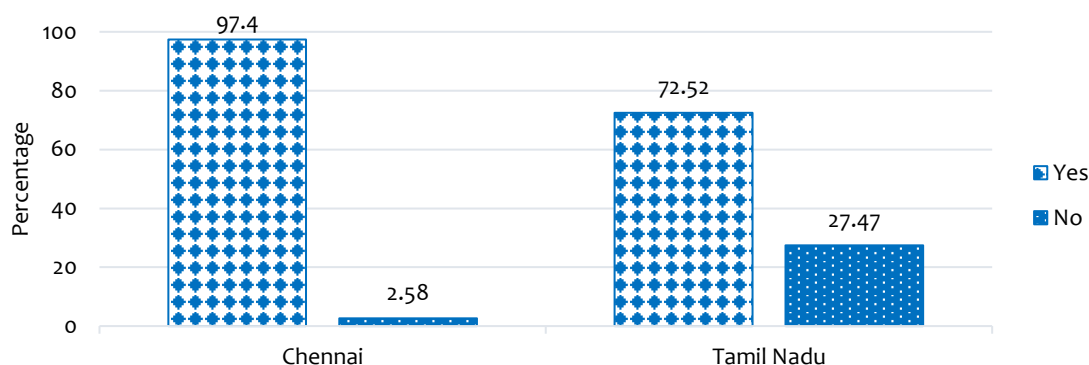
*Others Include Electricity, Gobar Gas, Solar Energy, etc.

Table 3.21 shows that there was not much disparity across the social groups in Chennai district in terms of the fuel used for cooking. More than 90 percent of the households across social groups were using LPG as the primary cooking fuel. 5.37 percent of the SC households in Chennai district reported that they were using Kerosene as the primary cooking fuel, and more than 10 percent of the ST households still used firewood as the main cooking fuel.

3.5.6 Sanitation

The PBS estimates on households with and without a latrine in the district is given in Chart 3.18.

Chart 3.18 Presence of Latrine within the Premises of the Household



The percentage of households with a latrine within the premises of the house had increased from 95.59 percent in 2011 (Census, 2011) to 97.41 percent in 2018 as per the PBS estimates. Chennai district was positioned second in the state among the 32 districts in terms of this indicator (TNHPS-PBS, 2021). The percentage of households with latrine facilities in the district was much higher than the state-level estimate.

Table 3.22 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	Chennai
Yes	89.30	96.45	99.50	98.40	100	100	97.40
No	10.70	2.54	0.49	1.60	0.00	0.00	2.58
DK/RF	0.00	1.01	0.02	0.00	0.00	0.00	0.01
Total	100	100	100	100	100	100	100

Table 3.22 shows that all General category households and more than 95 percent of BC, MBC and ST households had a latrine within the house premises. On the other hand, only 89.30 percent of SC households had a latrine within the premises of the household. All the twenty three DNC households surveyed in the district had a latrine within the house premises.

Chart 3.19 Presence of Latrine in the Premises of Different Types of Houses

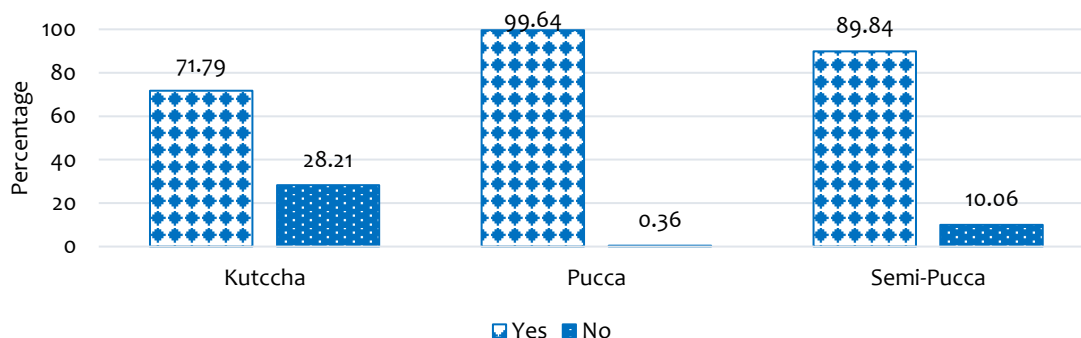
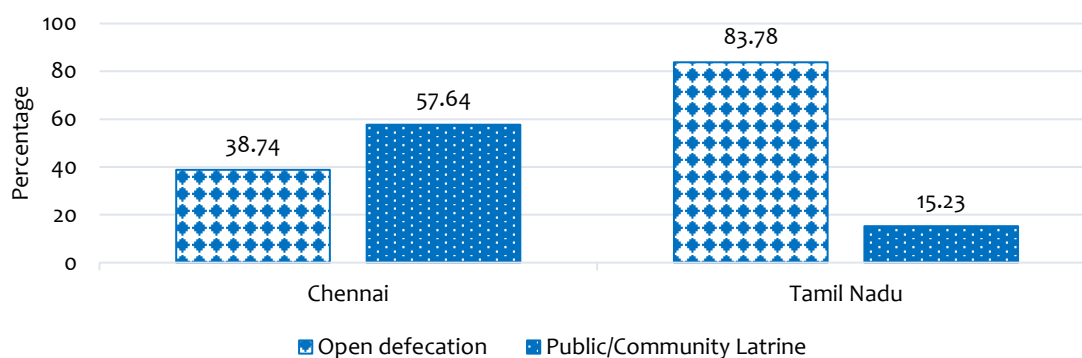


Chart 3.19 shows that almost all pucca houses in the district had latrine facilities within the house premises. The percentage of semi-pucca at 89.84 percent and kutchcha houses at 71.79 percent with latrine facilities were lower compared to the percentage of pucca houses with latrine facilities.

The alternative practices of defecation followed by 2.58 percent of the district’s households (see Chart 3.18) that did not have a latrine within the premises of the house is shown in the Chart 3.20.

Chart 3.20 Alternate Practices of Defecation by the Households without Latrine



The percentage of total households in the district practicing open defecation increased from 0.59 percent in 2011 (Census, 2011) to 1.01 percent in 2018 (TNHPS-PBS, 2021). Chart 3.20 shows that 57.64 percent of households without latrine within the premises of the house in Chennai district were using public/community latrine. As per the state report, the percentage of households following open defecation was the lowest in Chennai district compared to the other districts of Tamil Nadu.

4. Conclusions and Recommendations

The Pre-Baseline Survey (PBS) 2018-19 of Chennai district was conducted from the sample of 7,030 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.

Chennai district, a cornerstone of Tamil Nadu's economy, exhibits commendable progress in various socio-economic indicators. Not surprisingly, it secured the first rank in terms of mean annual household income and adoption of LPG as the primary cooking fuel. Additionally, it ranked second on literacy rate, domestic electricity connection, and presence of a latrine within the premises of the house. The district also reported the minimum cases of open defecation. The percentage of households owning at least one household asset in the Chennai district was higher than the state average. Despite these achievements, ensuring sustained development and fostering equitable growth demand targeted policy interventions.

Continuous efforts are necessary to ensure universal access to quality education in Chennai. This includes strengthening early childhood education programs and investing in teacher training and educational infrastructure to meet the growing demand for education in the district.

Chennai attracts people from all over India for employment. However, only 47.15 percent of the population aged 14 and above were employed and around 2.39% of the population were unemployed. Promoting skill development programs tailored to the demands of the job market can bridge the gap between education and employment in the district. The district ranks low in terms of female employment and a majority of the female population that were not in the labour force were homemakers. There is a need to enhance female labour force participation through supportive policies, including affordable childcare and flexible work arrangements.

Being an entirely urban district, Chennai encounters distinctive challenges concerning housing, infrastructure, and environmental sustainability. To address these, expanding affordable housing options via public-private partnerships and promoting sustainable housing practices is crucial. Simultaneously, investing in resilient infrastructure to cater to the escalating urban demands, encompassing water supply, and waste management systems, is imperative. In Chennai district, the majority of households rely on bottled water as their primary drinking source, leading to increased household expenses. To alleviate this burden, the government could facilitate access to quality drinking water through piped

connections at affordable rates. This initiative not only reduces household expenses but also presents a potential revenue stream for the government.

In conclusion, Chennai district stands at the forefront of economic prosperity and human development in Tamil Nadu. By enhancing access to social welfare schemes and services for vulnerable populations, and addressing income inequality through targeted interventions, the district can further consolidate its position as a model of urban excellence and pave the way for sustainable and inclusive growth.

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**A collaborative project between
Department of Economics and Statistics &
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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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