The Nilgiris

Tamil Nadu Household Panel Survey (TNHPS)

Pre-Baseline Survey (PBS) District Report 2018-19

The Nilgiris District

February 2024

Principal Investigator
& Project Coordinator   Prof. Kripa Ananthpur

Principal Investigator   Prof. L. Venkatachalam

Principal Investigator   Dr. K. Jafar

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

Cover page image source: http://tinyurl.com/bdhju6p3

Table of Contents

List of Tables

List of Figures

Acknowledgements

Summary of PBS Findings

Demographic indicators

- The Nilgiris had a sample size of 4,743 households, of which 75 percent of households were from rural areas and 25 percent of households were from urban areas of the district.

- The district had a huge demographic dividend with almost half the population—about 46.05 percent—aged between 17 and 45 years.

- The BC social group was the largest in the district, constituting around 52 percent of the total households in the district.

Education

- The literacy rate in the district had increased from 85.20 percent (Census 2011) to 88.76 percent in 2018. The Nilgiris was ranked seventh among the then 32 districts in terms of this indicator.

- Though both rural and urban literacy rates registered an increase, the rural literacy rate was 8.69 percent lesser than the urban literacy rate in 2018. The gender gap in literacy rate was wider in rural areas at 14.22 percent than in urban areas at 8.35 percent.

- While more than 89 percent of the specified General, BC and MBC category populations in the district had received formal education, almost a quarter of the ST population had not.

Employment

- The percentage of employed population in the district at 52.50 percent was higher than the state estimate of 50.10 percent, and so was the share of unemployed population at 3.99 percent compared to the state estimate of 3.50 percent. The rest were not in the labour force at 43.40 percent.

- The Nilgiris district was ranked eleventh among the then 32 districts in Tamil Nadu in terms of employed population.

- The percentage of population that was employed was higher in rural parts of the district than the urban.

- While 70.62 percent of the male population aged 14 and above was employed, the share of female population employed found low (36.34%) in the district.

- Around 61.30 percent of the female population aged 14 and above were not inclined to participate in the labour force, and among these, majority of them—about 70.47 percent—were associated with attending to domestic duties as a homemaker.

- In both rural and urban areas, casual labour engaged in agriculture account for the highest percentage of the employed population in the district.

- Apart from the General category population, that was primarily engaged in salaried work in the private sector, all other groups were principally employed as casual labourers in agriculture.

Land Ownership and Assets

- The percentage of households owning agricultural land in the district at 17.31 percent was lower than that at the state level estimate of 19.41 percent. A higher percentage of BC category households owned agricultural land in the district compared to the other social groups.

- More than two-thirds of the households—about 67.09 percent—that owned agricultural land in the district depended on rain-fed agriculture alone.

- Around 94.28 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares. Correspondingly, the ownership of at least one agricultural, allied agricultural or fishing asset in the district was low at 6.73 percent compared to the state estimate of 20.92 percent.

- While more than 90 percent of the General category, MBC and SC households owned at least one household asset, only 73.27 percent of the ST households in the district owned any such asset. This means that more than a quarter of the ST households did not even own a mobile phone.

- The percentage of households possessing priority ration cards in the district at 56.89 percent was lesser compared to the state level estimate of 71.14 percent.

Household Income

- The mean annual household income of The Nilgiris district was 6.66 percent lesser (₹1,33,245) than the state PBS estimate (₹1,42,752); in the urban areas it was ₹1,75,172 and in rural areas it was ₹95,334. The district was ranked tenth out of 32 districts with respect to this parameter.

- The mean income from salaried work (₹2,32,921) was the highest, while that from wage labour was the lowest (₹47,305).

- The Gini coefficient measuring income inequality across households in the district (0.546) was lower than the state PBS estimate (0.563).

Housing

- Around 64 percent of the households in the district were living in their own house, which was lower than the state level estimate of 75.16 percent. The Nilgiris district was ranked thirtieth among the then 32 districts of Tamil Nadu in terms of this parameter.

- Out of the households that lived in an own house in the district, 11.81 percent of houses were built under a government scheme. ST households had the highest percentage of houses built under a government scheme in the district compared to other social groups.

- Around 46 percent of the households in the district were living in pucca houses, which was considerably lower than the state level estimate of 63.42 percent.

Drinking Water, Electricity and Cooking Fuel

- The primary source of drinking water of households in the district was piped water into the dwelling at 43.64 percent.

- The district witnessed increase in electrification in both rural and urban areas between 2011-2018.

- The predominant fuel in the district had reversed from firewood to LPG in the period 2011-18. But firewood was still used by more than a quarter of the households. The Nilgiris district was ranked twenty second in terms of LPG use and twelfth in terms of firewood use as the primary cooking fuel.

- Around 85 percent of ST households used firewood as their primary cooking fuel, which was significantly higher compared to other social groups.

Sanitation

- The percentage of households with latrine within the house premises had increased from 51.89 percent in 2011 (Census, 2011) to 85.57 percent in 2018. The Nilgiris district was ranked third among the 32 districts in the state in terms of this parameter.

- While more than 80 percent of households belonging to each social group, except ST, had a latrine within the house premises, only 57.26 percent of ST households did so.

- The percentage of total households in the district following open defecation had declined from 36.66 percent in 2011 (Census, 2011) to 10.14 percent in 2018.

1. Introduction

1.1 Profile of The Nilgiris District

 The Nilgiris district of Tamil Nadu was formed in the year 1956. It is in the Western region of the State, bordering Karnataka in the north, Erode in the east, Coimbatore and Kerala in the south, and Kerala to the west. Around 56 percent of the total area of the district is under forest. Agriculture, horticulture, and agro-based industries play a key role in generating employment opportunities in the district, particularly in the rural areas. Rain-fed agriculture is the predominant feature of this district.

According to Census (2011), The Nilgiris had a total population of 7.35 lakhs, accounting for approximately 1.02 percent of Tamil Nadu's population, which was 7.21 crores. The district comprised 1.98 lakh households, with 59.24 percent residing in urban areas and 40.76 percent residing in rural areas. The male population was 48.97 percent, and the female population was 51.03 percent. The Nilgiris demonstrated a child-sex ratio of 985.23, which is higher compared to the State average of 943.27. Within the social groups, 32.08 percent of the population belonged to the Scheduled Caste community, while 4.46 percent belonged to the Scheduled Tribe community. The literacy rate in The Nilgiris district stood at 85.2 percent, which is higher compared to the state's average of 80.09 percent. The male literacy rate was reported to be 91.72 percent, while the female literacy rate was reported to be 78.98 percent. These figures indicate that there is potential to improve educational opportunities among females.

In the fiscal year 2018-19, The Nilgiris's Net District Domestic Product (NDDP) was ₹13,87,350 lakhs, ranking at twentieth among all districts. However, the district's per capita NDDP was recorded at 1,93,431, ranking it eleventh among districts and surpassing Tamil Nadu's average of ₹1,83,884 (Department of Economics and Statistics, 2023). In terms of sectoral distribution, the tertiary (service) sector contributes approximately 70 percent of the domestic income while the primary and secondary sectors contribute around 14 percent and 16 percent respectively (Department of Economics and Statistics, 2017).

 According to the Tamil Nadu State Planning Commission (2017), The Nilgiris ranked first in the Gender Inequality Index with a score of 0.036, i.e., it is the most gender-neutral district in the State. However, the district lags in other aspects of development. In terms of the Child Development Index, the district ranked eighth with a score of 0.697, indicating that there is a scope to improve health, nutrition, and education of children. The Nilgiris ranked fifteenth in terms of the Multidimensional Poverty Index with a score of 0.52, indicating that a significant portion of the district's population face multiple deprivations in various

aspects of life. However, the extent of multidimensional poverty in the district is moderate when compared to the other districts. These observations culminate in the district achieving a low ranking of twenty fourth on the Human Development Index, with a score of 0.624.

In general, The Nilgiris emerges as a developing district of Tamil Nadu, characterized by its low domestic product and noticeable shortfalls in aspects of development. However, it distinguishes itself as one of the most equitable districts, evident through its higher per capita income and minimal gender disparities.

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

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

Through PBS, we collected data on a comprehensive set of socio-economic indicators for 2018-19. The results provide district-level estimates for these indicators. The information was also used for developing a sample design and a suitable sampling frame for the first wave of the TNHPS. In the absence of Census 2021 data, the PBS estimates on the demographic characteristics act as an important intermediate database between Census 2011 and Census 2021 for the Government of Tamil Nadu. The PBS surveyed a total of 2,12,282 households in the erstwhile 32 districts of Tamil Nadu across 1,476 Primary Sampling Units—which included 684 rural PSUs and 792 urban PSUs.

This report analyzes data from the PBS for The Nilgiris district and presents the findings. Wherever possible, the report compares the district PBS estimates with the most recent census data of The Nilgiris (Census, 2011) and the state PBS estimates (TNHPS-PBS, 2021) to assess the socio-economic development of The Nilgiris district. The sample size for the district was 4,743 households, among which 3,583 households were from rural areas and 1,160 households were from urban areas. The blocks covered during the survey were: Coonoor, Gudalur, Kotagiri and Udhagamandalam.

2. Survey Response

For the Pre-Baseline Survey (PBS) 2018-19, a total of 5,978 households were selected in The Nilgiris district using a multi-stage stratified sampling design.[1] The final sample size for PBS was 4,743 households, of which 75 percent of households were from rural areas and 25 percent of households were from urban areas of the district. The area-wise distribution of the total sample as well as the survey response is given in Table 2.1.

Table 2.1 Distribution of Sample Households – Response-wise

Response of Households	Area Type					
	Rural		Urban		The Nilgiris	
	Number of HHs	Percentage	Number of HHs	Percentage	Number of HHs	Percentage
Response	3,583	80.50	1,160	75.97	4,743	79.34
Non-Response	197	4.43	112	7.33	309	5.17
Non-sample	671	15.08	255	16.70	926	15.49
Total	**4,451**	**100**	**1,527**	**100**	**5,978**	**100**

The Nilgiris district had a lower response rate—willingness of households to participate in the TNHPS-PBS—of 79.34 percent compared to the state response rate of 96.5 percent (TNHPS-PBS, 2021). Rural areas had a higher response rate compared to the urban areas. Around 5.17 percent of households were not willing to participate in the survey. About 15.49 percent of the selected samples were removed as they were not considered as households as per the definition used in the PBS.[2]

---

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

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

3. Key Findings

3.1 Demographic Indicators

As per the PBS estimates (2018-19), the average household size[3] in the district had reduced from 3.74 in 2011 (Census, 2011) to 3.33 in 2018. Around 52.30 percent of the population in the district were female, and 47.69 percent of the population were male. Around 22.84 percent of the households in the district were headed by females, which was higher than the state estimate of 18.93 percent (TNHPS-PBS, 2021).

Chart 3.1 Age-wise Distribution of Population
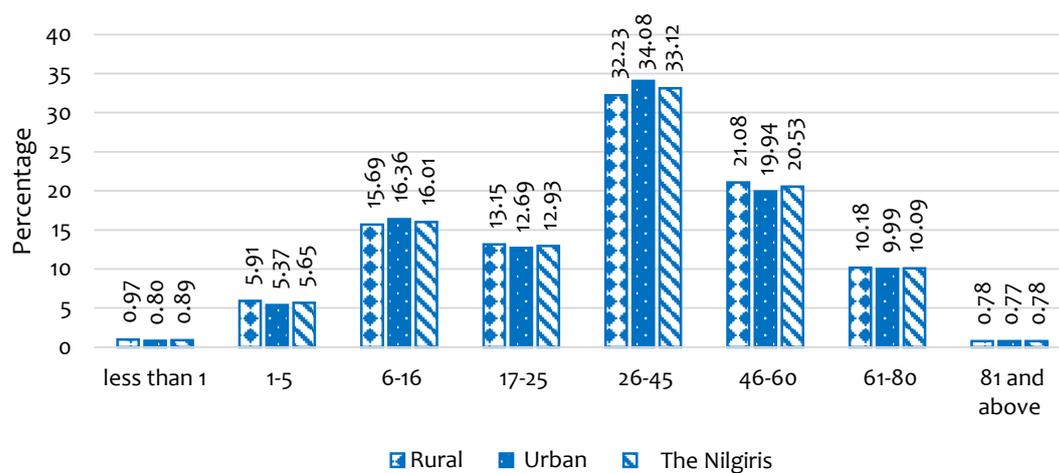
As per the PBS estimates, almost one-third of the population in the district belonged to the age group of 26 to 45 years. The working age population—between age 17 to 60 years—in the district was 66.58 percent, which was slightly higher than the state estimate of 66.00 percent (TNHPS-PBS, 2021).

The percentage of currently married population in the district was 70.06 percent in 2018. A higher percentage of males were currently married compared to females. The widowed female population was notably higher than the widowed male population.

The religion-wise distribution of the households in the district as per the PBS estimates shows that 82.03 percent of the households practiced Hinduism, 7.15 percent practiced Islam and 10.66 percent followed Christianity.

---

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

Table 3.1 Social Group-wise Distribution of Households

Social Group	Percentage
SC	29.94
ST	7.90
BC	52.26
MBC	4.21
Denotified Communities (DNC)	0.01
General	4.33
DK/RF	1.34
Total	**100**

As per the PBS estimates, more than half the households in The Nilgiris district belonged to the BC category. The percentages of SC and ST households in the district were 29.94 percent and 7.90 percent respectively in 2018.

The percentage of DNC category households in The Nilgiris district was only 0.01 percent and only two DNC households were sampled in the district. This fact may be noted while discussing the the results pertaining to the social.

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 Nilgiris district.

3.2.1 Education

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

Table 3.2 Literacy Rates between Census 2011* and PBS 2018

Gender	Rural		Urban		The Nilgiris		Tamil Nadu	
	2011	2018	2011	2018	2011	2018	2011	2018
Male	89.27	92.06	93.39	97.60	91.72	94.75	86.77	90.97
Female	73.53	77.84	82.80	89.25	78.98	83.33	73.40	80.15
Total	**81.17**	**84.56**	**87.99**	**93.25**	**85.20**	**88.76**	**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 The Nilgiris district at 85.2 percent was higher than

the state estimate of 80.09 percent. The PBS estimates showed that in the year 2018, the literacy rate in The Nilgiris district had increased to 88.76 percent, which continued to be higher than the state estimate of 85.40 percent. The district had registered a 3.56 percent increase in literacy rate between 2011 and 2018 while the state had registered a 5.31 percent increase. The difference in literacy rate between the district and the state was 5.11 percent in 2011, which had declined to 3.36 percent in 2018. In terms of literacy rate, The Nilgiris was ranked seventh among the then 32 districts in 2018 (TNHPS-PBS, 2021).

Both male and female literacy rates in the district had recorded an increase during the period under consideration, though a wide gender gap still prevailed. The gender gap in literacy rate had declined from 12.74 percent in 2011 to 11.42 percent in 2018, which is still higher than the state gender gap of 10.82 percent in 2018.

Both rural and urban literacy rates recorded an increase between 2011 and 2018, though the rural literacy rate was still 8.69 percent lower than the urban literacy rate in 2018. The gender gap in literacy rate was much higher in rural areas at 14.22 percent than in urban areas at 8.35 percent.

3.2.2 Education Status of Population (Age 7 and above)

In this section, we discuss the education status of the population aged seven and above in The Nilgiris district.

Chart 3.2 Formal Schooling of the Population – Area-wise
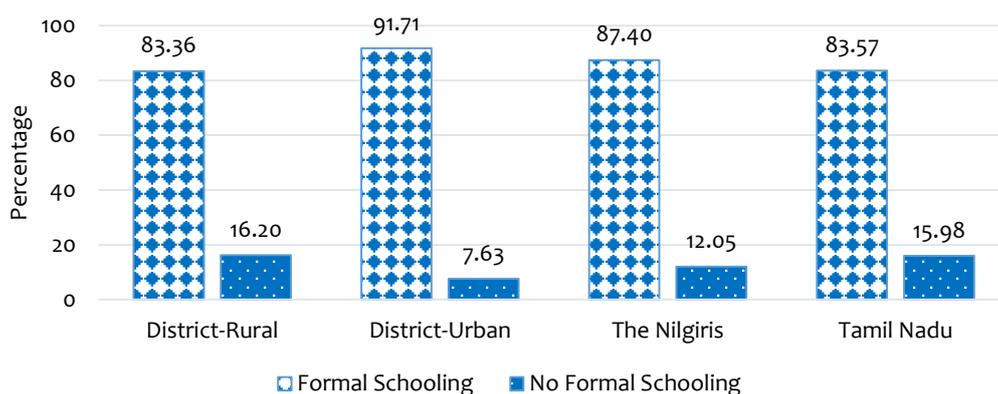
*Others and Don't Know/Refuse to Answer categories are not included in any chart, unless their value is substantially high. Therefore, the total might not add up to 100 percent.

Chart 3.2 shows that 87.4 percent of the specified population in the district had attended formal schooling, which was higher compared to the state estimate. The percentage of population with formal education in urban areas was higher than in rural areas of the district.

Chart 3.3 Formal Schooling of the Population– Gender-wise
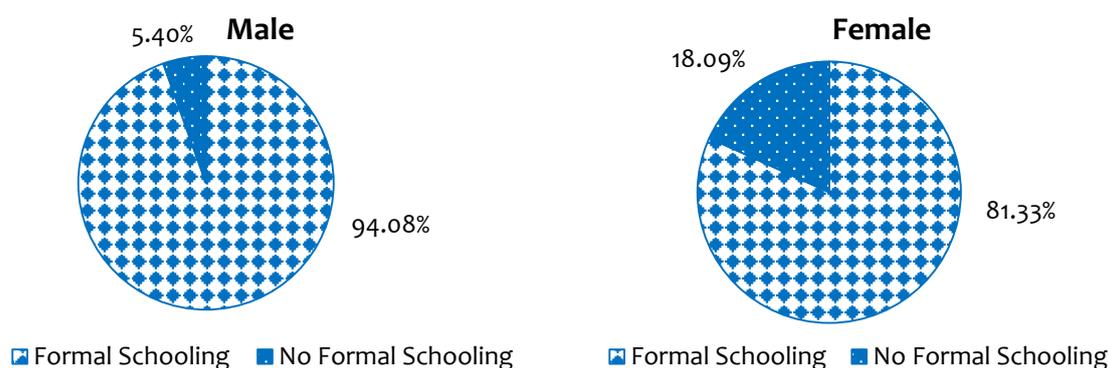
Chart 3.3 shows that the percentage of the population that had acquired formal education in the district was much higher among males compared to females, again denoting a wide gender gap, like in literacy.

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

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

Education Status	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Formal Schooling	85.79	75.30	89.49	89.10	100.00	97.26	87.40
No Formal Schooling	13.72	24.50	9.98	10.73	0.00	2.44	12.05
Others and DK/RF	0.49	0.21	0.53	0.16	0.00	0.30	0.55
Total	100	100	100	100	100	100	100

Table 3.3 shows a high coverage of formal schooling across social groups. While more than 89 percent of the specified General, BC and MBC category populations in the district had received formal education, almost a quarter of the ST population had not. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

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

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

Current Highest Formal Educational Attainment	Area Type		
	Rural	Urban	The Nilgiris
Primary (I to V)	20.64	14.66	17.60
Middle School (VI to VIII)	18.63	16.40	17.50
High School (IX to X)	26.41	27.94	27.19
Higher Secondary (XI to XII)	18.42	17.87	18.14
Bachelor's degree	9.34	12.01	10.70
Diploma Degree	3.29	5.01	4.16
Post Graduate Degree	2.72	5.35	4.05
Other Higher Education	0.03	0.05	0.04
Others/DK/RF	0.53	0.72	0.63
Total	**100**	**100**	**100**

Around 80 percent of the district's population—age 7 and above, with formal education—was either pursuing or had completed primary or secondary schooling. The percentage of population that was either pursuing or had completed tertiary education—such as bachelor's degree, diploma or post graduate degree and above—was 18.95 percent, which was lower than the state estimate of 20.02 percent (TNHPS-PBS, 2021). Also, this figure was higher for urban areas of the district at 22.42 percent than rural areas at 15.38 percent.

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

Educational Qualification	Gender		
	Male	Female	The Nilgiris
Primary (I to V)	15.83	19.46	17.60
Middle School (VI to VIII)	17.83	17.14	17.50
High School (IX to X)	28.29	26.03	27.19
Higher Secondary (XI to XII)	16.67	19.69	18.14
Bachelor's degree	10.48	10.92	10.70
Diploma Degree	5.92	2.31	4.16
Post Graduate Degree	4.38	3.71	4.05
Other Higher Education	0.04	0.03	0.04
Others/DK/RF	0.55	0.71	0.63
Total	**100**	**100**	**100**

Table 3.5 shows that a higher percentage of females at 82.32 percent in the specified population had completed schooling upto higher seconday compared to males at 78.62 percent. In tertiary education, a higher percentage of males were pursuing diploma, post-graduate degree and other higher education compared to females, while it was the reverse for bachelor's degree.

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

Educational Qualification	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Primary (I to V)	20.28	29.71	14.79	22.01	17.07	11.65	17.60
Middle School (VI to VIII)	19.99	28.49	15.51	17.27	0.00	9.87	17.50
High School (IX to X)	27.12	27.33	27.05	22.33	0.00	32.25	27.19
Higher Secondary (XI to XII)	15.52	10.48	20.40	18.08	34.14	20.90	18.14
Bachelor's degree	9.15	1.52	12.44	12.09	31.71	13.32	10.70
Diploma Degree	4.61	1.79	4.31	3.81	0.00	3.61	4.16
Post Graduate Degree	2.73	0.41	4.87	4.22	17.07	8.08	4.05
Other Higher Education	0.04	0.00	0.05	0.00	0.00	0.00	0.04
Others/DK/RF	0.57	0.27	0.59	0.18	0.00	0.31	0.63
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

The social group-wise analysis in Table 3.6 shows that 96.01 percent of the ST population in the district was either pursuing or had completed only primary or secondary school. The percentage of population who were either pursuing or had completed tertiary education was higher among the General category at 25.01 percent, followed by the BC category at 21.67 percent, and very low at 3.72 percent among the ST category. Similar to the national and state level trend, the percentage of population with higher educational qualification in the district was lower among SC and ST categories. There were only six DNC respondents in the specified population surveyed in the district and hence their results must be interpreted accordingly, as discussed in Section 3.1.

About 12.05 percent of the population had not received formal education in The Nilgiris district (refer Chart 3.2); the PBS investigated the ability of those who could read and write a simple sentence with understanding or functional literacy.

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

Functional Literacy	Area Type		
	Rural	Urban	The Nilgiris
Yes	7.43	20.19	11.33
No	91.96	79.33	88.09
DK/RF	0.62	0.48	0.58
Total	**100**	**100**	**100**

Table 3.7 shows the literacy status of the population with no formal schooling in the district. Only 11.33 percent of the population without formal schooling had functional literacy. The specified population group in urban areas of the district had better functional literacy than the rural areas.

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

Functional Literacy	Social Group					
	SC	ST	BC	MBC	General	The Nilgiris
Yes	9.72	3.66	16.16	5.93	18.10	11.33
No	89.54	96.34	83.28	93.57	81.90	88.09
DK/RF	0.74	0.00	0.56	0.50	0.00	0.58
Total	**100**	**100**	**100**	**100**	**100**	**100**

* All the eight DNC respondents surveyed in the district had obtained formal schooling and hence this social group is not captured in the table.

Table 3.8 shows the literacy status of the population with no formal schooling, across various social groups. Functional literacy was relatively higher among the General and BC categories, and very low among the ST population.

3.2.3 Employment Status

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

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

- People who are self-employed in agriculture,

- People who are self-employed in allied agricultural activities,

- People who are self-employed in non-agricultural activities,

- People who worked as casual labourer in agriculture,

- People who worked as casual labourer in industry,

- People who worked as casual labourer in the service sector,

- People who worked as casual labourer in other domains,

---

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

- People who worked as salaried employees in the government sector,

- People who worked as salaried employees in the private sector,

- People who are involved in multiple occupations, and

- People who are involved in other types of work.

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

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

- People who attended educational institutions,

- People who attended domestic duties only,

- Rentiers, pensioners, remittance recipients, etc.,

- People who are not able to work due to disability and

- Others (including begging, etc.).

Chart 3.4 Employment Status of Population (Age 14 years and above) – Area-wise
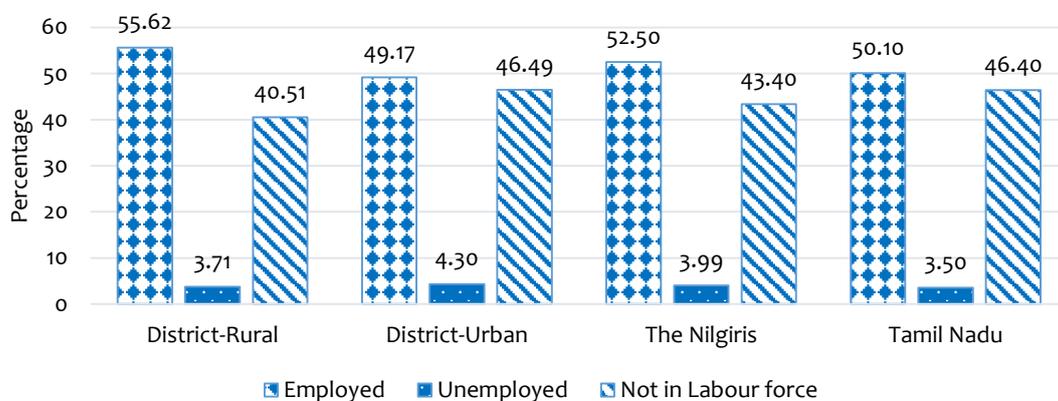
Chart 3.4 shows that the overall percentage of employed population—14 years and above—in the district was higher than the state estimate. The share of unemployed population was also higher in the district compared to the state. The percentage of population that was employed was higher in rural parts of the district than the urban. The unemployment status in rural areas of the district at 3.71 percent was higher than the state's rural estimate of 3.60 percent, similarly the district urban unemployment status at 4.30 percent was higher than the state urban estimate of 3.30 percent (TNHPS-PBS, 2021). The Nilgiris district was ranked eleventh among 32 districts in Tamil Nadu in terms of employed population and ranked eleventh highest in terms of the unemployed population (TNHPS-PBS, 2021).

Chart 3.5 Employment Status of the Population – Gender-wise

Male

23.35%

5.97%

70.62%

◨ Employed   ▣ Unemployed

◉ Not in Labour Force

Female

36.34%

61.30%

2.23%

◨ Employed   ▣ Unemployed

◨ Not in Labour Force
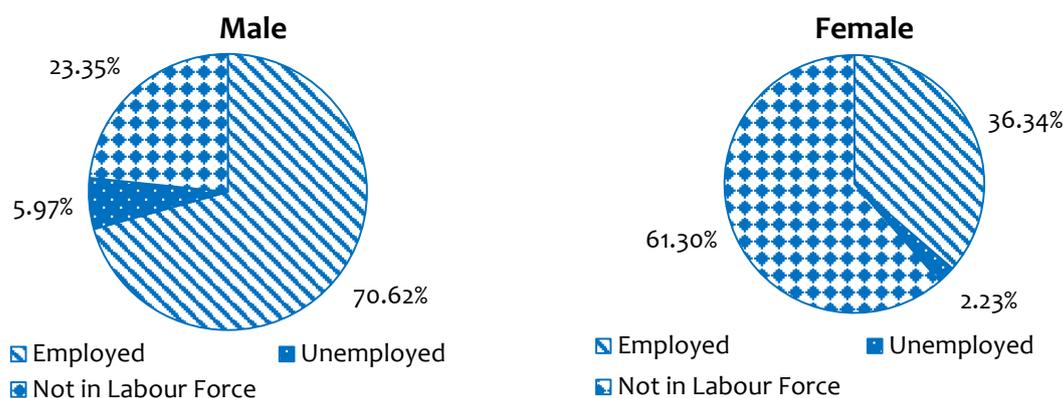
Chart 3.5 shows the gender-wise employment status of the population aged 14 years and above. While more than 70 percent of the male population was employed, the female work participation was a little more than 36 percent. Decreased female labour force participation has been well documented at the national level (Das et al., 2015; Desai, 2017; Desai & Joshi, 2019). The district female work participation was higher than the national average of 23.3 percent in 2017-18 (National Statistical Office, 2019), and the state estimate of 29.96 percent . Around 61.30 percent of the female population was in the labour force, and among these, majority of them at 70.47 percent were associated with attending to domestic duties as homemakers (see Chart 3.7). As per the state PBS estimates, The Nilgiris district was ranked seventh in terms of employed female population and ranked seventeenth in terms of female unemployment (TNHPS-PBS, 2021).

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

Work Type	Area Type		
	Rural	Urban	The Nilgiris
Self Employed Agriculture	9.80	4.34	7.32
Self Employed Non-Agriculture	5.65	12.97	8.97
Self Employed Allied Agriculture	0.72	0.60	0.66
Casual Labourer Agriculture	48.45	22.35	36.63
Casual Labourer Industry	6.26	8.05	7.07
Casual Labourer Service	4.48	9.72	6.85
Casual Labourer (others)	5.40	3.66	4.61
Salaried Worker Government	6.96	17.08	11.54
Salaried Worker Private	9.91	19.99	14.47
Others	0.08	0.06	0.07
Multiple Occupations	2.25	1.00	1.68
DK/RF	0.06	0.17	0.11
Total	**100**	**100**	**100**

The PBS estimates show that casual labourer in agriculture engaged the highest percentage of the employed population in the district, while the greatest proportion of

the working population in the state were salaried workers in the private sector at 21.82 percent (TNHPS-PBS, 2021). Casual labourer in agriculture was the predominant type of work in rural as well as urban areas.

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

Work Type	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Self Employed Agriculture	0.76	0.97	12.93	9.61	0.00	6.76	7.32
Self Employed Non-Agriculture	5.09	0.77	11.43	15.47	0.00	20.38	8.97
Self Employed Allied Agriculture	0.59	0.77	0.76	0.23	0.00	0.56	0.66
Casual Labourer Agriculture	43.46	56.50	30.70	31.80	51.84	10.45	36.63
Casual Labourer Industry	9.62	1.89	6.13	8.35	0.00	6.22	7.07
Casual Labourer Service	9.03	5.37	5.24	10.33	0.00	8.57	6.85
Casual Labourer (others)	6.46	7.53	3.39	3.18	0.00	0.39	4.61
Salaried Worker Government	10.52	19.07	10.94	8.86	0.00	17.55	11.54
Salaried Worker Private	13.08	3.76	16.37	11.36	0.00	27.89	14.47
Others	0.15	0.00	0.01	0.35	0.00	0.00	0.07
Multiple Occupations	1.23	3.37	1.87	0.46	48.16	1.23	1.68
DK/RF	0.00	0.00	0.22	0.00	0.00	0.00	0.11
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

The agricultural sector, being predominant in the district, is the primary employer for almost all social groups. Apart from the General category population, that was primarily engaged in salaried work in the private sector, all other groups were principally employed as casual labourers in agriculture. A high percentage of the ST population was employed in salaried work in the government sector, compared to other social groups. There were only four DNC respondents in the specified population surveyed in the district and hence their results must be interpreted accordingly, as discussed in Section 3.1.

Chart 3.6 Composition of Population Not in the Labour Force – Area-wise
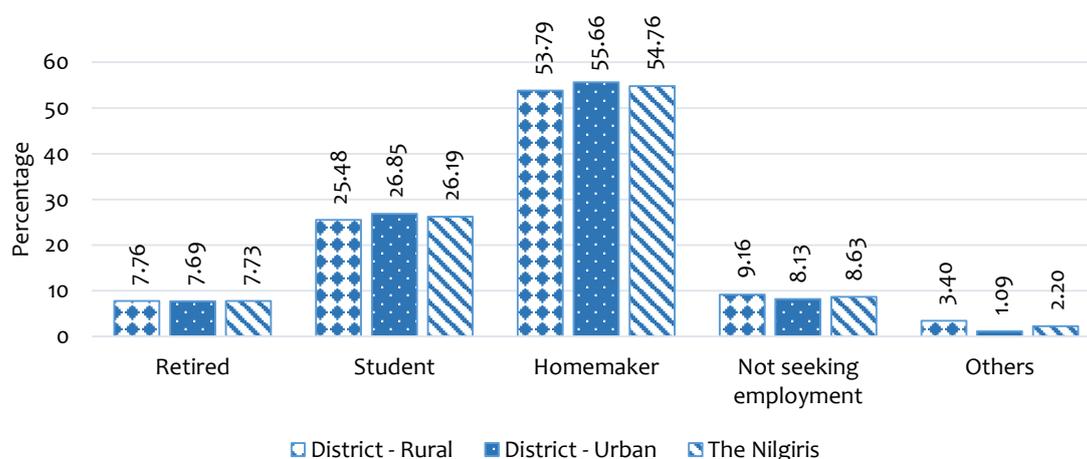
Chart 3.6 shows that, similar to the trend at the state level, more than half the population that was not in the labour force in the district comprised homemakers involved in unpaid

domestic duties of the household, followed by students. The proportion of the population that was not seeking employment was higher in rural areas than urban areas, whereas the percentages of students and homemakers were higher in urban areas than rural areas.

Chart 3.7 Composition of the Population Not in the Labour Force – Gender-wise
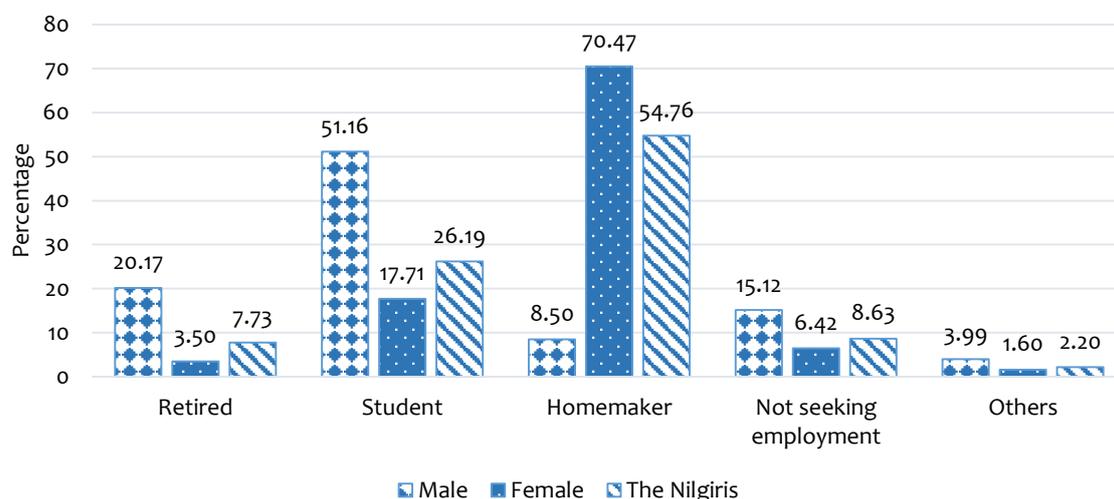
While Chart 3.3 represents the lower female involvement in formal education, Chart 3.7 shows the staggeringly lower female involvement in higher education compared to men as only 17.71 percent of the female not-in-labour-force population were students. Similar to the state trend, majority of the male not-in-labour-force population were students, whereas a majority of females were homemakers. It must be noted that the study did not capture unpaid domestic labour or any other form of unpaid labour carried out by women.

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

Current Status	Social Group					
	SC	ST	BC	MBC	General	The Nilgiris
Retired	6.61	10.24	8.54	4.16	4.64	7.73
Student	30.21	21.65	24.44	31.37	30.02	26.19
Homemaker	52.61	58.37	55.43	50.09	56.09	54.76
Not seeking employment	8.10	6.97	9.33	8.28	7.47	8.63
Others	1.69	2.69	1.87	6.09	1.24	2.20
DK/RF	0.78	0.08	0.39	0.00	0.53	0.49
Total	**100**	**100**	**100**	**100**	**100**	**100**

*There were no DNC respondents in the not in labour force population, hence this social group is not captured in the table.

Table 3.11 shows that within all social groups, the percentage of homemakers was the largest category in the district. The MBC, SC and General Category populations had a

higher percentage of not-working population as students compared to other social groups, despite a majority of the employed SC and MBC population being engaged as casual labourers in agriculture (see Table 3.10), probably suggesting increasing awareness on the importance of education.

3.3 Socio-Economic Indicators

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

3.3.1 Ownership of Agricultural Land

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

Chart 3.8 Ownership of Agricultural Land
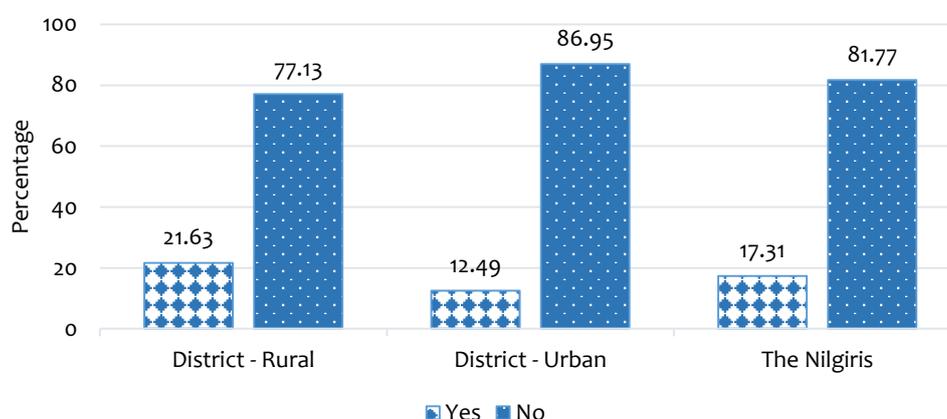
The percentage of households owning agricultural land in the district was lower than that at the state level at 19.41 percent. The district was ranked twenty first in the state in terms of agricultural land ownership (TNHPS-PBS, 2021). Area-wise comparison shows that a lower proportion of households in rural areas of the district owned agricultural land compared to the state rural estimate of 29 percent, while urban land ownership was higher than the state urban estimate of 8.61 percent (TNHPS-PBS, 2021).

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

Type of Agriculture Land	Area Type		
	Rural	**Urban**	**The Nilgiris**
Only Irrigated Agriculture Land	27.87	23.40	26.34
Only Unirrigated Agriculture Land	68.94	63.53	67.09
Both Irrigated and Unirrigated Agriculture Land	1.80	9.39	4.39
DK/RF	1.40	3.68	2.18
Total	**100**	**100**	**100**

Table 3.12 shows the percentage of agricultural land-owning households in the district that depended on irrigation or rain. Rain-fed agriculture is a predominant feature of The Nilgiris district. Table 3.12 shows that, as per the PBS estimates, more than two-thirds of the households that owned agricultural land in The Nilgiris district depended on rain-fed agriculture alone. A higher percentage of rural households owned irrigated agricultural land compared to the urban households in the district. Wells are the major source of irrigation in The Nilgiris district (Tamil Nadu State Planning Commission, 2011). The proportion of households having irrigated agricultural land was significantly lower in the district at 26.34 percent compared to the state estimate of 50.03 percent (TNHPS-PBS, 2021).

An analysis of the social group-wise ownership of agricultural land by households in Table 3.13 showed that a relatively higher percentage of BC households owned agricultural land in the district compared to other social groups. A significant number of General and MBC households also owned agricultural land. Though 34.35 percent of the DNC households in the state owned agricultural land, neither of the two DNC households surveyed in the district owned agricultural land.

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

Agriculture Land Ownership	Social Group						
	SC	**ST**	**BC**	**MBC**	**DNC**	**General**	**The Nilgiris**
Yes	4.05	10.33	26.48	16.06	0.00	17.10	17.31
No	94.72	89.40	72.67	83.42	100.00	82.90	81.77
DK/RF	1.23	0.27	0.86	0.52	0.00	0.00	0.92
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

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

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

Size of Agricultural Land (in Hectares)	Area Type		
	Rural	Urban	The Nilgiris
Marginal (0.01 - 0.99)	86.60	84.53	85.90
Small (1 - 1.99)	9.82	5.54	8.38
Semi Medium (2 - 3.99)	2.52	8.08	4.39
Medium (4 - 9.99)	0.46	1.53	0.82
Large (10 and above)	0.60	0.33	0.51
Total	**100**	**100**	**100**

Table 3.14 shows that 94.28 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares. This figure is higher than the state level estimate of 89.33 percent (TNHPS-PBS, 2021). The shares of semi-medium, medium, and large landholdings were all lesser than that of the state estimates of 7.64 percent, 2.26 percent and 0.77 percent respectively (TNHPS-PBS, 2021).

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 The Nilgiris district.

Chart 3.9 Ownership of Agricultural, Allied Agricultural and Fishing Assets – Area-wise
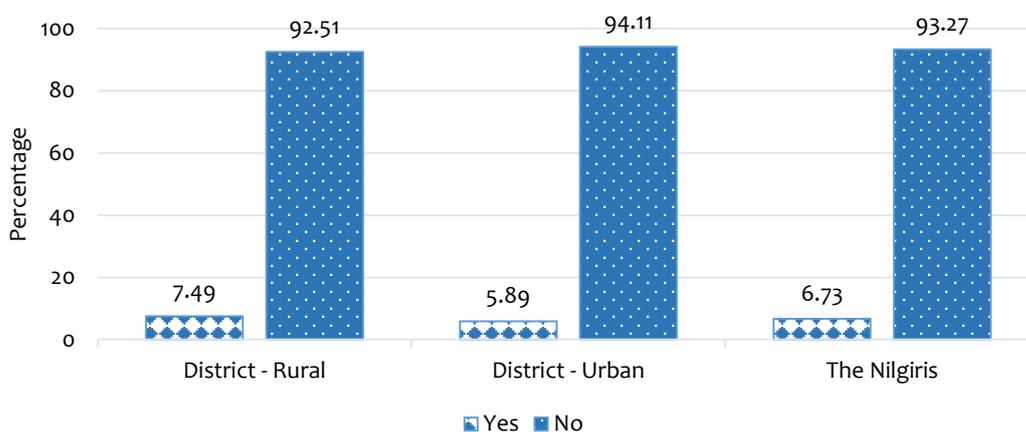
Chart 3.9 shows that only 6.73 percent of the households in The Nilgiris district owned at least one agricultural, allied agricultural or fishing asset. This estimate was much lower than the state estimate of 20.92 percent . Although the district predominantly depends on agriculture, marginal land holding and dependency on rain-fed agriculture are the main reasons behind low ownership of such assets. The ownership of these assets was higher in rural areas than urban areas. The ownership pattern was lower in both rural and urban

areas of the district compared to the state rural and urban estimates of 32.69 percent in rural and 7.67 percent in urban areas (TNHPS-PBS, 2021).

3.3.3 Presence of Household Assets

Chart 3.10 shows the percentage of households in The Nilgiris 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
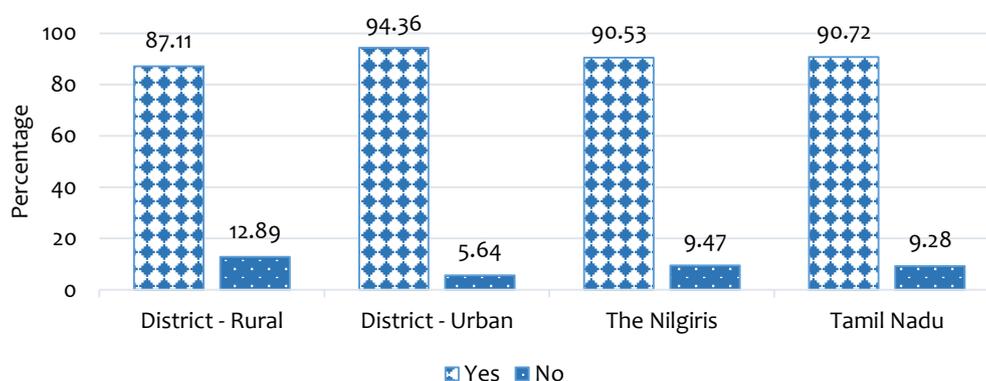
Chart 3.10 shows that the percentage of households owning at least one household asset in the district was similar to the state estimate. Within the district, the urban areas had more percentage of households owning at least one household asset than the rural areas.

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

Presence of at least one Household Asset	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Yes	91.31	73.27	92.10	93.24	100.00	97.73	90.53
No	8.69	26.73	7.90	6.76	0.00	2.27	9.47
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

The social group-wise ownership of household assets in The Nilgiris district is given in Table 3.15. The PBS estimates show that while more than 90 percent of the General category, MBC and SC households owned at least one household asset, only 73.27 percent of the ST households in the district owned any such asset. This means that more than a quarter of the ST households did not even own a mobile phone. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

3.3.4 Possession of Ration Card

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

Chart 3.11 Possession of Ration Card
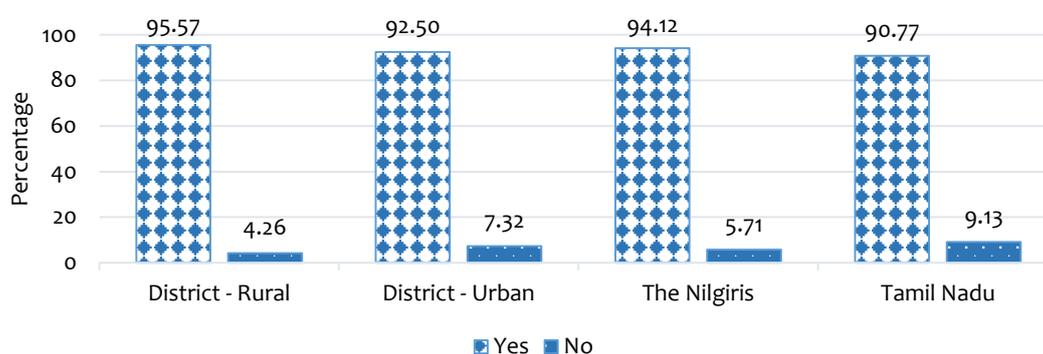
Chart 3.11 shows that the percentage of households that possessed a ration card in the district was higher than the state estimate. Within the district, both urban and rural households indicated a high level of possession of ration card, with higher possession among rural than urban households.

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

Possession of Ration Card	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Yes	94.23	94.73	94.55	93.87	100.00	89.71	94.12
No	5.64	5.27	5.27	6.13	0.00	10.07	5.71
DK/RF	0.13	0.00	0.18	0.00	0.00	0.22	0.17
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Social group-wise estimates on the possession of ration card at the household level is shown in Table 3.16. More than 90 percent of households belonging to all social groups, except the General category, possessed ration cards in the district. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

3.3.5 Type of Ration Card

According to the National Food Security Act (NFSA) 2013, ration cards are broadly 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. The percentage of households possessing priority and non-priority ration cards in rural and urban areas of The Nilgiris district are given in Chart 3.12.

Chart 3.12 Type of Ration Card at the Household Level
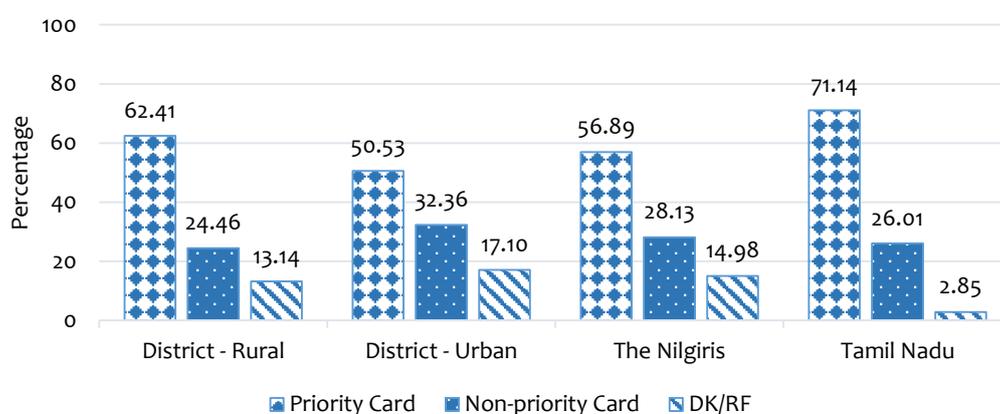
The percentage of households possessing priority ration cards in the district was much lesser compared to the state level estimate. A higher percentage of rural households possessed priority cards than urban households. A large fraction of households, in rural and urban areas, refused to answer this question.

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 The Nilgiris district from various sources for 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 other 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 the district.

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

Source	Rural	Urban	The Nilgiris	Tamil Nadu
Agriculture	80,227	1,11,379	91,460	61,830
Allied Agriculture	52,417	1,57,754	95,379	38,576
Salaried	1,73,175	2,70,557	2,32,921	2,29,857
Self Employed	1,02,514	1,77,206	1,47,740	1,47,403
Wage Labour	43,247	54,686	47,305	47,734
Other Sources	66,447	1,09,991	88,410	97,646
Income from all Sources	**95,334**	**1,75,172**	**1,33,245**	**1,42,752**

The mean annual household income of The Nilgiris district was 6.66 percent lesser than the state estimate (₹1,42,752). Among the then 32 districts, The Nilgiris was at tenth place in the state in terms of mean annual household income (TNHPS-PBS, 2021). The mean household income was higher among the households with salaried income and lower among the households that depended on wage labour.

In rural areas of The Nilgiris district, the mean household income was ₹95,333.72, which was slightly higher than the state rural estimate of ₹92,765 (TNHPS-PBS, 2021). This could be due to various reasons such as high number of marginal landholders and high percentage of non-irrigated agriculture. The mean household income was higher among the households who depended on salaried income and lower among the households that engaged in wage labour.

In urban areas of the district, the mean household income was ₹1,75,172, which was lower than the state urban estimate of ₹1,99,629 (TNHPS-PBS, 2021). The mean household income was higher among the households that depended on salaried income and lower among the households that depended on wage labour.

3.4.2 Income Inequality in The Nilgiris 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 The Nilgiris district (0.546) was lower than the state estimate (0.563)[5]. Income inequality across households in urban areas of the district was higher than its rural areas.

---

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

Table 3.18 Gini Coefficient of Income Inequality- Area-wise

Area	Gini coefficient
Rural	0.499
Urban	0.545
The Nilgiris	0.546
Tamil Nadu	**0.563**

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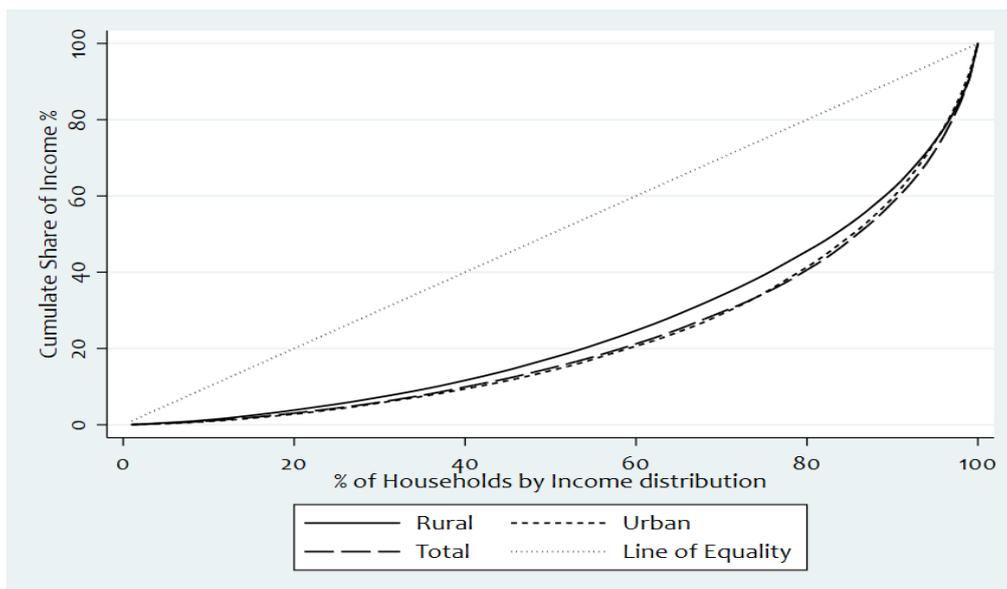
The Lorenz curve is a graphical representation of inequality in the distribution of income or wealth of households. Chart 3.13 shows that the bottom 60 percent of the households held around 20 percent of the total income; the bottom 80 percent of households held around 40 percent of the total income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

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

Besides the present income of the households (in the year 2016-17), the PBS also investigated the households' expectation of change in income in the following five years. The expectation of a household head on the change in the household's income in the future depends highly on various factors such as the probability of a household member's entry (or exit) to (or from) the labour market, expected possession of financial and non-financial assets and so on. These variables can capture the level of optimism—or pessimism—that each household has about their future economic status.

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

Expectation of Future Income	Area Type			
	Rural	**Urban**	**The Nilgiris**	**Tamil Nadu**
Higher	26.31	42.17	33.80	50.06
Lower	6.19	5.14	5.69	8.17
About the same	46.55	37.87	42.45	31.66
DK/RF	20.95	14.82	18.06	10.11
Total	**100**	**100**	**100**	**100**

While a majority of the urban households in the district expected their income to increase in the following five years, maximum percentage of rural households expected their future income to remain the same. Only about five percent of households in the district expected a lower future income.

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

Expectation of Future Income	Social Group						
	SC	**ST**	**BC**	**MBC**	**DNC**	**General**	**The Nilgiris**
Higher	32.68	24.50	34.71	32.35	0.00	50.10	33.80
Lower	5.05	5.25	6.54	2.99	0.00	4.23	5.69
About the same	41.46	48.40	43.82	36.97	100.00	31.40	42.45
DK/RF	20.80	21.85	14.93	27.69	0.00	14.26	18.06
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

While more than half the General category households expected a higher future income, more than 40 percent of the ST, BC and SC households expected their income to remain the same after five years. Both the surveyed DNC households expected their future income to remain the same. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

3.5 Basic Infrastructure

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

3.5.1 House Ownership Status

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

Chart 3.14 Ownership Status of the Households' Dwelling/House – Area-wise
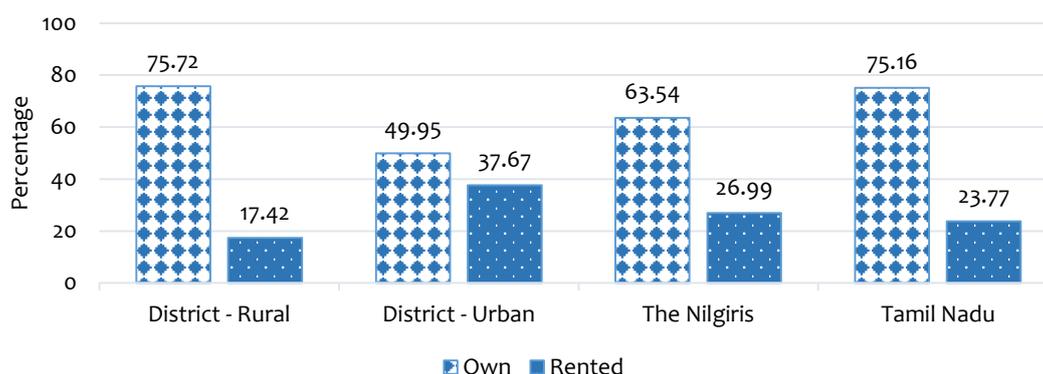
Chart 3.14 shows that the proportion of households living in their own house in the district was lower than the state level estimate. The The Nilgiris district was ranked thirtieth among the then 32 districts of Tamil Nadu in terms of percentage of households living in their own house (TNHPS-PBS, 2021). While more than three quarters of the rural households lived in their own house, a large proportion 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 house, encroachments etc. This data does not capture the ownership of a house in a different geographical location.

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

Ownership Status	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Own	55.63	74.99	67.26	68.78	0.00	48.70	63.54
Rented	29.10	16.11	27.23	20.93	100.00	34.72	26.99
Others	15.25	8.45	5.52	10.29	0.00	16.58	9.43
DK/RF	0.02	0.45	0.00	0.00	0.00	0.00	0.04
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Table 3.21 shows that almost three quarters of ST households in the district stayed in their own house, while less than half the General Category households were doing the same. All social groups in the district had a lower percentage of house ownership when compared to their respective state estimates (TNHPS-PBS, 2021). The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

A detailed analysis of ownership of houses showed that out of the 63.54 percent households (see Chart 3.14) that lived in an own house in the district, 11.81 percent of houses were built under a government scheme, which was lower than the state estimate of 14.12 percent (TNHPS-PBS, 2021). The social group-wise analysis of this parameter is given below.

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

House Constructed under a Government Scheme	Social Group					
	SC	ST	BC	MBC	General	The Nilgiris
Yes	21.47	32.00	3.88	12.76	10.53	11.81
No	75.84	67.63	95.44	80.67	88.61	86.62
DK/RF	2.69	0.37	0.68	6.57	0.86	1.57
Total	**100**	**100**	**100**	**100**	**100**	**100**

In The Nilgiris district, ST households had the highest percentage of houses built under a government scheme compared to other social groups. The General Category had a higher percentage of houses built under a government scheme compared to the BC category. Both the surveyed DNC households did not live in their own house and hence are not represented in Table 3.22.

3.5.2 House Type

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

Chart 3.15 Type of House – Area-wise
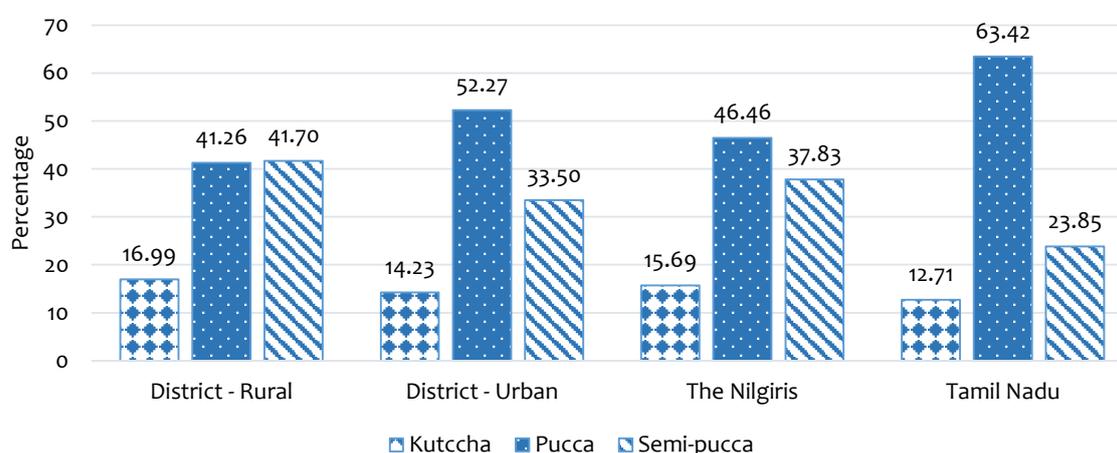
Chart 3.15 shows that around 46 percent of the households in the district were living in pucca houses, which was considerably lower than the state estimate. The percentage of urban households living in pucca houses in the district was higher than rural households, but lower than the state urban estimate of 75.22 percent (TNHPS-PBS, 2021).

3.5.3 Primary Drinking Water Source

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

Chart 3.16 Primary Source of Drinking Water of Households
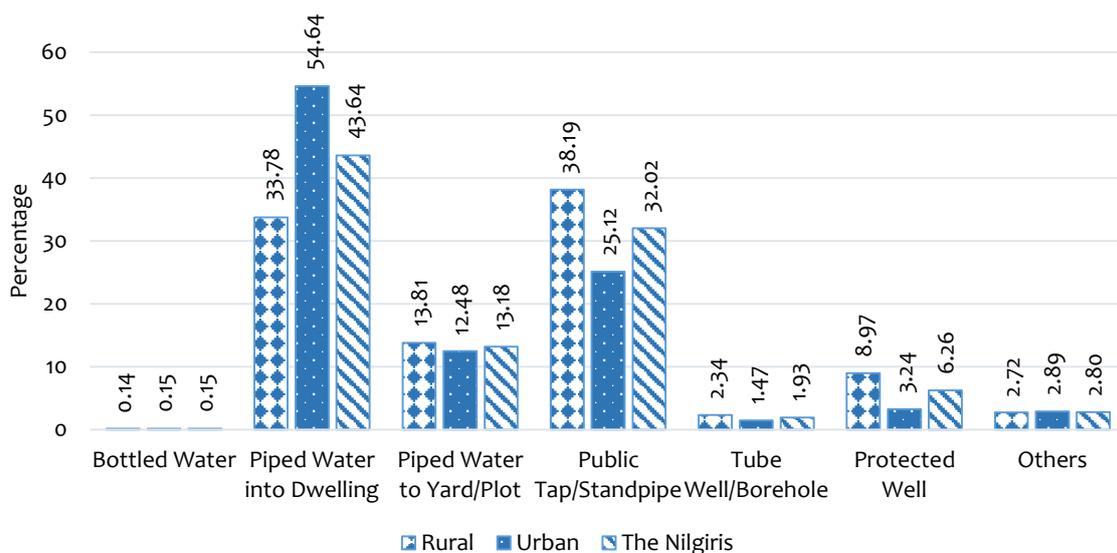
Chart 3.16 shows that the primary source of drinking water of households in the district was piped water into the dwelling at 43.64 percent, which was higher than the state estimate of 32.04 percent (TNHPS-PBS, 2021). The state estimates showed that piped water into the dwelling in urban areas—about 37.02 percent—and public tap/standpipe in rural areas—about 44.51 percent—were the primary water sources of households (TNHPS-PBS, 2021). In The Nilgiris district too, the same pattern was observed.

3.5.4 Electricity

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

---

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

Chart 3.17 Comparison of Households with Electricity between Census 2011 and PBS 2018
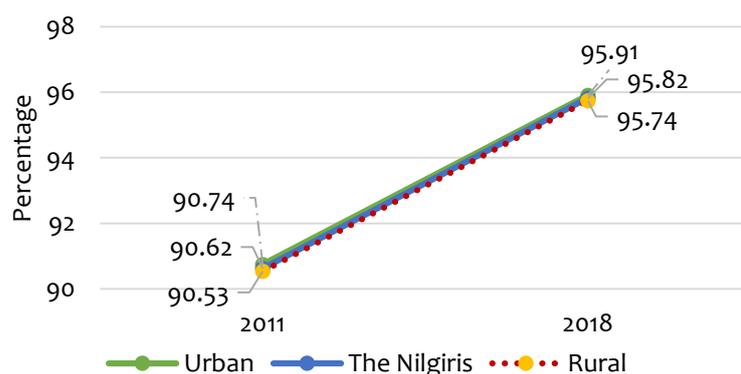
Chart 3.17 shows rapid electrification in rural and areas of The Nilgiris district between 2011-2018. The rate of growth of households with electricity was similar in rural and urban areas. Although the district was positioned last among the then 32 districts in terms of electrification as per the state estimates, the difference in electrification between the district at 95.82 percent and the state at 97.6 percent was small (TNHPS-PBS, 2021).

3.5.5 Primary Cooking Fuel

A comparison of Census (2011) and the PBS estimates on the main fuel[7] used for cooking by the households in the district is given in Chart 3.18.

Chart 3.18 Comparison of Primary Cooking Fuel – District and Tamil Nadu
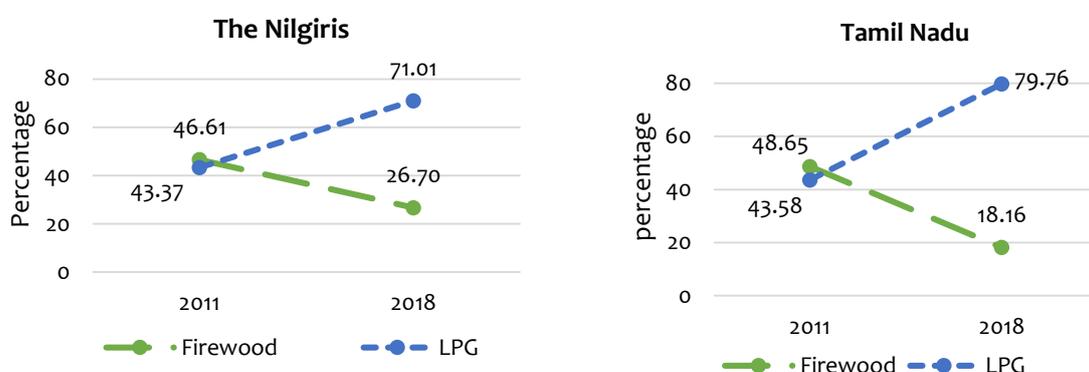
Chart 3.18 shows that the predominant fuel in the district had reversed from firewood to LPG in the period 2011-18. But firewood was still used by more than a quarter of the households. Compared to other districts of Tamil Nadu, The Nilgiris district was ranked twenty second in terms of LPG use and twelfth in terms of firewood use as the primary cooking fuel (TNHPS-PBS, 2021).

---

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

Chart 3.19 Comparison of Primary Cooking Fuel used for Cooking – Rural and Urban
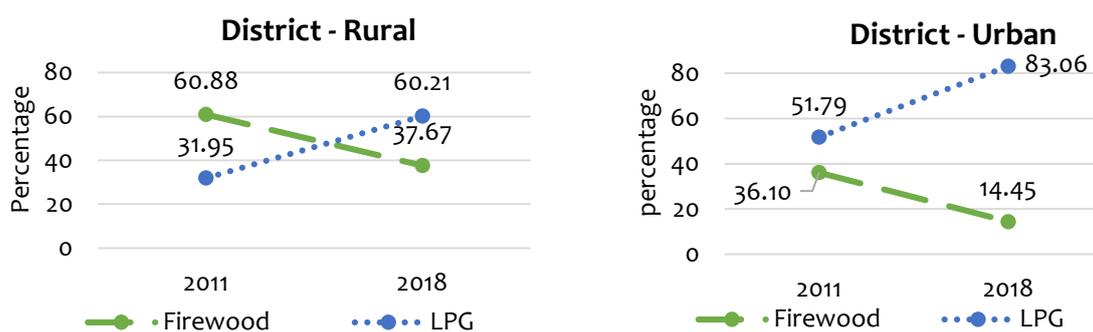
Chart 3.19 shows that the predominant fuel in rural areas in the district had changed drastically from firewood to LPG in the period 2011-18, though almost 38 percent of the rural households still depended on firewood. LPG uptake had increased further in urban areas, and that of firewood had dropped significantly during the same period.

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

Table 3.23 Primary Cooking Fuel in Household - Social Group-wise Percentages

Primary Cooking Fuel	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Firewood	25.86	85.16	19.09	23.04	0.00	19.12	26.70
Kerosene	2.36	2.28	1.39	1.10	0.00	0.94	1.80
LPG	71.41	12.56	78.99	75.70	100.00	77.91	71.01
Others	0.37	0.00	0.51	0.16	0.00	2.03	0.48
DK/RF	0.00	0.00	0.01	0.00	0.00	0.00	0.01
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

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

Table 3.23 shows that 85 percent of ST households used firewood as their primary fuel, which was significantly higher compared to other social groups. More than 70 percent of households belonging to all other social groups used LPG as the primary cooking fuel. However, lesser percentage of BC and General category households in the district were using LPG as primary cooking fuel compared to the state estimates of 85.9 percent and 96.2 percent respectively (TNHPS-PBS, 2021). Both the DNC households surveyed in the district used LPG as their main cooking fuel.

3.5.6 Sanitation

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

Chart 3.20 Presence of Latrine within the Premises of the Household
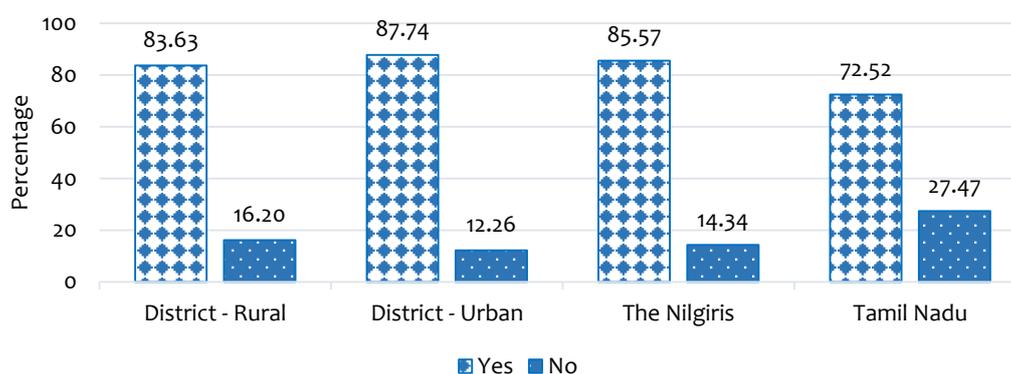
The percentage of households with latrine within the house premises had increased from 51.89 percent in 2011 (Census, 2011) to 85.57 percent in 2018. The The Nilgiris district was ranked third among the 32 districts in terms of this indicator (TNHPS-PBS, 2021). The percentage of households equipped with latrine facilities in the district was higher than the state level estimate. A greater percentage of urban households were equipped with latrine facilities compared to rural households.

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

Percentages

Latrine within House Premise	Social Group						
	SC	ST	BC	MBC	DNC	General	The Nilgiris
Yes	82.89	57.26	89.89	93.37	48.16	98.48	85.57
No	16.98	42.74	10.01	6.63	51.84	1.52	14.34
DK/RF	0.13	0.00	0.10	0.00	0.00	0.00	0.09
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Table 3.24 shows the presence of latrine within the premises of the household across various social groups. The PBS estimates show that, while more than 80 percent of households belonging to each social group, except ST, had a latrine within the house premises, only 57.26 percent of ST households had a latrine within the premises of the house. The results for the DNC category must be interpreted in the context of their sample size, as discussed in Section 3.1.

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

Chart 3.21 Presence of Latrine in the Premises of Different Types of Houses – Area-wise
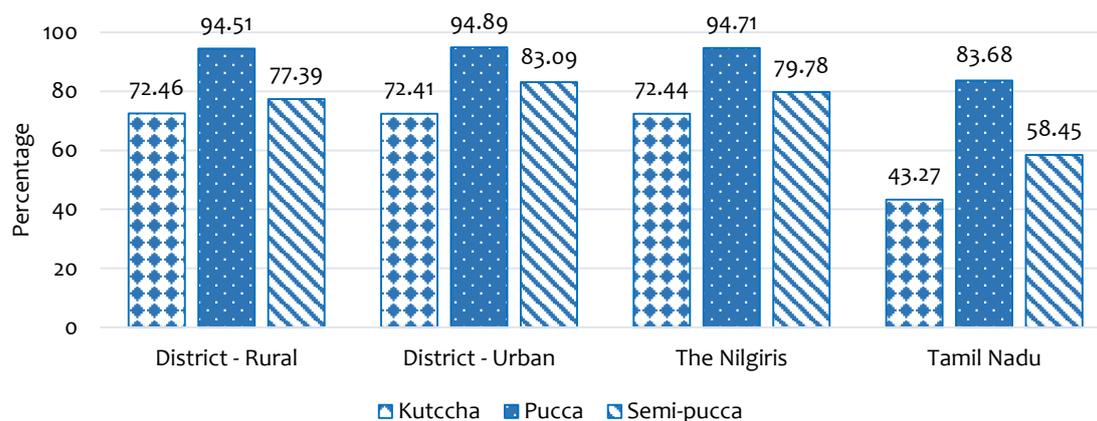
Chart 3.21 shows that the percentage of pucca houses with latrine facilities was higher than for semi-pucca and kutccha houses in the district. The percentages of latrine facilities in kutccha, pucca and semi-pucca houses in the district were higher than their respective state estimates. The rural and urban estimates for pucca houses with latrine facilities were similar, and for kutccha houses as well.

The percentage of total households in the district following open defecation had declined from 36.66 percent in 2011 (Census, 2011) to 10.14 percent in 2018 (TNHPS-PBS, 2021). The alternative practices of defecation followed by 14.34 percent of the district's households that did not have a latrine within the premises of the house is shown in Chart 3.22.

Chart 3.22 Alternate Practices of Defecation by the Households without Latrine
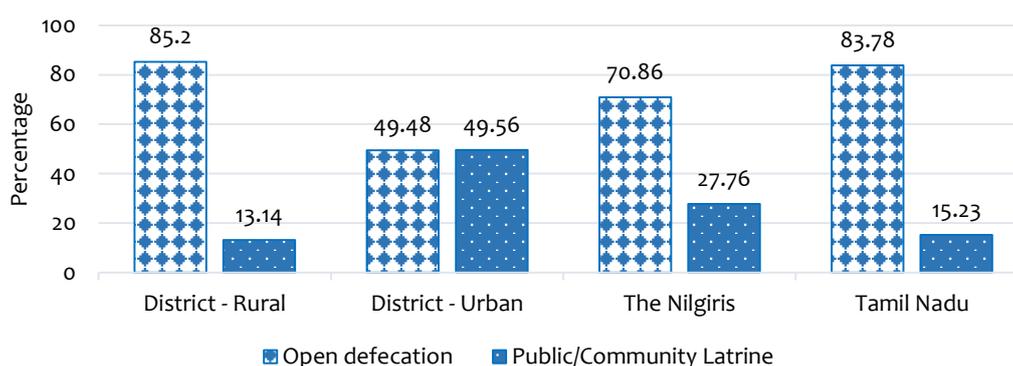
Chart 3.22 shows that more than 70 percent of households without latrine within the premises of the house in the district were following open defecation, which was lower than the state level estimate. The practice of open defecation by these households was much higher in rural areas compared to urban areas of the district. As per the state PBS report, The Nilgiris district was ranked twenty-ninth in the state in terms of the percentage of total households following open defecation.

4. Conclusion and Recommendations

The Pre-Baseline Survey (PBS) 2018-19 of The Nilgiris district was conducted from the sample of 4,743 households in the district who were willing to participate in the survey. The survey focused on five major indicators: i) demographic indicators, ii) development indicators, iii) socio-economic indicators, iv) household income and v) basic infrastructure.

The Nilgiris was one of the top ten districts in Tamil Nadu in terms of highest literacy rate. The district employment rate and female work participation rate were higher than the state estimates. The district was also one among the top ten districts in terms of the mean annual household income probably due to tourism and plantation crops. Yet, income inequality as measured by the Gini coefficient was lower than the state estimate. The percentage of households having piped water into dwelling as the main drinking water source was higher in the district compared to the state estimate. The Nilgiris district was ranked third in terms of the presence of latrine facilities in Tamil Nadu. In terms of open defecation practices, the district performed better at the fourth lowest position, preceded by Chennai, Kanyakumari, and Coimbatore districts.

Around 12 percent of the population in the district had not received formal education and more than 80 percent of the specified population—among the 12 percent of the population without formal education—did not have functional literacy. There was a wide gender gap in literacy rate and attainment of formal schooling in the district, with the gap being considerably wider in rural areas. A large proportion of females above the age of 14 who were not in the labour force were homemakers. Policies targeted at improving the education status of women may be crucial to close this gender gap. A social group-wise disparity also existed in the district where the prevalence of formal education was lower among the ST households compared to other social groups.

Similarly, in employment, despite gains made in female literacy and formal education, female work participation continues to be significantly lower than that for males. All social groups, apart from the General category, were principally employed as casual labourers in the agricultural sector, which yielded lower incomes. Policy interventions targeted at these marginalized sections may help reduce these disparities.

The percentage of households owning pucca house in the district was lesser than the state estimate. Majority of the households who owned agricultural land in the district depended on rain-fed irrigation alone as the landscape is not conducive for alternative source of irrigation except dug wells. Since most of the farmers are marginal landholders, opting for alternative irrigation is not economically viable for them. Failure in rain-fed irrigation not

only affected the agricultural landowners, but also the casual labourers in agriculture as their livelihood depends on the income from agriculture. Ownership pattern of agricultural, allied agricultural and fishing assets in the district was lesser than the state estimate. The district ranked last among the then 32 districts in terms of electrification probably due to its hilly terrain.

Firewood use as the primary cooking fuel was still prevalent in The Nilgiris. Policies should be drawn to ensure that all households are equipped with LPG connection which will reduce the usage of firewood as main fuel. Targeting the ST households, of which around 85 percent still used firewood as the main cooking fuel and more than 42 percent of whom lacked latrine facilities within the house premises, might help reduce the stark social group-wise disparity in these two parameters.

References

Census. (2011). *District Census Handbook - The Nilgiris*. Directorate of Census Operations. Government of Tamil Nadu. https://censusindia.gov.in/nada/index.php/catalog/1089

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%20Report%2C%20PLFS%202017-18_31052019.pdf?download=1

Tamil Nadu State Planning Commission. (2011). *District Human Development Report – The Nilgiris District*. https://spc.tn.gov.in/reports/The%20The Nilgiris.pdf

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.* Draft report submitted to the Government of Tamil Nadu.

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.