Public Expenditure Review of Secondary Education in Tamil Nadu

Public Expenditure Analysis Series 4 of 8
Policy Brief based on this study is also available

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Acknowledgements

Research Team at Centre for Budget and Policy Studies (CBPS), Bangalore:

Madhusudhan B.V. Rao

Jyotsna Jha

Shreekanth Mahendiran

Siddarth Sriram

Arun Viknesh

Thyagarajan R.

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List of Abbreviations

BC	Backward Class
BDO	Block Development Office
BE	Budgeted Estimate
CAG	Comptroller and Auditor General
CAGR	Compounded Annual Growth Rate
CBPS	Centre for Budget and Policy Studies
CBSE	Central Board of Secondary Education
CEO	Chief Educational Officer
CIE	Cambridge International Education
CISCE	Council for Indian School Certificate Examination
CWSN	Children With Special Needs
DC/DNC	Denotified Communities
DEO	District Educational Officer
DIET	District Institute of Education and Training
DSE	Directorate of School Education
ELCOT	Electronics Corporation of Tamil Nadu
EMIS	Education Management Information System
EMS	Education Management System
FC	Finance Commission
FGD	Focus Group Discussions
FRBM	Fiscal Responsibility and Budget Management
GER	Gross Enrolment Ratio
GIS	Geographical Information System
GOI	Government of India
GSDP	Gross State Domestic Product
GST	Goods and Services Tax
GSVA	Gross State Value Added
HDI	Human Development Index
HM	Headmaster
HSC	Higher Secondary School Certificate
IB	International Baccalaureate
ICSE	Indian School Certificate Examination
ICT	Information and Communication Technology
ITI	Industrial Training Institute
LPG	Liquified Petroleum Gas
MBC	Most Backward Class
MDM	Mid-Day Meal
MGRNMP	MGR Nutritious Meal Programme
MHRD	Ministry of Human Resource Development

NAR	Net Attendance Ratios
NCF	National Curriculum Framework
NEET	National Eligibility cum Entrance Test
NER	Net Enrolment Ratio
NFHS	National Family Health Survey
NMO	Noon Meal Organisers
NPSDE	National Policy for Skill Development and Entrepreneurship
NSQF	National Skills Qualification Framework
NSSO	National Sample Survey Office
NTSE	National Talent Search Examination
NUEPA	National University of Educational Planning and Administration
OBC	Other Backward Classes
OC	Other Classes
PA	Personal Assistant
PTA	Parent-Teacher Association
PTMGRNMP	Puratchi Thalaivar MGR Nutritious Meal Programme
PWD	Public Works Department
RE	Revised Estimate
RMSA	Rashtriya Madhyamika Shiksha Abhiyan
RTE	Right To Education
SC	Scheduled Caste
SCERT	State Council of Educational Research and Training
SDG	Sustainable Development Goals
SDMC	School Management and Development Committee
SSA	Sarva Shiksha Abhiyan
SSLC	Secondary School Leaving Certificate
ST	Scheduled Tribe
SW	Social Welfare
SWNMP	Social Welfare and Nutritious Meal Programme
TANGEDCO	Tamil Nadu Generation and Distribution Corporation
TANII	Tamil Nadu Innovation Initiatives
TN	Tamil Nadu
TNCSC	Tamil Nadu Civil Supplies Corporation
TTI	Teaching Training Institutes
UDAY	Ujjwal Discom Assurance Yojana
UDISE	Unified District Information on School Education
UNICEF	United Nations Children's Fund

Chapter 1: Introduction

1.1.   Background

Tamil Nadu (TN) is the southern-most state in India with a population of 72.14 million, out of which 34.95 million live in urban areas across 1,097 towns and 37.19 million live in rural areas across 15,979 villages of 32 districts. Among the 32 districts, Chennai has the highest urban population of 4.68 million, and Villupuram has the highest rural population of 7.94 million according to Census 2011. In terms of economic growth, the Gross State Domestic Product (GSDP) in Tamil Nadu has grown consistently between 10% to 14% over the past five years The Compounded Annual Growth Rate (CAGR) of the GSDP stands at 11.85%. The primary sector's share of the GSDP is 10.04%, standing at nearly Rs 1.4 billion. While the figure has been on the rise over the years, its share has remained nearly the same since from 2012-13, where it was at 9.56% before rising to 11% and falling again. The share of secondary sector has been, however, falling over the past five years, with the state moving away from being a highly industrial one to one that sees lesser and lesser share of its income being generated by the secondary sector; it fell from 32% in 2012-13 to 27.22% in 2016-17, with a slow but definitely downward trend. The gainer over these five years in consideration is, thus, the tertiary sector. The tertiary sector has seen an absolute rise in contribution to the GSDP and a relative rise in percentages in comparison to expenditures in the primary and the secondary sectors. Taxes on products were on the rise till 2016-17, whereas subsidies on products were on a decline from Rs 300 million in 2012-13 to Rs 266 million in 2016-17 approximately.

For the year 2016-17, the state's GSDP stood at Rs 13.39 billion. Of this, the tertiary sector alone contributed to 56.88%, Rs6.84 billion. In terms of the state's Gross State Value Added (GSVA), the primary sector contributed to nearly 12%, while the secondary and tertiary sectors amounted to 31% and 57% and are on the decline and ascent, respectively.

Figures 1. 1 and 1. 2: Sector-wise composition of Tamil Nadu's Gross State Domestic Product (GSDP) and Gross State Value Added (GSVA)
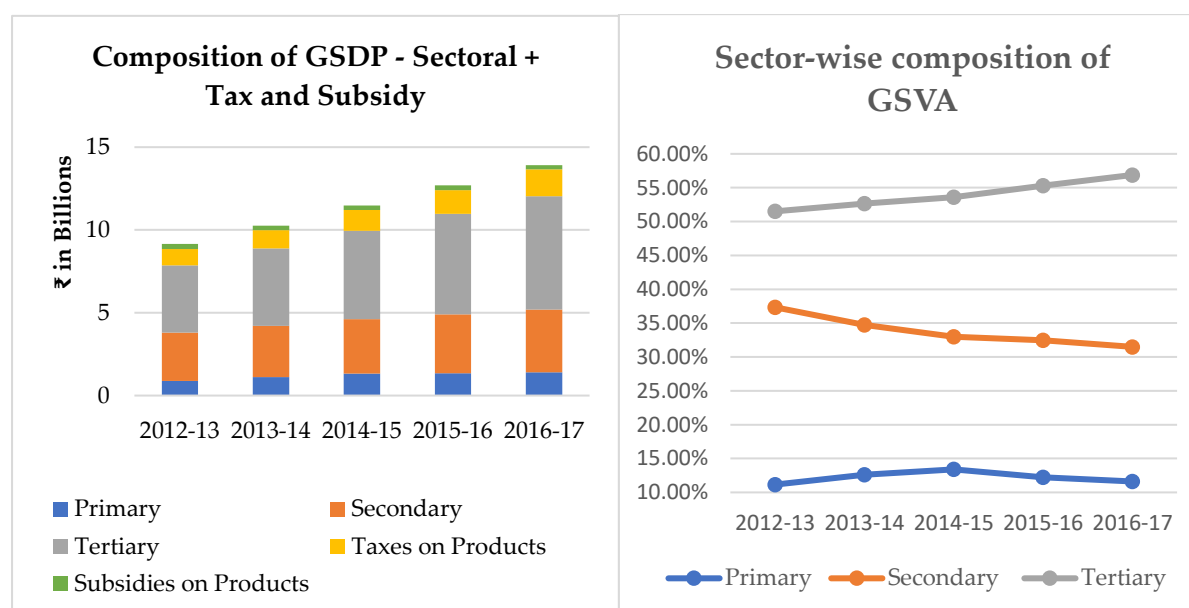
Tamil Nadu is considered one of the most developed Indian states with a relatively high ranking in education as well as associated social development indicators. Tamil Nadu ranks third among 17 major Indian states in Education and Empowerment Index (E&E), which is constituted of enrolment ratios at primary and secondary stages, child sex ratio and the prevalence of child marriage (Figure 1.3). However, that does not mean the state does not face any challenge in the context of education and social development. In education, the state has a high Net Attendance Ratios (NAR) for the upper-primary and secondary levels but the same is not true for senior secondary levels indicating a high level of drop out between secondary and senior secondary. The state fares much better than the all-India average but is still far behind Kerala, the best performing state in the country (Table 1.1), and this gap has widened in recent years. We have deliberately chosen to use NAR instead of enrolment indicators as it reveals, in some sense, the real enrolment, i.e., children who really attend schools as against those who are merely enrolled and may not be attending. Hence, if TN has to move fast towards achieving the Sustainable Development Goal (SDG) 4 of providing inclusive and equitable quality education by ensuring that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes, it needs to make wiser public policy and expenditure choices.

Figure 1. 3: Education and Empowerment Index (E&E) Values and ranking: Selected Indian states
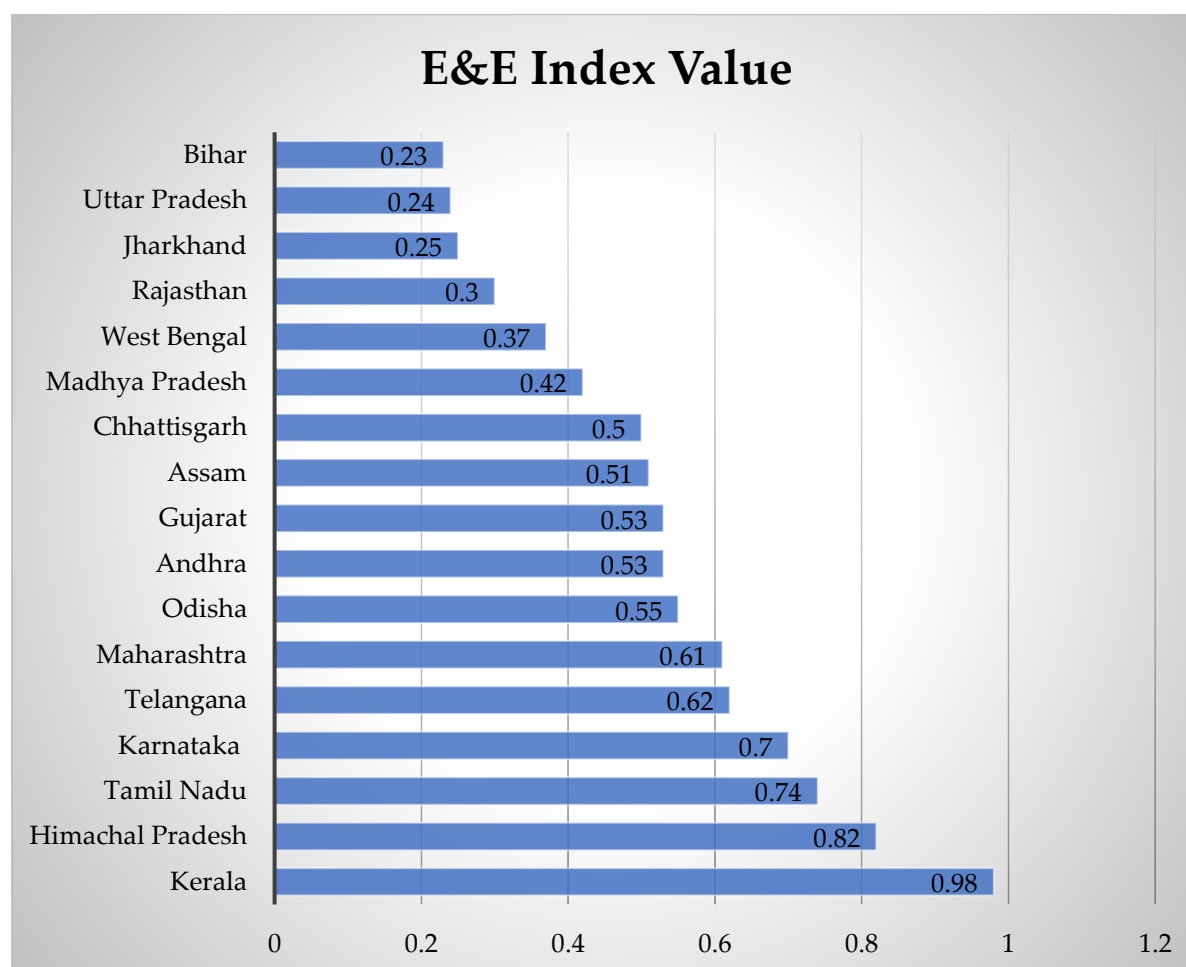
Note: The E&E index has been prepared using the indicators in Table 1.1, with equal value to all five constituents (negative value for the child marriage indicator)

Table 1. 1: Selected Education and Empowerment (E&E) Indicators

	Tamil Nadu	Kerala	India
Net Attendance Ratio (Primary)	88	90	83
Net Attendance Ratio (Upper Primary)	72	76	63
Net Attendance Ratio (Secondary)	69	80	52
Net Attendance Ratio (Senior Secondary)	53	74	38
Women aged 20-24 years married before age 18 years (%)	16.30	7.60	26.80
Sex ratio at birth for children born in the last five years	954	1047	919

Sources: National Sample Survey Office (NSSO)71st Round – Education in India (2014) for Net Attendance Ratios (NAR) at different levels (first four rows), National Family Health Survey (NFHS) (2015-16) for the last two rows.

The state also has high inter-district disparities in terms of income, human development, and education indicators. As on 2010-2011, Kanniyakumari (Rs 81,094) and Tiruppur (Rs 72,479) ranked first and second place in terms of per capita income; and Tiruvarur (Rs 27,408), Perambalur (Rs 17,922), and Ariyalur (Rs 16,559) were the poorest districts in the state (Table A1.1 in the Annexure). Chennai with the highest urban population ranks 12th with a per capita income of Rs 57,706. The per capita income of the richest district is about five times that of the poorest district in the state. There appears to be no geographical concentration of economic activity as evidenced by the fact the Kanniyakumari (richest) is in the southern-most district, Tiruppur (second richest) is situated in north-western part, and Tiruvallur (third richest) is situated in the north-eastern part of the districts.

The correlation between high income and levels of human development in the districts does not seem to be strong. While Kanniyakumari which is the richest district in terms of per capita also registered the highest Human Development Index (HDI) value of 0.71 in 2017-2018, Kancheepuram, which ranked 5th in terms of per capita income is positioned in the 29th place in terms of HDI with a value of 0.53. Fourteen districts ranked below the state average in HDI included both the richer districts such as Coimbatore, Tiruchirappalli, Madurai, and poorer districts such as Viluppuram, Dindigul, Tirunelveli and others (refer to Table A2.1 in the Annexure).

The population of the state stood at 72.14 million in 2011 recording a decadal growth of 15.6%. The share of Scheduled Caste (SC) and Scheduled Tribe (ST) population was 20.01% and 1.1% respectively. The Other Backward Classes (OBC) share stood at 68%. The sex ratio of the state was 996. The urbanisation in the state stood at 48.4%which is one of the highest among larger states of the country. The literacy rate of the state was 80.33% while the rural and urban literacy rates were 87.24% and 73.8% respectively. The literacy rates of male and female were 86.81%and73.86% respectively. The literacy rates of General, SC and ST categories stood at 82.15%, 73.26% and 54.34% respectively.

In the Education Index, the richer districts such as Kanniyakumari, Tiruppur, Tiruvallur, Virudhunagar and Kancheepuram are ranked 2nd, 25th, 12th, 3rd, and 17th, respectively, whereas poorer districts such as Ariyalur, Perambalur and Thiruvarur are ranked 6th, 09th, 07th, respectively. Thus, TN presents a picture of considerable inequalities and paradoxes in income, level of human development, and education attainment among the districts despite the increasing economic growth in the state. This study, therefore, is an attempt to analyse the public

spending on secondary education in TN, with an objective to understand the directions, priorities, and reach.

1.2. Objectives and methodology of the present study

Secondary education is a critical intermediate sub-sector that not only links elementary to higher education but also prepares children for work in case they want to discontinue schooling and join the labour market. This also covers the adolescent phase of childhood, which is far more demanding and challenging for children, parents, and school systems. Public policies and expenditure have a high potential of influencing the nature and kind of secondary education available to children. This study limits itself to an analysis of public expenditure for secondary education in the context of existing structures, status of schooling, and the challenges the state is facing in this respect. An attempt is also made to examine the delivery process of certain schemes in terms of procedures, reach and relevance. The specific objectives of the study are as listed below:

- To review and understand the public expenditure on secondary education in TN.
- To identify the inter-linkages between different departments that have operational schemes for the secondary schools and understand the associated challenges.
- To develop a preliminary understanding of the efficiency and effectiveness of selected schemes implemented in secondary education.

We followed the following four steps to complete the study:

1. **Secondary data review:** We analysed the available data to understand the status of education and schooling provisions in the state in detail. This included an analysis of private expenditure in education thorough the use of secondary sources.
2. **Policy and institutional Review:** We analysed state specific policy documents for a period of about five years to understand the state's policy intent and objectives for the sub-sector. We also used document reviews and consultations to develop an understanding of the institutions and school-systems at secondary state in the state.
3. **Public Expenditure Review:** We undertook a detailed analysis of the public spending in secondary education through the analysis of state budgets by looking into allocations, expenditures, and trends.

4. **Fieldwork**: We undertook fieldwork for understanding the implementation of four selected schemes by visiting departments and schools in four blocks of two select districts. The field work was limited to interviews of the headmasters (HM) of the identified schools and a Focus Group Discussion (FGD) with small groups of students (both boys and girls) in either secondary or senior secondary classes and their parents. Observations with respect to noon meal centre and school. were also recorded.

This report is based on the above analysis and the report is organised in six chapters, including this first chapter. The second chapter presents the analysis based on the review of secondary data, and the next one presents the review of policy and structural arrangements around secondary education. These two chapters provide the backdrop for the next two chapters: one based on the public expenditure review and the other based on the analysis of findings from the field. Finally, the last chapter attempts to bring it all together and present the conclusions and suggestions.

Chapter 2: Status of Secondary Education in Tamil Nadu

This chapter presents the status of secondary education in TN in terms of enrolment and transition indicators, access and availability of schools, infrastructure and teachers, private expenditure and barriers using existing sources. The National Sample Survey Office (NSSO)71st Round report (2014) is the primary source while the Unified District Information on School Education (UDISE) data has also been referred to.

2.1. Status of Enrolment in and transition to Secondary Education

In 2015-2016, there were 2.25 million and 1.78 million students enrolled in secondary and senior secondary levels respectively in TN. The enrolment in secondary and senior secondary level grew at about 0.63% and 2.20% per annum between 2012-2016 in TN, whereas it grew by 3.25% and 6.04% per annum respectively during the same period in India. Students from OBC constitute about 71% of the total enrolled at secondary and senior secondary levels, followed by 25% of students belonging to SC, and about 1% belonging to ST. The General caste (categorised as Others in the NSSO survey) which is known to represent the economically and socially better-off group constitute only about 4% of the total enrolled in secondary and senior secondary level. This caste-wise distribution of enrolled students shows that 'Others' or General caste is underrepresented while SCs and OBCs are overrepresented in the enrolment perhaps reflecting that either the share of school going children is lower among 'others' population or their enrolment in high-end private schools is not fully captured in these enrolment figures. The latter is more likely to be true- higher caste families may be sending their children to private schools, which does not get reflected in these statistics.

Table 2. 1: Enrolment and its growth between 2012-2013 and 2015-2016

Gender/Caste/Level	Tamil Nadu (in million)		India (in million)		Per annum Growth Rate (%)	
	2015-16	2012-13	2015-16	2012-13	Tamil Nadu	India
Secondary	2.26	2.20	39.15	34.64	0.63	3.25
By Gender						
Male	1.15	1.14	20.55	18.32	0.36	3.04
Female	1.10	1.07	18.60	16.32	0.91	3.49
By Caste						

Gender/Caste/Level	Tamil Nadu (in million)		India (in million)		Per annum Growth Rate (%)	
	2015-16	2012-13	2015-16	2012-13	Tamil Nadu	India
General	0.08	0.09	10.80	10.46	-0.98	0.80
SC	0.53	0.54	7.31	6.31	-0.33	3.94
ST	0.03	0.02	3.32	2.92	3.89	3.48
OBC	1.62	1.55	17.71	14.95	1.01	4.63
Senior Secondary	**1.78**	**1.64**	**24.74**	**19.92**	**2.20**	**6.04**
By Gender						
Male	0.84	0.76	13.00	10.66	2.58	5.50
Female	0.94	0.88	11.73	9.27	1.86	6.65
By Caste						
General	0.08	0.08	8.04	7.09	0.60	3.35
SC	0.40	0.36	4.29	3.45	2.44	6.04
ST	0.02	0.01	1.67	1.23	7.32	9.00
OBC	1.29	1.19	10.73	8.15	2.17	7.92

Source: Secondary Education in India: Progress towards Universalisation, National University of Educational Planning and Administration (NUEPA), 2016.
Note: SC stands for Scheduled Caste (SC), ST stands for Scheduled Tribe (ST), and OBC stands for Other Backward Classes (OBC).

This distribution remained largely unaltered in spite of the greater growth rate of students' enrolment belonging to ST relative to other caste groups from 2012-2013 to 2015-2016. To explain, the per annum growth rate between 2012-2013 and 2015-2016 of students belonging to General, SC, and OBC in secondary level is about -0.98%, -0.33%, and 1.01%, respectively. At the senior secondary level, the per annum growth rate was observed to be 0.60%, 2.44% and 2.17%, respectively. On the other hand, students belonging to ST households who constitute less than 1% of total enrolled have registered relatively higher growth rate during the same period. The per annum growth rate observed for secondary and senior secondary level was about 3.89% and 7.32%. But this only translates to an addition of 3,500 students from ST households in the regular school system, whereas 1.59% per annum growth of OBC students led to an addition of 1,65,487 students by 2015-2016. In sum, the pool of students enrolled in secondary education is dominated by those belonging to OBC, followed by SC, General and ST households in spite of greater growth rate of students from ST households.

The same is observed for gender-wise distribution of students even though it is interesting to note that percentage of female students is marginally higher than male students at the senior secondary level. There are about 0.94 million female students representing 52% of the total enrolled in senior secondary level and 0.84 million male students constituting the remaining 48%. A similar distribution of male and female students at senior secondary level was observed in 2012-2013. At the secondary level, the representation of male and female students is fairly equal as they constitute about 51% and 49% of the total enrolled, respectively.

The higher presence of female students at senior secondary level is due to relatively higher enrolment of girls in general and improvements in the transition rate over the period. First, we will examine the enrolment rate by making use of Gross Enrolment Ratio (GER), defined as the percentage of the total number of students enrolled at an education level irrespective of age to the population of the official age group of that education level, and Net Enrolment Ratio (NER), defined as the percentage of the total number of students enrolled belonging to the appropriate age group to the population of the official age group of that education level. Here, the discussion will also extend to providing a greater understanding of the enrolment levels across caste and economic groups as well. Then, we will move on to unpacking the transition rates to highlight the greater success of girls in being able to pursue senior secondary level relative to boys in TN.

The GER in secondary level in 2012-2013 was about 90.15, which improved to 94.02 during the period 2015-2016 in TN. There exist inter-district variations in GER in TN where the lowest GER was 80.21 registered by Viluppuram district and the highest GER was 218.71 in Perambalur in 2015-2016. If this data is correct, then the case of Perambalur needs further examination to understand the composition of age-group of students enrolled in secondary level, in addition to unpacking the individual, societal and institutional factors that lead to high participation in education. Among the 30 districts in TN, GER has declined for 13 districts with the highest decline observed in Chennai (-8.45 points) followed by Nilgiris (-7.33 points), Dharmapuri (-4.51) and others[1]. The highest increase in GER among the remaining 17 districts was observed for Perambalur with 7.37 points followed by Tiruvannamalai (5.35 points), Pudukkottai (4.74 points), Karur (4.72 points) and others[2]. In addition, the female

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[1] Others include Nagapattinam, Kanniyakumari, Tiruchirappalli, Krishnagiri, Cuddalore, Thiruvarur, Sivaganga, Ramanathapuram, Thoothukudi, and Erode.

[2] Others include Kancheepuram, Dindigul, Coimbatore, Thiruvallur, Salem, Namakkal, Thanjavur, Madurai, Theni, Vellore, Viluppuram, Virudunagar, and Tirunelveli.

GER is about 1.03 to 1.05 points higher than male GER in about 26, and the female GER is at the similar rate as the male GER in the remaining 4 districts.

Figure 2. 1: Gross Enrolment Ratio (GER) at secondary level for districts in Tamil Nadu
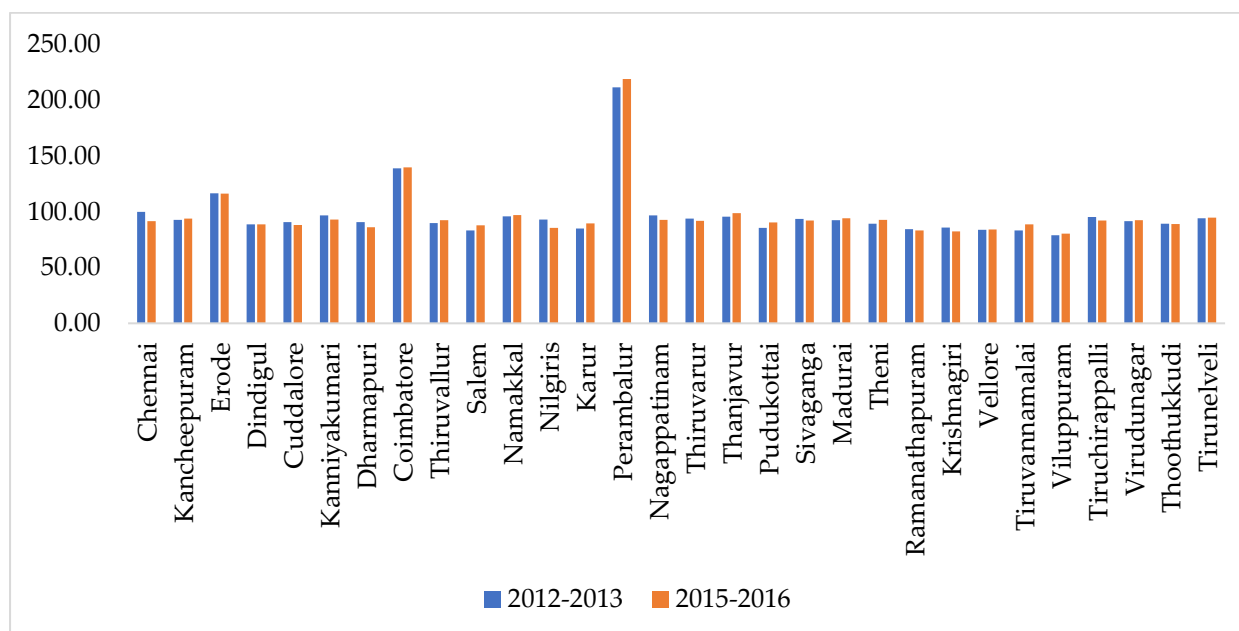
Source: Unified District Information on School Education (UDISE) Dashboard –Secondary Education (retrieved from http://udise.schooleduinfo.in/dashboard/Secondary#/ as on 14 January 2019)

On the other hand, the GER of senior secondary level improved drastically from 59.81 in 2012-2013 to 82.37 in 2015-2016. Not only is the state's GER higher than the national average but the magnitude of improvement in GER over the time period, especially for the senior secondary level is also much greater than that observed at the national level. This is resultant of improvement in level of GER across all the districts in TN where the highest increase was observed for Thiruvallur (15.34 points), followed by Perambalur (13.71 points), Virudunagar (12.10 points), Kancheepuram (11.74 points); the lowest increase was observed for Tiruvannamalai with 2.69 points.

The female GER is significantly higher in comparison to male GER in each of the districts in 2015-16. The ratio between female GER and male GER ranges between 1.10 (Viluppuram) to 1.39 (Thiruvarur) and the average ratio was about 1.20, which indicates that a greater number of girls are pursuing senior secondary education in Tamil Nadu. This finding is strengthened by the fact that enrolment of age-appropriate age group is considered where the female NER was observed to be 56.94

relative to 47.4 for male NER.[3] This is an interesting phenomenon as it shows that a higher proportion of girls are continuing to pursue senior secondary level and also that their presence is higher than that of boys at that level. While this is in complete contradiction to the status of girls' education in India as a whole, this is in line with the trends seen globally in many regions, especially in developed and middle-income countries that have achieved almost universal primary education. This deserves greater attention by policy makers as experiences in other countries show that unless addressed, this phenomenon can lead to more serious educational and social challenges (Jha and Kelleher, 2006; Jha, Bakshi and Faria, 2012; and Jha, Menon and Chatterjee, 2017).

Figure 2. 2: Gross Enrolment Ratio (GER) at senior secondary level for districts in Tamil Nadu.
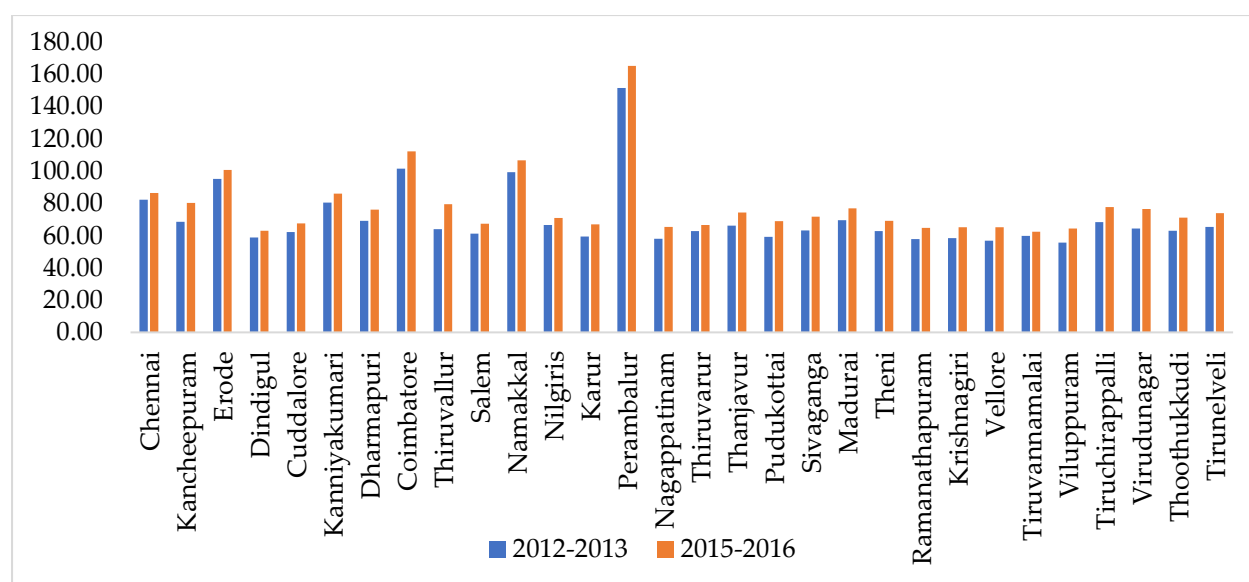
Source: Unified District Information on School Education (UDISE) Dashboard – Secondary Education (retrieved from http://udise.schooleduinfo.in/dashboard/Secondary#/ - as on 14 January 2019)

The GER and NER in secondary and senior secondary levels by castes and gender in TN and India is presented in Table 3. First, a comparison between GER and NER in secondary and senior secondary level reveal that a significant number of male and female students belong to non-age appropriate category, i.e., there are lot of students who are not in the age group of 14-15 years and 16-17 years enrolled in secondary and senior secondary levels in India. The same is observed for TN for SC, OBC, and others in rural and urban sector in secondary education. The only exception here

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[3] Refer to Table A5 for detailed table on Net Enrolment Ratio (NER) in secondary and senior secondary in Tamil Nadu and India.

would be that age-appropriate population constitutes the majority of enrolled ST students in the rural sector. Another distinguishing element of enrolment rate is that the population belonging to General (categorised as Others in the NSSO survey) have higher NER of 59.59% and 47.62% in secondary and senior secondary level, respectively, followed by OBC (51.40% and 39.51%, respectively), SC (50.60% and 32.67% respectively), and ST (49.59% and 35.67%, respectively) in India. In TN, on the other hand, the highest NER of 45.01% and 92.73% in secondary and senior secondary level was observed for ST, followed by OBC (73.29% and 52.55% respectively), SC (58.83% and 50.38% respectively) and Others (47.52% and 41.51% respectively). In addition, an examination of NER by location (rural/urban) reveals that there is generally higher participation in secondary education in the urban sector (51.59%) than rural sector (42.01%) in secondary education in India. The same is true across different caste groups in India. But the NER for TN reveals no discernible difference between the rural (61.48%) and urban (60.77%) in secondary education. Finally, the observation of girls' participation being higher relative to boys in secondary and senior secondary level is true even across caste and location.

Table 2. 2: Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) by location, gender, caste, and state (2014).

State/Gender/Caste	GER				NER			
	Rural		Urban		Rural		Urban	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
Tamil Nadu Boys								
ST	90.51	98.59	NA	100.00	88.75	98.59	NA	100.00
SC	104.13	58.67	63.30	55.47	65.17	49.49	45.23	41.84
OBC	109.77	69.55	111.29	59.96	72.01	49.41	80.23	47.95
Others	40.13	NA	42.76	155.92	40.13	NA	42.76	82.07
Total	105.87	66.01	93.84	62.73	69.11	50.07	68.29	48.05
Tamil Nadu Girls								
ST	96.98	81.75	NA	NA	90.37	81.75	NA	NA
SC	103.29	92.58	117.27	63.85	64.75	60.71	71.89	52.32
OBC	123.29	86.70	127.52	86.86	71.94	54.62	67.70	59.39
Others	NA	NA	83.13	113.85	NA	NA	83.13	84.62
Total	114.28	88.10	123.45	82.14	69.96	58.76	68.60	58.16
Tamil Nadu Total								
ST	95.56	85.46	NA	200.00	90.02	85.46	NA	100.00
SC	103.70	70.85	78.43	59.79	64.95	53.51	52.70	47.25

State/Gender/Caste	GER				NER			
	Rural		Urban		Rural		Urban	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
OBC	115.60	76.08	118.58	73.51	71.98	51.39	74.61	53.71
Others	56.07	0.00	54.91	140.38	40.13	0.00	54.91	83.01
Total	109.79	74.61	105.80	72.46	69.51	53.46	68.42	53.12
India Boys								
ST	74.55	51.22	112.13	86.76	45.30	25.22	58.90	55.14
SC	80.57	53.28	87.09	55.65	45.28	27.80	48.64	35.87
OBC	87.03	63.62	83.39	66.13	51.35	38.21	52.38	40.90
Others	98.12	77.85	98.18	87.23	57.84	43.25	63.66	54.62
Total	86.26	63.01	90.04	72.65	50.58	35.53	55.85	45.48
India Girls								
ST	78.02	44.77	92.33	74.77	45.73	26.42	48.29	33.50
SC	87.80	53.82	105.85	64.95	49.12	29.19	61.42	36.44
OBC	81.72	57.57	89.09	71.50	47.61	33.50	54.13	45.30
Others	90.20	70.36	95.68	81.68	51.97	38.96	64.45	53.33
Total	84.38	58.04	94.08	74.65	48.63	32.92	58.69	46.69
India Total								
ST	76.09	48.12	102.42	81.45	45.49	25.80	53.70	45.55
SC	83.86	53.52	95.21	59.46	47.03	28.43	54.17	36.10
OBC	84.57	60.93	86.02	68.58	49.61	36.12	53.19	42.90
Others	94.48	74.33	97.01	84.57	55.14	41.23	64.04	54.00
Total	85.40	60.74	91.90	73.56	49.69	34.34	57.16	46.03

Source: Estimated using the survey dataset provided by 71st Education Round, 2014, National Sample Survey Organisation (NSSO).

Note: SC stands for Scheduled Caste (SC), ST stands for Scheduled Tribe (ST), and OBC stands for Other Backward Classes (OBC).

Table 2. 3: Gross Enrolment Ratio (GER) and Net Enrolment Ratio (NER) by location, gender, economic quintile, and state (2014)

Economic Quintiles/Gender/State	GER				NER			
	Rural		Urban		Rural		Urban	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
Tamil Nadu Boys								
0 to 20	92.71	56.89	93.09	50.79	66.08	40.35	62.82	33.63
21 to 40	101.17	60.67	119.16	61.37	72.09	42.44	85.36	53.06

Economic Quintiles/Gender/State	GER				NER			
	Rural		Urban		Rural		Urban	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
41 to 60	155.47	75.93	59.59	68.62	81.75	74.37	44.69	55.49
61 to 80	105.30	64.27	80.90	77.00	72.16	46.96	62.21	45.40
81 to 100	84.21	75.46	112.22	63.14	49.39	45.92	84.73	54.96
Total	105.87	66.01	93.84	62.73	69.11	50.07	68.29	48.05
Tamil Nadu Girls								
0 to 20	103.67	107.64	122.69	95.57	65.07	59.98	77.85	74.66
21 to 40	109.73	73.34	139.30	82.74	71.52	67.35	68.80	49.40
41 to 60	108.28	97.22	144.01	78.97	74.41	51.28	71.05	69.23
61 to 80	144.95	110.50	107.96	82.93	58.58	71.26	58.66	51.10
81 to 100	117.61	66.86	100.57	74.91	77.12	36.61	62.97	48.32
Total	114.28	88.10	123.45	82.14	69.96	58.76	68.60	58.16
Tamil Nadu Total								
0 to 20	98.09	72.13	106.28	66.27	65.58	46.24	69.52	47.81
21 to 40	105.05	67.01	128.31	71.55	71.83	54.91	77.84	51.32
41 to 60	129.06	82.93	84.57	74.36	77.64	66.78	52.49	63.11
61 to 80	118.07	81.98	93.99	80.71	67.79	56.27	60.49	48.97
81 to 100	101.91	71.91	108.70	69.01	64.09	42.08	78.17	51.65
Total	109.79	74.61	105.80	72.46	69.51	53.46	68.41	53.12
India Boys								
0 to 20	67.81	42.25	63.15	40.00	39.10	17.71	35.95	22.03
21 to 40	85.23	47.05	89.84	67.39	46.66	25.39	55.49	37.95
41 to 60	83.61	60.28	97.01	73.79	50.93	35.13	61.23	47.11
61 to 80	93.76	71.51	103.52	91.80	55.93	42.82	65.84	60.53
81 to 100	104.56	90.54	111.45	98.68	63.36	53.67	71.70	65.85
Total	86.25	63.00	90.04	72.65	50.56	35.52	55.85	45.48
India Girls								
0 to 20	66.27	33.50	71.87	44.59	37.50	18.07	43.64	26.43
21 to 40	78.59	49.10	97.80	63.16	45.03	25.59	56.36	37.49
41 to 60	89.24	56.74	102.94	85.20	48.13	28.77	64.52	50.57
61 to 80	87.61	67.32	101.95	91.79	52.00	41.04	68.42	60.79
81 to 100	108.43	88.42	110.15	99.17	65.36	53.94	72.00	65.36
Total	84.38	58.04	94.08	74.65	48.63	32.92	58.69	46.69
India Total								

Economic Quintiles/Gender/State	GER				NER			
	Rural		Urban		Rural		Urban	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
0 to 20	67.11	37.72	67.32	42.04	38.37	17.89	39.63	23.98
21 to 40	82.05	47.99	93.55	65.32	45.88	25.48	55.89	37.72
41 to 60	86.09	58.69	99.50	78.96	49.69	32.28	62.61	48.68
61 to 80	90.85	69.71	102.76	91.79	54.07	42.05	67.07	60.65
81 to 100	106.24	89.62	110.87	98.88	64.23	53.79	71.84	65.64
Total	85.39	60.73	91.90	73.56	49.68	34.33	57.16	46.03

Source: Estimated using the survey dataset provided by National Sample Survey Organisation (NSSO) 71st Education Round, 2014.

Next, we examine the patterns of enrolment rate by the intersection of economic class, gender, and state in secondary and senior secondary level in TN and India (Table 4). First, a comparison between GER and NER by economic class reveals that there is significant number of boys and girls belonging to the non-age appropriate population in secondary and senior secondary level across the different economic quintiles in TN and India. Second, there exists a pattern of lower participation in secondary education of those belonging to lowest economic quintile, which increases as one moves up the economic quintile (from first to second quintile and so on), and the highest participation was observed for the highest economic quintile in India. This portrays the role of economic resources in enhancing the opportunities to pursue secondary education in India as a whole. This is not true for TN as there is no significant difference in NER between the lowest economic quintile and the highest economic quintile. The NER in lowest economic quintile was observed to be 55.91% and 58.67% in rural and urban sector, respectively—this is not significantly different from 53.08% and 64.91% in rural and urban sector respectively in TN.

An interesting fact is that there is a greater participation of girls relative to boys in the first, second, and third economic quintiles relative to the top two economic quintiles in TN. This is a trend similar to what is observed in most high-income and middle-income countries that have already achieved near universal basic education—gender parity tends to turn in favour of girls at secondary level, especially among the non-rich population (Jha and Kelleher, 2006; and Jha, Menon and Chatterjee, 2017). This trend has policy implications, and we return to this later while discussing the schemes.

Moving from enrolment to transition, we observe that the transition rate from upper primary to secondary level was 89.28% in 2012-2013, which increased to 96.67% in

2014-2015. It is good to observe that almost all students were able to transition from upper primary to secondary level, thereby indicating the low probability of dropping out at that stage. This could very well be an outcome of the no-detention policy till secondary level instituted by the state government in 2011. This needs to be explored more not only to know whether the higher transition rate is attributable to no-detention policy but also to understand the mechanism through which this outcome had transpired in the state. In comparison, the transition rate from secondary to senior secondary level was observed to be 71.24% in 2012-2013, which increased significantly by 14percentage points to 85.16% in 2014-2015. This is significantly better than the transition rate of 69.07% observed at the national level in 2014-2015.

While there is no significant difference between transition rate from upper primary to secondary by gender, there exists a significant difference of 14-15% between male and female transition rate from secondary to senior secondary level, and low or no difference between male and female transition rates at the national level. In 2012-2013, the transition rate from secondary to senior secondary level for male and female was observed to be 62.59% and 79.89%, respectively in TN. From this point, the transition rate for female students reached 91.16% by 2014-2015, whereas the same for male students was at 79.15% in 2014-2015. In other words, almost all female students are able to move from secondary to senior secondary level indicating a lower dropout or repetition rate at the secondary level; in contrast, this is true only for three-fourth of the male students in the state. While this could be due to greater labour market opportunities for boys as compared to girls, this needs to be understood and analysed better as mentioned earlier in the context of enrolment.

2.2. Access to and availability of Schools with Secondary and Senior Secondary Sections

Tamil Nadu and all-India present similar pictures in terms of distribution of schools by location (rural/urban) and management (government/aided private/unaided private). In terms of management, the government schools constituted about 40-45% of the total, followed by unaided private with 35-40%, and then aided private with 15-18% in 2012-2013 and 2015-2016. In terms of location, about 63% of these schools are located in the rural sector in TN; similar to the 69% observed at the national level. According to NSSO 71st round, about 60% and 93% of the households in the rural and urban sector, respectively have reported that nearest school with secondary sections is at a distance of less than or equal to 2 kms in TN. That shows that access to secondary school is not a major issue, at least in urban areas.

During 2012-2013 and 2015-2016, the number of schools with secondary sections increased, whereas the number of schools with senior secondary sections declined. To explain in detail, there were about 11,577 schools with secondary sections in 2012-2013 which increased to 12,452 schools by 2015-2016 in TN. This increase was driven by the number of secondary sections in government schools at the rate of 3.08% per annum, followed by a 0.87% per annum in unaided private schools, and 0.36% per annum in aided private schools. This is in contrast to the national picture where the growth of secondary sections in unaided private schools was higher, about 5.76% per annum, relative to around 1% observed for government schools or aided private schools during the same time period between 2012-2016.

Figure 2. 3: Number of Schools with secondary sections
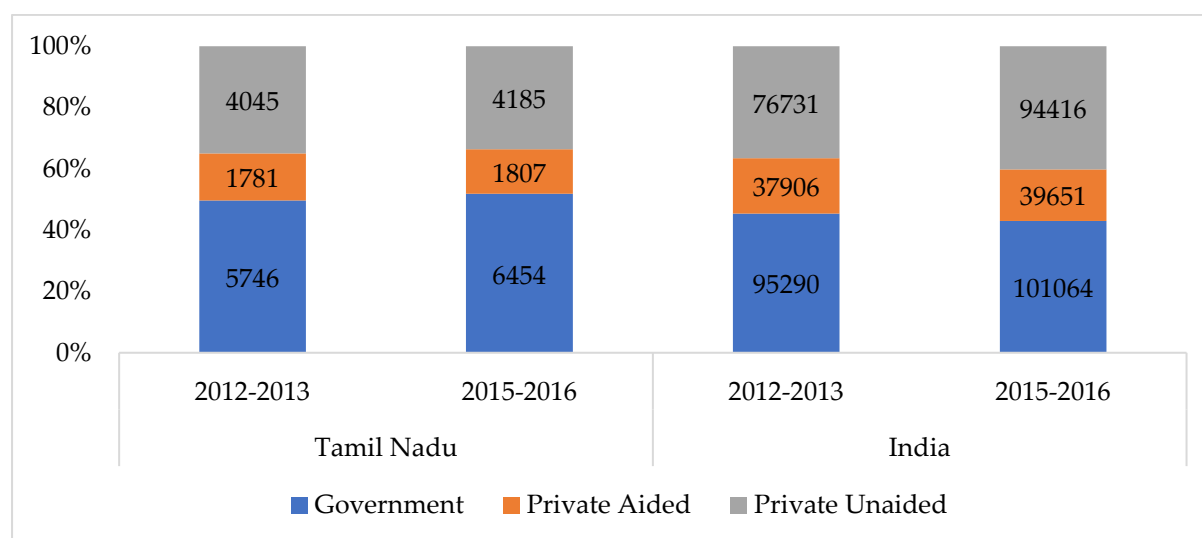
Source: Secondary Education in India: Progress towards Universalisation, National University of Educational Planning and Administration (NUEPA).

While the number of schools with secondary sections increased in Tamil Nadu and India, the opposite was true for the number of schools with senior secondary sections. The number of schools with senior sections decreased from 11,581 in 2012-2013 to 6,877 in 2015-2016 in TN; and from 1,22,368 in 2012-2013 to 1,12,637 in 2015-2016 in India as a whole. In TN, the decline in number of schools with senior secondary sections is similar across government, unaided private and aided private over the time period.[4] The number of senior secondary schools in government schools declined from 5,743 in 2012-2013 to 3,150 in 2015-16 (about *-11.29* per cent per annum), followed by unaided private schools from 4,053 in 2012-2013 to 2,544 in

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[4] Public schools are the state-run schools that provide education at free of user-fee. Private schools are of two types, aided private and unaided private. The aided private schools partly receive funds from the government for their running and the unaided private schools manage by themselves.

2015-2016 (about *-9.31* per cent per annum), and then aided private schools from 1,778 in 2012-2013 to 1,182 in 2015-2016 (about *-8.38* per cent per annum). In terms of absolute numbers, the availability of schools with senior secondary sections reduced by 2,593 in government, 1,510 in unaided private and 596 in aided private managements.

Figure 2. 4: Number of Schools with senior secondary sections
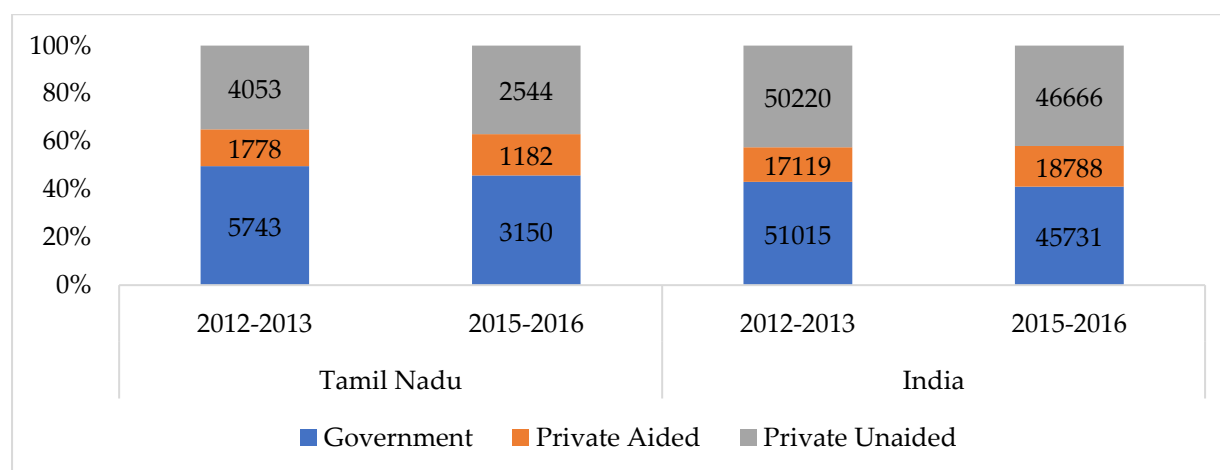
Source: Secondary Education in India: Progress towards Universalisation, National University of Educational Planning and Administration (NUEPA).

Table 2. 4: Pass percentage in SSLC (Class 10) and HSC (Class 12)

Class	2014	2015	2016
Class 10 SSLC Appeared	10,20,749	10,60,866	10,11,919
SSLC Passed	9,26,138	9,85,940	9,47,335
SSLC Pass %	90.73	92.94	93.62
	2016	2017	2018
Class 12 - HSC Appeared	8,33,682	8,93,262	8,60,434
HSC Passed	7,61,725	8,22,838	7,84,081
HSC pass %	91.37	92.12	91.13

Note: SSLC stands for Secondary School Leaving Certificate and HSC stands for Higher Secondary School Certificate.

The overall reduction in number of schools with senior secondary sections altered the distribution of secondary and senior secondary sections in TN. In 2012-2013, there were equal percentage, i.e., about 50%, of schools with secondary and senior secondary sections across government and private schools (including aided and unaided). But this changed in 2015-2016, where schools with secondary sections constituted about 65% and schools with senior secondary sections constituted about 35% of total schools with secondary and senior secondary sections in TN. The

decline observed for the schools with senior secondary sections did not alter the distribution of secondary and senior secondary sections at the national level.

In sum, there are a greater number of schools with secondary sections relative to schools with senior secondary sections in TN. Further, an examination of the distribution of secondary and senior secondary sections by districts in TN reveal a similar picture with minor deviations in one or two districts in 2016-2017 (refer to Table A4 in Annexure). The reasons for a drop in the senior secondary sections need to be explored further. The pass percentage is around 90% to 93%for those who appear for both secondary and senior secondary examinations, and about 90% of those who pass secondary exams and have been appearing for senior secondary examinations—this shows that the reduction in the number of senior secondary schools has not adversely affected the intake at senior secondary stage (Table 5).

2.3.   Enabling learning conditions: infrastructure, facilities, management, and teachers

The role of teachers, facilities and basic infrastructure is critical in enabling a safe, conducive, and supportive learning environment. More than 95% of schools with secondary and senior secondary sections are approachable by all-weather roads, with good classroom condition, girls' and boys' toilet, drinking water facility, and electricity in TN; this is largely true for all districts in the state.

Table 2. 5: Status of basic infrastructure in Secondary (Sec) and Senior Secondary (S. Sec) school (2016-2017)

District/State	Schools approachable by all-weather road		Schools with Playground facility		Schools with girl's toilet		Schools with Ramp		Classrooms in Good condition	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
Chennai	99.3	100.0	83.3	86.7	100.0	100.0	26.2	26.8	98.7	98.3
Coimbatore	99.7	99.6	91.8	95.8	100.0	100.0	7.6	5.7	96.3	96.1
Cuddalore	98.7	100.0	79.9	86.0	100.0	100.0	45.8	45.1	90.7	91.8
Dharmapuri	98.1	98.6	85.3	95.7	100.0	100.0	44.6	47.9	96.2	95.7
Dindigul	98.1	98.6	89.8	95.6	100.0	100.0	34.9	29.6	94.5	92.3
Erode	100.0	100.0	89.7	97.1	100.0	100.0	22.7	20.3	95.8	96.9

District/State	Schools approachable by all-weather road		Schools with Playground facility		Schools with girl's toilet		Schools with Ramp		Classrooms in Good condition	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
Kancheepuram	98.2	99.6	91.9	96.4	100.0	100.0	40.5	38.2	93.7	93.1
Kanniyakumari	99.4	99.6	91.2	98.2	100.0	100.0	25.0	29.8	93.1	94.3
Karur	100.0	100.0	85.0	95.0	100.0	100.0	35.8	30.0	96.4	95.3
Krishnagiri	96.6	96.5	84.6	93.5	100.0	100.0	41.8	44.9	93.3	92.0
Madurai	99.4	100.0	81.2	89.9	100.0	100.0	34.1	35.9	93.8	93.9
Nagapattinam	99.3	99.5	85.0	93.1	100.0	100.0	47.6	46.2	94.7	96.2
Namakkal	99.5	100.0	89.7	95.9	100.0	100.0	17.3	18.8	97.0	96.3
Perambalur	99.3	99.6	87.7	93.3	100.0	100.0	37.3	35.9	95.0	94.4
Pudukkottai	100.0	100.0	89.3	94.6	100.0	100.0	54.9	51.4	89.7	89.0
Ramanathapuram	97.6	98.8	90.6	98.5	100.0	100.0	41.6	43.6	94.4	95.1
Salem	99.0	99.8	89.5	96.5	100.0	100.0	44.0	45.6	95.5	95.8
Sivaganga	97.4	96.8	90.0	95.2	100.0	100.0	50.4	51.2	94.3	93.8
Thanjavur	99.2	100.0	89.6	95.2	100.0	100.0	50.5	53.9	95.3	96.5
Nilgiris	98.5	99.1	92.8	96.4	100.0	100.0	24.4	28.9	92.6	94.8
Theni	99.7	99.5	83.9	86.9	100.0	100.0	48.1	46.5	93.8	94.2
Thiruvallur	98.5	98.8	88.9	95.5	100.0	100.0	29.1	34.4	93.9	94.0
Thiruvarur	98.5	100.0	74.3	82.2	100.0	100.0	53.7	55.2	86.1	88.5
Thoothukudi	98.3	99.7	92.0	95.3	100.0	100.0	40.5	43.8	96.8	96.4
Tiruchirappalli	99.8	100.0	86.3	94.7	100.0	100.0	42.6	44.1	93.4	94.2
Tirunelveli	99.6	99.6	91.9	95.5	100.0	100.0	48.1	49.5	74.9	54.8

District/State	Schools approachable by all-weather road		Schools with Playground facility		Schools with girl's toilet		Schools with Ramp		Classrooms in Good condition	
	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec	Sec	S.Sec
Tiruvannamalai	98.4	99.3	84.0	93.2	100.0	100.0	47.1	46.7	92.7	91.9
Vellore	97.0	97.9	82.7	92.3	100.0	100.0	39.1	37.1	97.4	97.5
Villupuram	99.8	100.0	86.4	92.6	100.0	100.0	45.4	44.5	93.7	93.6
Virudhunagar	98.6	98.1	86.5	95.2	100.0	100.0	15.6	20.1	95.2	95.0
Tamil Nadu	98.8	99.3	87.2	93.7	100.0	100.0	37.9	38.4	93.6	93.1

Source:Unified District Information System for Education (UDISE) Dashboard – Secondary Education (retrieved from http://udise.schooleduinfo.in/dashboard/Secondary#/on 14 January 2019)

However, these schools appear to be not inclusive in the context of infrastructure facilities required for Children With Special Needs (CWSN). The flagship programme for secondary level, the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) guidelines clearly state that all rooms in the schools including laboratories and libraries should be accessible to CWSN, which means installing ramps and railingsin addition to at least one CWSN friendly toilet in every school (MHRD, 2014[5]). Only 38% of schools have ramps in Tamil Nadu and this proportion is much lower in some districts. For instance, in Coimbatore, only about 7.6% and 5.7% of schools with secondary and senior secondary sections respectively have ramps. The highest% of schools with ramps, about 53%, was registered by the district Pudukkottai; followed by Thiruvarur, Thanjavur, and Sivaganga, which have similar percentage of schools with ramps. The statistics reported by UDISE or NSSO do not report on whether schools have CWSN friendly toilets or not.

According to provisions for infrastructure to facilitate quality education specified in RMSA, secondary and senior secondary schools are to have the minimum student-classroom ratio of 40 or lower as per TN's own policy, and equipped with one integrated science laboratory for physics, chemistry, biology, and mathematics; arts/crafts/culture laboratory; vocational education related workshops; computer room; and library. Thus, we examine these parameters to understand the status of

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[5] http://rmsaindia.gov.in/images/School_Infrastructure_and_Strengthening.pdf

facilities available to enhance learning in secondary and senior secondary schools in TN.

In terms of student-classroom ratio, the secondary and senior secondary schools are well within the norm of 1:40 specified in the RMSA programme; this is better than the ratio observed at the national level, which is at 1:46 and 1:47 ratio for secondary and senior secondary schools, respectively. States such as Maharashtra, Madhya Pradesh, Chandigarh, West Bengal, Odisha, Bihar, Jharkhand, Nagaland, Tripura, Mizoram, Meghalaya, Assam, Arunachal Pradesh, and Manipur are not meeting the specified norm, especially at the senior secondary level and cause the national average to go up.

In terms of availability of computer with internet connection, about 85% and 98% of secondary and senior secondary schools have been equipped with this facility in TN. It should be noted that there has been a drastic improvement in the percentage of senior secondary schools with this particular facility since 2012-13. Data reveals that secondary schools have made available integrated laboratory for physics, chemistry, biology, computer, and mathematics, whereas senior secondary schools have made available separate rooms of laboratories for each of these subjects. In secondary schools, about 58% have integrated laboratories in 2015-16 which is higher than 46% observed at the national level. In senior secondary schools, although only 65% of senior secondary schools have laboratories for physics, chemistry, biology, computer and language in Tamil Nadu, this percentage is higher in comparison to India as a whole, Second, only ten% or less senior secondary schools have laboratories for mathematics, geography, home science and psychology. Overall, it can be concluded that though a good proportion of secondary and senior secondary schools have the necessary basic infrastructure, but it is far from universal.

Skill-based education in the state is guided entirely by the centrally sponsored programme's approach in this regard[6]. The state of TN has conducted the skill gap

[6] The vocationalisation of higher secondary education, a centrally sponsored scheme of 1988, was revamped as vocationalisation of secondary and higher secondary education and was subsumed under Rashtriya Madhyamika Shiksha Mission (RMSA) with effect from 01 April 2013 with a funding of 75:25. This provided the much needed support for vocationalisation of secondary and higher secondary education by provisioning Rs 14.5 lakhs per annum per school for under flexi pool apart from providing Rs 2 lakhs for developing curriculum for each of the job role. The vocational education was brought under the National Vocational Education Qualifications Framework (NVEQF) which provided the different levels (level 1 to 10) of knowledge with the skills and certification mechanisms. The levels 1 to 4 are meant for secondary and higher secondary students. The states were expected select two vocational trades per school as per the skill gap analysis conducted by

analysis and also district wise skill development plan[7] under the aegis of the Tamil Nadu Skill Development Corporation. The 2019 report indicated that the skill gap among skilled and semi-skilled for the period 2019-2025 would be 6.78 lakh and 9.31 lakh personnel respectively[8]. The vision document of Tamil Nadu 2023[9] indicated the need to increase and strengthen the delivery of vocational education and training apart from universalisation of secondary education. Employment linked vocational training programme to school students in the age group of 14 to 17 and providing vocational education and training to school dropouts at the cost of Rs 6000 crores is a part of this vision.

There are 67 schools across 67 educational districts which are offering vocational courses in two trades in accordance with the National Skills Qualification Framework (NSQF) from classes 9 to 12. The trades covered include agriculture, multi-skill foundation course, electronics and hardware, beauty and wellness, automotive and apparel and home furnishings. About 5,300 students had enrolled in year 2018-19 across the state under these 6 trades.

The national employment and unemployment survey 2015-16 indicated that only 4.7% of the people aged above 15 years had obtained vocational education in the state as against the national average of 5.5%. The districts of Tiruppur and Coimbatore have higher percentage of people obtaining vocational education followed by Tiruvallur Chennai, Kanchipuram Tiruvannamalai, Villupuram, Salem, and Namakkal districts.[10]

National Skill Development Council (NSDC). The NSDC had notified 339 job roles across 22 sectors at level 4 (Class 12) including agriculture, automotive, beauty and wellness, gems and jewellery, IT and ITES, security, retail, telecom, travel and tourism, etc. The state governments were responsible for policy guidance, providing the required infrastructure, mobilisation of students through school principals, aligning vocational to mainstream scheme of studies of the state boards and marketing of the project. Sector Skill Council was expected to identify the trades, industry interface, assessment, and certification.

[7] https://www.tnsdm.tn.gov.in/index.php/login/guidelines
[8] https://www.tnsdm.tn.gov.in/Downloads/State%20Skill%20gap%20Report.pdf
[9] http://tnidb.tn.gov.in/forms/TN%20VISION%202023(PHASE%202).pdf
[10] https://www.tnsdm.tn.gov.in/Downloads/State%20Skill%20gap%20Report.pdf

Table 2. 6: Status of facilities related to learning (2012-2013 and 2015-2016)

Selected Indicators	Secondary		Senior Secondary	
	2015-2016	2012-2013	2015-2016	2012-2013
Student-Classroom Ratio				
Tamil Nadu	38	41	36	38
India	46	55	47	53
Percentage of Schools with Library				
Tamil Nadu	99.38	95.8	99.85	95.79
India	90.88	80.13	92.32	83.85
Percentage of Schools with Computer				
Tamil Nadu	88.14	84.52	98.37	84.48
India	68.56	56.89	72.28	59.64
Percentage of Schools with Computer and Internet				
Tamil Nadu	79.67	71.32	94.08	71.29
India	40.1	27.24	50.26	32.96
Percentage of Schools with Integrated Science Laboratory				
Tamil Nadu	57.24	56.24	NA	NA
India	46.20	36.29	NA	NA
Percentage of Schools with separate room for Physics Lab				
Tamil Nadu	NA	NA	65.7	44.18
India	NA	NA	33.89	33.73
Percentage of Schools with separate room for Chemistry Lab				
Tamil Nadu	NA	NA	65.45	44.24
India	NA	NA	33.64	32.86
Percentage of Schools with separate room for Biology Lab				
Tamil Nadu	NA	NA	60.22	40.23
India	NA	NA	32.02	31.11
Percentage of Schools with separate room for Computer Lab				
Tamil Nadu	NA	NA	64.02	46.18
India	NA	NA	37.26	41.77
Percentage of Schools with separate room for Maths Lab				
Tamil Nadu	NA	NA	10.62	6.6
India	NA	NA	12.18	12.27
Percentage of Schools with separate room for Language Lab				
Tamil Nadu	NA	NA	11.4	10.69
India	NA	NA	7.82	8.99
Percentage of Schools with separate room for Geography Lab				
Tamil Nadu	NA	NA	2.41	2.23
India	NA	NA	12.91	12.46
Percentage of Schools with separate room for Home Science Lab				
Tamil Nadu	NA	NA	1.96	1.52

Selected Indicators	Secondary		Senior Secondary	
	2015-2016	2012-2013	2015-2016	2012-2013
India	NA	NA	7.66	7.78
Percentage of Schools with separate room for Psychology Lab				
Tamil Nadu	NA	NA	2.5	1.02
India	NA	NA	3.32	3.86

Source: Secondary Education in India: Progress towards Universalisation, National University of Educational Planning and Administration (NUEPA).

Next, we examine the indicators that facilitate in providing insights into the facilities or formation of committees that facilitate in management of secondary and senior secondary schools. There are three indicators that we consider primarily, namely (a) separate room for HM, (b) Parent-Teacher Association, and (c) School Management and Development Committee (SDMC).

The guidelines provided by RMSA specifically touches upon the formation of SDMC to enable decentralised planning and implementation with the inclusion of parents and communities to foster the *bottom-up approach.* Here, information is available for School Building Committee which is a sub-committee in SDMC primarily tasked with planning, management, and reporting of accounts relating to construction and maintenance of school infrastructure. Here, the examination of data reveals a dismal picture of the presence of School Building Committees in TN, on the whole. These committees are present in only 33-34% of secondary and senior secondary schools in the state. This indicates the limited participation of the communities in the actual management and construction of school infrastructure. The situation may be even worse for the other sub-committee namely Academic Committee, which is tasked with planning, management, and reporting to ensure quality and equity in secondary education. But we cannot be certain of this as the data on the presence of the Academic Committee is not reported by UDISE. While this certainly limits our understanding of the management in secondary education, the non-availability of data on formation or presence of this particular sub-committee may be indicative of the relative importance given to fostering a *bottom-up approach* to improve quality and reduce barriers in secondary education.

Table 2. 7: Details of Headmaster room, School Building Committee, and Parent-Teacher Association

Selected Indicators	Secondary		Senior Secondary	
	2015-2016	2012-2013	2015-2016	2012-2013
Percentage of Schools with separate room for Headmaster (HM)				
Tamil Nadu	78.94	82.47	86.1	82.48
India	75.64	67.06	80.57	69.27
Percentage of Schools with School Building Committee (SBC)				
Tamil Nadu	33.98	29.46	32.75	29.46
India	33.28	21.13	34.81	20.8
Percentage of Schools with Parent-Teacher Association (PTA)				
Tamil Nadu	73.03	66.81	71.89	67.38
India	44.85	29.11	44.3	28.85

Source: Secondary Education in India: Progress towards Universalisation, National University of Educational Planning and Administration (NUEPA).

About 70% of secondary and senior secondary schools have constituted parents-teacher association, this is far greater than the 45% observed at the national level. However, major gaps between the envisioned role of parents-teacher association and its actual practice has been reported by research (Dharmaraj, Nelson and Ramesh,2017). Poor participation, low level of awareness, gender, class, and caste divides are cited as reasons.

Next comes one of the most important components of the schooling system: teachers. According to UDISE data, in 2015-2016, there were 89,361 regular and 18,352 contract teachers at the secondary level, and 55,503 regular and 14,780 contract teachers at the senior secondary level in TN. About 80-85% of teachers teaching secondary and senior secondary level have a post-graduate degree and above, in addition to about 98% of them being professionally qualified to teach secondary and senior secondary students.

Unpacking the teachers by type of management reveals that at the secondary level, 62.48%, 16.22% and 21.26% of 89,361 regular teachers are in government, aided private and unaided private, respectively. Similar distribution of regular teachers at senior secondary level is observed where government teachers constitute the majority with 53.4% followed by unaided private with 28.74% and aided private with 17.88%. Interestingly, the whole distribution across the management is reversed when one examines the distribution of contractual teachers. Under contractual teachers, the majority of teachers are employed in unaided private constituting about

70.22% and 75.01% at secondary and senior secondary level, respectively. The contractual teachers in government and aided private schools constitute about 15% each in Tamil Nadu. Thus, a majority of regular teachers work in government schools and a majority of contractual teachers in unaided private schools in TN.

2.4.   Out-of-Pocket Expenditure for Secondary Education

In the previous section, the discussion on enrolment rates in secondary and senior secondary level clearly depicts a higher level of participation in TN, relative to India, and most notably that of girls relative to boys in Tamil Nadu. We now examine the average private (out-of-pocket) expenditure as reported in NSSO 71st Education Round, 2014, to understand its magnitude and nature across gender, economic class, and sector in TN. Second, we examine whether there exists any difference in average private expenditure in TN relative to India. On examination of the per annum average expenditure towards secondary education, we observe significant variation as one moves from first to the fifth quintile in TN and India. The average expenditure incurred by households in the first and second quintile was about Rs 4,895 and Rs 4,532 which then jumps up to Rs 6,188 in the third quintile, 10,355 in the fourth quintile and Rs 19,962 in the fifth quintile in TN. While the average expenditure was similar for the first two economic quintiles in TN, the expenditure curve observed at the national level is upward sloping ranging between Rs 3,946 and Rs 20,796 for the households in the first and fifth quintiles in India.

There exists a great rural-urban gap in average expenditure in each of the economic quintiles in both TN and India. The rural-urban gap in the first quintile was observed to 0.69 and 1.78 in TN and India, respectively. The gap only increases as one moves up the economic quintiles as evidenced by the ratio of 1.99, 2.28 and 2.99 for households in second, third and fourth economic quintiles in TN. Similar level of gap was observed for India as well for the aforementioned economic quintiles. Interestingly, the rural-urban gap for household in the fifth economic quintile is lower at 2.11, relative to the fourth economic quintile, but urban households are still incurring about twice the cost of secondary education, on average, relative to those in the rural sector. Thus, a majority of households in the urban sector incur at least twice the amount of expenditure on secondary education as that of rural households in TN and India.

The average expenditure on secondary education by gender reveals a mixed picture for TN. In the rural sector, households in the first quintile incur about Rs 9,008 for girls which is 2.4 times more the expenditure incurred for boys to pursue secondary

education. But the average expenditure for girl's education is almost similar to that of boys in all the other economic quintiles. In the urban sector, the households in the first two economic quintiles and the fifth economic quintile incur about 1.28 times the cost for girls relative to boys. This is reversed in the third and fourth economic quintiles where the average expenditure on boys is higher than the girls. Thus, there exists variation in average expenditure on boys and girls to pursue their secondary education in TN, but no clear pattern emerges to be able to elucidate on the gender parity or equity parameters.

Table 2. 8: Per annum expenditure (in Rs) incurred per student by location, gender, economic quintile, and state (2014)

Economic Quintile	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
Tamil Nadu						
First Quintile	3,660.65	9,007.65	3,763.27	5,086.25	3,386.37	6,404.31
Second Quintile	3,506.15	3,573.5	6,098.32	8,004.74	4,640.53	4,425.29
Third Quintile	5,134.06	4,769.31	13,161.17	9,461.74	5,861.22	6,514.47
Fourth Quintile	5,828.46	5,238.31	19,898.8	13,194.17	11,504.72	9,204.74
Fifth Quintile	11,023.75	11,355.39	21,321.7	25,843.83	19,792.95	20,131.61
India						
First Quintile	3,835.19	3,094.84	6,551.92	5,801.47	4,306.54	3,585.94
Second Quintile	4,762.76	4,536.53	9,411.72	8,375.26	5,157.31	4,790.92
Third Quintile	6,093.87	4,672.91	12,465.96	10,660.04	6,761.34	5,848.92
Fourth Quintile	6,492.59	5,753.61	18,654.79	17,521.25	9,546.64	7,903.24
Fifth Quintile	12,805.06	9,687.25	35,145.43	34,973.82	21,902.71	19,688.61

Source: Estimated using the survey dataset provided by National Sample Survey Organisation, 71st Education Round, 2014.

On unpacking the expenditure by type of institution in TN, we find that the per annum average expenditure incurred on secondary education is highest for those attending unaided private schools, at about Rs 30,739 and Rs 23,645 in rural and urban sector, respectively. The students attending secondary education in aided private schools incur only about Rs 9,368 and Rs 10,885 per annum, on average, in rural and urban sector, respectively. The per annum average expenditure is even lower for those attending government schools which was observed to be about Rs 2,199 and Rs 3,709 in rural and urban sector, respectively. Here, the rural-urban gap is found to be significant for students attending government and aided private schools, especially for the households in third, fourth and fifth economic quintiles. The rural-urban gap for those attending government schools was found to be about

1.27, 1.97 and 2.60 for the households in third, fourth and fifth economic quintiles, respectively; it was even higher for those attending aided private with 1.63, 1.68 and 2.31, respectively. Thus, students attending government schools face lower per annum expenditure on average, followed by aided private and unaided private schools. Second, the students attending government and aided private schools in rural sector face significantly lower expenditure per annum, on average, relative those in the urban sector. Third, households sending their children to unaided private schools face the highest expenditure per annum whether their residence is in the rural or urban sector.

Figure 2. 5: Per annum expenditure incurred per student by type of institution, economic quintile, and location in Tamil Nadu.
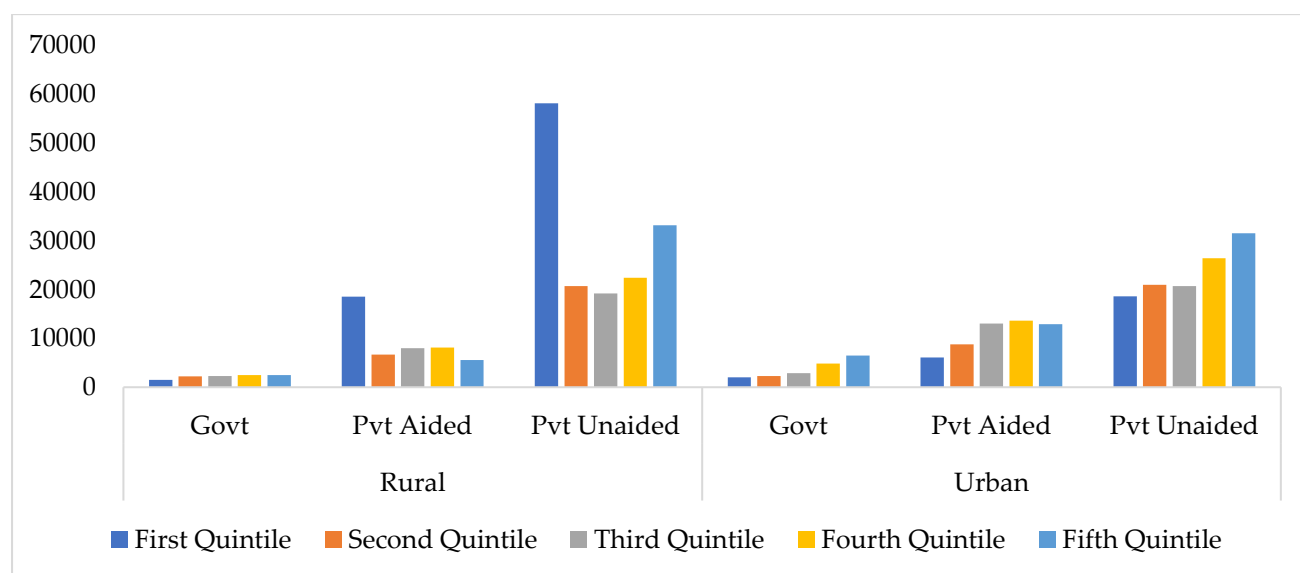
Source: Estimated using the survey dataset provided by National Sample Survey Organisation, 71st Education Round, 2014.

2.5. Reasons for not attending Secondary Education

The constraint in attending secondary education in TN falls primarily into two categories: (a) not interested in studies and (b) unable to cope with studies. In the rural sector, the need to supplement household income especially of households belonging to the first, second, and third quintiles is found to be the reason for not attending secondary education. In terms of not being interested in studies, the NSSO survey does not provide further data to allow deeper analysis and understand the reasons for being interested in studies. Without the reasons for not being interested, it is difficult to ascertain whether these are genuine cases of not being interested or are there any other factors such as care work or inability to cope with subjects or adverse experiences in school and so on leading to loss of interest for an adolescent

in TN. Second, girls belonging to the first economic quintile and residing in urban sector are burdened with both not being able to cope with studies and needing to supplement income of the household. On the other hand, boys face the problem of providing for the household in the rural sector. This may require further examination through primary survey to understand the nature of economic activities undertaken by boys and girls in the age group 14-17 years in order to be able to identify the actual constraints faced by them and also to be able to contribute to the policy discussions.

Table 2. 9: Reasons for not attending secondary education by gender, location, and economic quintile (2014) (in percentage).

Sector/Reasons	Male					Female				
	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile
Rural										
Not interested in Studies	75.60	33.94	68.53	47.02	31.44	11.09	42.45	46.65	77.44	5.70
Not interested in the current level	0.00	0.00	0.00	13.96	0.00	0.00	0.00	0.00	0.00	0.00
Unable to cope	5.02	42.47	0.00	37.13	0.00	46.39	15.36	1.84	0.00	0.00
Non-Accessibility of Institutions	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Supplement HH Income	16.43	11.52	31.47	1.88	0.00	42.52	10.23	1.78	22.56	62.37
Domestic Duties	0.00	0.00	0.00	0.00	29.32	0.00	19.69	0.00	0.00	31.93
Others	0.00	12.08	0.00	0.00	39.25	0.00	12.27	49.73	0.00	0.00
Urban										
Not interested in Studies	61.34	77.41	100.00	51.20	0.00	57.47	0.00	0.00	34.57	0.00
Not interested in the	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Sector/Reasons	Male					Female				
	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile
current level										
Unable to cope	27.30	0.00	0.00	17.87	0.00	22.61	5.04	4.12	48.37	0.00
Non-Accessibility of Institutions	0.00	0.00	0.00	30.93	0.00	0.00	0.00	0.00	0.00	0.00
Supplement HH Income	9.47	0.00	0.00	0.00	0.00	0.00	94.96	12.80	0.00	0.00
Domestic Duties	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.82	0.00	0.00
Others	1.90	22.59	0.00	0.00	100.00	19.93	0.00	74.25	17.06	0.00

Source: Estimated using the National Sample Survey Organisation, 71st Education Round data, 2014.

The main points that emerge in this section are the following: (i) the enrolment levels are high at secondary level but transition to senior secondary is an issue, especially for boys; (ii) transitions rates have improved for both secondary and senior secondary stages in recent years;(iii) the schools are well-equipped in general, but not when it comes to laboratories and similar facilities; access is not a major issue but inclusive infrastructure for CWSN is still far from universal; and (iv) participation of parents and other stakeholders seems to be low and private expenditure is high for those who choose who go to unaided private schools.

Chapter 3: Policies and Institutional Structures for delivery of Secondary Education in Tamil Nadu

3.1.   Important Policy Initiatives

Tamil Nadu government has committed itself to the goal of 'education for all' in their policies and the state is fairly successful in making every child attend a formal schooling system, especially at elementary level. The School Education department in the state issues a document titled 'policy note', which outlines their policy initiatives and activities every year. The initial section of the document just talks about the policy in the given year, measures taken by the department with the help of the state government and important initiatives they focus on[11].Areas that have received attention in this policy note include girls' children education and science and technology in the schools by implementing Information and Communication Technology (ICT) in addition to improving access, infrastructure, teacher management (capacity building and availability), and digitalisation of contents and classrooms. Welfare schemes such as free laptops, books, and other items have also gained attention for improving access and retention of the students in the school. The next goal of the state, according to the school education department's policy note 2018, is to make the education more 'child-centric' by focusing on the pedagogy. We present here an analysis of this policy notes.

An analysis of the policy-note of the Tamil Nadu Education Department

Based on the analysis of these policy notes of the school education department from the year 2013-14 to 18-19, we have culled out a few important points regarding the state's intent and initiatives:

- The department in all these years has consistently given importance to the quality of education, access, and improving the infrastructure of the schools.
- The state always has given their concern for maintaining and improving the Net Enrolment Ratio (NER) and the Pupil to Teacher Ratio for better outcomes. Especially in the academic year 2016-17, it is stated that due to the number of teacher recruitment in the last five years, which is 94% of the total sanctioned strength, it became possible to have a teacher for every 25 students at the primary and the upper primary level, a teacher for 26 students at the secondary level, and a teacher for 37 students at the higher secondary level.

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[11] The details of the drafting members and how this policy note is drawn is not given in any of the government sources, but it is presented under the name of the educational minister of the regime.

- In almost all these years, the department has claimed to have implemented or introduced some significant changes in the approach to education. Especially in the last two years, 2017-18 and 2018-19, the note says the educational policy have been directed towards a 'child-centric' system.
- New practices like (i) abolishing the publication of ranks based on the student's marks to stop the competition among the schools that are putting pressure on the students to score more for the school's name, and (ii) introducing board exams for the class 11 are such examples in the year 2018-19.
- In the year 2014-15, the policy note talks about the migrant children's admission to the special training centres where instructions are in their own mother tongue and educational kits were also given in these centres like at any other government school student.
- The use of the school mapping by Geographical Information System (GIS) and Education Management System (EMS) was given importance, and it marked the school on the map, which was used to enhance the accessibility for the students.
- There was a revision of syllabus by forming a new committee in the year 2018-19. The class 11 and class 12 syllabi were changed after a gap of 12 years and syllabi of classes 1 to 10 were changed after a gap of seven years
- There has, however, been no separate emphasis on secondary education level.

State Schemes in promoting Secondary Education

We extracted information from the document titled *Government Welfare Schemes* for the year 2017 to identify and understand the nature of the schemes implemented by Government of Tamil Nadu in secondary education. The detailed information on specifics of the scheme, its target group, and implementation department is given in the Annexure Table A3. From this, we found that though the Department of School Education implemented majority of the schemes, there were a number of schemes being implemented by other departments as well: Adi Dravidar and Tribal Welfare Department; Backward Classes (BC), Most Backward Classes (MBC) and Minorities Welfare Department, Labour Employment Department, Environment and Forest Department, Tamil Nadu Unorganised Workers Welfare Board, Tamil Nadu Construction Workers Welfare Board, Department of Welfare of Differently Abled, and Social Welfare Department. All these departments and boards were implementing about 81 schemes targeted largely towards promoting participation of SC, ST, OBC, minorities and girls' children in secondary education. Only 21out of the 81 schemes had a universal coverage in the state in 2017.

Of the 81 schemes, about 49 schemes were providing monetary rewards for diverse purposes, varying from providing incentives to girl-children to pursue their secondary level to payment of special fees, hostel fees, and examination fees, to scholarship, bright students' rewards, toppers award and merit award for performing the best in the state, and also towards funding of education in private schools. Out of the remaining 32 schemes, 12 schemes were focussed on enhancing learning of students by providing laptops, textbooks, notebooks, geometry boxes, special guidebooks, and other such facilities. All these 61 schemes can be classified as either cash or in-kind transfer in some form. Only about five schemes were aimed at improving access to schools.

No state government scheme, other than the centrally sponsored RMSA and Skill development programmes, incentivised or promoted vocational education or vocationalisation in secondary education in spite of extensive discussion on its importance in the National Curriculum Framework (NCF), 2005, especially in the context of secondary education.

Apart from the state schemes, there are also schemes implemented by the Central Government. These schemes include RMSA, ICT, National Scheme of Incentives to Girls in Secondary Education, Integrated Education for Disabled, Teacher Training, and National Policy for Skill Development and Entrepreneurship (NPSDE). Of these schemes, RMSA, which was launched in 2009, is a major vehicle aimed at (i) providing universal access to secondary education by 2017, (ii)increasing gross enrolment ratio of secondary stage to 75%, (iii) improving quality of education, reduce gender, socio-economic and disability barriers, and (iv) universalising retention by 2020.

Curriculum and its Framework[12]

In framing of educational curriculum for the school education, the state has put in efforts by constituting committees to make a curriculum based on the real needs of the students. While developing the curriculum for the state, the NCF and New Education Policy 1986/Plan of Action 1992were also considered important. In recent years, there were two important committees that played a role in developing a curriculum framework for Tamil Nadu.

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[12] Since there are no documents available from the government sources about the committees and the recommendations, this section is written after reading online sources.

Muthukumaran Committee[13]

The Universalisation of Education or *Samacheer Kalvi* stressed by the Muthukumaran committee in the year 2007 was the core of the set of recommendations that sought empowerment on social, cultural, and economic basis. The committee also stood to provide social justice and quality education to the school students in the state. The act is called as Tamil Nadu Uniform system of school education Act, 2010. The main recommendation of the committee is to merge different boards of school education into one single board in the name Samacheer Kalvi as a form of universalisation of education in TN. The highlights of committee report are as follows:

- Single board curriculum: The key point the committee suggested or recommended the government was to merge the Matriculation, State board, Anglo Indian and Oriental school into one single board in the name Samacheer Kalvi for the sake of uniformity in syllabus, marking schemes, and examinations. The committee believed that this difference actually denied equal opportunity to students who pursued admission in higher education institutions, for one board was preferred over another without valid reasons. The uniform board called 'Samacheer Kalvi' would result in the state's syllabus being uniform for all the students across the state, whether one lives on rural or urban areas.

- Teacher-student ratio of 1:30: For a better teacher and student relationship, the committee recommended one teacher for a group of not more than 30 children. The argument was that this ratio idealises the teacher's attention to the students inside the classroom and also encourages students' participation.

- Decommercialisation of private school: The committee believed that private schools commercialised education by having an exorbitant fees structure. The committee thought that this multiple board system was supporting commercialisation by having different boards of different standards.

- Uniform and new form of evaluation: The evaluation system followed by the schools across boards with different approaches, which was considered "weak" in

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[13] T. Krishnamoorthy. (2011, August 11). Recommendations of Muthukumaran committee over Samacheer Kalvi in Tamil Nadu. Retrieved January 15, 2019, from http://www.tamilspider.com/resources/7810-Muthukumaran-committee-recommendation-samacheer-ka.aspx

Lawrence, C. (2015, November 12). Samacheer Kalvi In Tamil Nadu - Know all About It | mycity4kids. Retrieved January 15, 2019, from https://www.momspresso.com/parenting/article/all-you-need-to-know-about-samacheer-kalvi-in-tamil-nadu

some schools, and "strong and good" in another, was causing inequality in terms of their access to higher education. The committee recommended that evaluation should be comprehensive and not dependent on a particular syllabus. It also looked to change the education system moving away from rote learning.

- Importance to mother tongue, including those of the linguistic minorities: According to the committee, schooling should be provided in the student's mother tongue. Other linguistic minority groups would also receive importance separately to have their reaching-learning in their respective mother tongues.

Anandakrishnan Committee

In 2017, a curriculum development committee was set up by the Tamil Nadu government under Anandakrishnan and sub-committees were also formed for mathematics, science, arts, and humanities. The committee worked on the Draft Syllabus Tamil Nadu 2017 and floated it on the department of education, Tamil Nadu website for open comments from the public. The committee also held conferences and public hearings before releasing the draft to understand various stakeholders' ideas on the education policy. During one of the outputs sessions, the chairman of the committee criticised Samacheer Kalvi as a disadvantage for the students[14]. Based on the comments and suggestions from the public, it was decided that a new syllabus would be incorporated in the academic year 2018-19 for classes 1,6,9, and 11[15].The curriculum was to include technology, sciences and Tamil history, culture, arts and literature, and environment. It was also intended to include a number of application-oriented topics and scientific advanced concepts like nano technology and robotics. The revised syllabus would be at par with the Central Board of Secondary Education (CBSE) level as the state was put under pressure for its students not doing well in competitive exams[16] like National Eligibility cum

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[14] Sivanesan. (2017, October 10). Tamil Nadu education system needs total overhaul. Retrieved January 15, 2019, from https://www.orfonline.org/research/tamilnadu-education-system-total-overhaul/

[15] The Hindu BusinessLine. (2018, January 09). TN school curriculum reforms panel to seek inputs from India Inc. Retrieved January 15, 2019, from https://www.thehindubusinessline.com/news/education/tn-school-curriculum-reforms-panel-to-seek-inputs-from-india-inc/article9833801.ece

[16] Mariappan, J. (2017, May 11). TN plans to revise syllabus to make students contest-ready - Times of India. Retrieved January 15, 2019, from https://timesofindia.indiatimes.com/city/chennai/tn-plans-to-revise-syllabus-to-make-students-contest-ready/articleshow/58620434.cms

Entrance Test (NEET)as compared to the CBSE students in the state.[17]. The curriculum would have goals for fair and affordable education for all the students in TN. The committee also would train the teachers and hand them a guide for the new syllabus.

The position paper attached in the draft curriculum on each subject gave importance to the following specific concepts[18]:

- Tamil nurtures the culture and heritage with language competency approaches and methodologies.
- English language teaching will make the student acquire meaningful experiences of a language by exploring.
- The subject mathematics to mathematise thought and also to provide opportunities to think logically, abstractly, critically, and creatively.
- Science subject will enhance the fluency in working with the material world.
- Social sciences subjects have ability to teach values, attitudes, and behavior to children.

It believed that additions in terms of political history of the state would make the students understand the richness and values of the Tamil culture and imparting some concepts of secular character of early Tamil society would help students understand the values and social issues that are pertaining now.

Tamil Nadu curricular framework 2017 on Science and Mathematics

Science[19]: Significant amount of population in the state lives in the rural areas, where their daily life deals with the nature, and education there should relate with the hands-on experience they get with science, where quantification of this knowledge is important. The science curriculum that is taught in schools merely concentrates on physics and chemistry of the any material, living organisms, and the natural, physical environment of the surroundings.

Drawing from NCF 2005, the primary goal of this model of education is to make children understand that all sciences related to the reality of the world, and it was aimed at the following:

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[17] Thirumurthy, P. (2017, November 20). After 12 years, TN govt revises syllabus for class 1-12, but is this enough? Retrieved January 15, 2019, from https://www.thenewsminute.com/article/after-12-years-tn-govt-revises-syllabus-class-1-12-enough-71918

[18] Draft Syllabus Tamil Nadu 2017. (2017). Retrieved January 15, 2019, from http://www.tnscert.org/webapp2/tn17syllabus.aspx

[19]Sourced from the website direct PDF: www.tnscert.org/webapp2/tn17syllabus.aspx?sub=Science_PP

- Promoting critical scientific enquiry
- Active experimentation
- Developing connections between various areas and branches of science
- Changing the assessment to reflect the methodology of science, and
- Enriching teachers with scientific resources

Science in schools is taught as a combined subject up to class 10 and the primary sections focus on making the student rich with scientific curiosity and understanding the scientific process. At the higher level, the subject turns to dealing with various levels of scientific understanding that would enable a student to get into in-depth knowledge on a particular discipline, which would help in picking up a specialisation in the higher secondary level.

Mathematics[20]: The goal of the subject is to quantify the subjects a child would encounter in a daily life. A person who has completed school education would be able to talk of matters related to calculations of his daily life and handle resources efficiently. The use of mathematical concepts such as geometry in Tamil culture and sculpture was expected to add richness to the curriculum. Again, drawing from NCF 2005, the new curriculum aimed at the following:

 - Teaching mathematics in a happy and enjoyable way
 - Shifting from content knowledge to skill knowledge
 - Employing active mathematical thinking through problem solving, and
 - Enriching teachers with mathematical resources

Primary sections of the school introduce maths with the concepts of numbers and shapes, arithmetic, measurements, and quantification with adequate relation to the application of life. At the upper primary level, the primary level learning actually helps to get into an actual problem solving and mathematical thinking. At the secondary level, the mathematics offers algebra as a central concept to learn other areas of mathematics. This stage involves a transition from addictive to multiplicative and from inductive to deductive reasoning. At the higher secondary level, mathematics relates to other branches of science like physics to derive number of variables, and it emerges as a separate discipline.

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[20]Sourced from the website direct PDF: www.tnscert.org/webapp2/tn17syllabus.aspx?sub=Science_PP

Tamil Nadu private school fees determination[21]

Tamil Nadu is the first state to regulate private schools' collection of fees via a law, The Tamil Nadu Schools (Regulation of Collection of Fee) Act,2009, that is applicable to all the unaided private schools. A committee has been constituted headed by a retired high court judge, who is also the chairperson; other than the chairperson, Director School Education, Director Matriculation Education, Director Elementary Education, Joint Chief Engineer (PWD), and Additional Secretary (School Education) are Ex-Officio members in this committee. This committee has the power to determine the fees of any unaided private schools based on the fee proposal submitted by them to the committee.

The fee regulating committee have four factors to determine the fees as proposed by the respective schools:

- The location of the private school
- The infrastructure
- The expenditure on administration and maintenance
- The reasonable surplus required for the growth and development of the private school, and
- Any other factors may be prescribed

The fee fixed by the committee is the final and private schools have to follow the prescribed fee for three years. After three years, the school may apply for revision. However, the school can file an objection with the committee within 15 days, if not satisfied by the determined fees. The committee shall consider and revert within 30 days. The Madras High Court has ruled out the appeals by private schools saying that the state has all authority to regulate private schools' fees.

The power of the committee as given in the law includes the following:

- To determine the fee to be collected by private schools
- To hear complaints with regard to collection of fees in excess of the fee determined by it or fixed by the government
- To review fee proposed by each private school
- To verify if the fee proposed by the school is justified and it does not amount to profiteering or charging exorbitant fee
- To approve the fee structure of schools, and

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[21]RGICS. (2018). Ever Increasing School Fee and Status of Fee Regulations in India (PDF file).

- The committee can also recommend to CBSE for disaffiliation of schools affiliated with CBSE for not complying with provisions of the regulation.

The District committee in each of the districts is formed under the Chief Educational Officer and all members are authorised to enter any private school campus for inspection if they thought that the private school had violated the rule of law. The committee has rights to seize any documents from the school too. The power of the state to inspect and to understand the functioning of private schools has been subject of legal battles. While the high court has opined that the state has powers under private school act of 2009 and to verify whether the fee charged commensurate with the education services provided by them, the Supreme Court has limited the power of the committee in a recent judgement by excluding the CBSE and Indian School Certificate Examination (ICSE) schools in the state form the ambit of the committee as a body of fee determination[22].

3.2. Structure and Management of Secondary Education

Like any other state in India, TN has 12 years (10+2) of school education in which up to class 10, a student studies composite subjects and after that they choose to specialise in a stream. Public and private schools including the unaided private school in TN broadly fall under Department of School Education, Tamil Nadu (Akila, 2009). But the department, except for the board exams conducted in the classes 10, 11, and 12, has limited control over unaided private schools, even if they are affiliated to the State Board. The private schools affiliated to State Board, however, have to follow the board of examination and syllabus framed by the government.

Table 3. 1: Details of Boards and its accreditation in Tamil Nadu

Boards	Classes served	Type	Accredited with
Tamil Nadu state board	Elementary, Secondary, and Senior Secondary	Government	State Education Department, Government of Tamil Nadu
Central Board of Secondary Education	Elementary, secondary, and Senior Secondary	Government	Ministry of Human Resource and Development, Government of India

[22]https://timesofindia.indiatimes.com/city/chennai/CBSE-schools-free-to-fix-fee-says-SC/articleshow/50790649.cms

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Boards	Classes served	Type	Accredited with
Council for Indian School Certificate Examination (CISCE) Indian Certificate of Secondary Education (class 12) Indian School certificate examination (class 12)	Elementary, secondary, and Senior Secondary	Private	Non - Governmental board, India.
International Baccalaureate	Elementary, secondary, and Senior Secondary	Private	International Educational Foundation, Geneva, Switzerland
National Institute of Open Schooling	Secondary and Senior Secondary	Government	Ministry of Human Resource and Development, Government of India
Cambridge International Education	Secondary and Senior Secondary	Private	Unit of University of Cambridge, Britain.

The state board is the uniform board that has tried to combine Matriculation, Anglo Indian and oriental board together and have a same form of syllabus called as Samacheer Kalvi. This new syllabus was passed in the year 2010 called Tamil Nadu Uniform system of school education Act, 2010 recommended by the Muthukumaran Committee in the year 2007. Unaided private schools affiliated to CBSE, CISCE (Council for Indian School Certificate Examination), IB (International Baccalaureate) and CIE (Cambridge International Education) also exist in the state.

The Department of School Education, Tamil Nadu is tasked with the responsibility of management of education in TN. The Minister of School Education is in charge of school education in the state. The ministry of school education operates under the minister, and the Principal Secretary heads the department and does all the activity including planning, budgeting, and administration. The principal secretary is assisted by a Joint Secretary, four Deputy Secretaries and six Under Secretaries[23].

[23] Role of secretariat. (2019, January 15). Retrieved from Department of School Education, Government of Tamil Nadu: http://www.tn.gov.in/schedu/roleofsecretariat.htm

Figure 3. 1: Administrative Structure of Education in Tamil Nadu
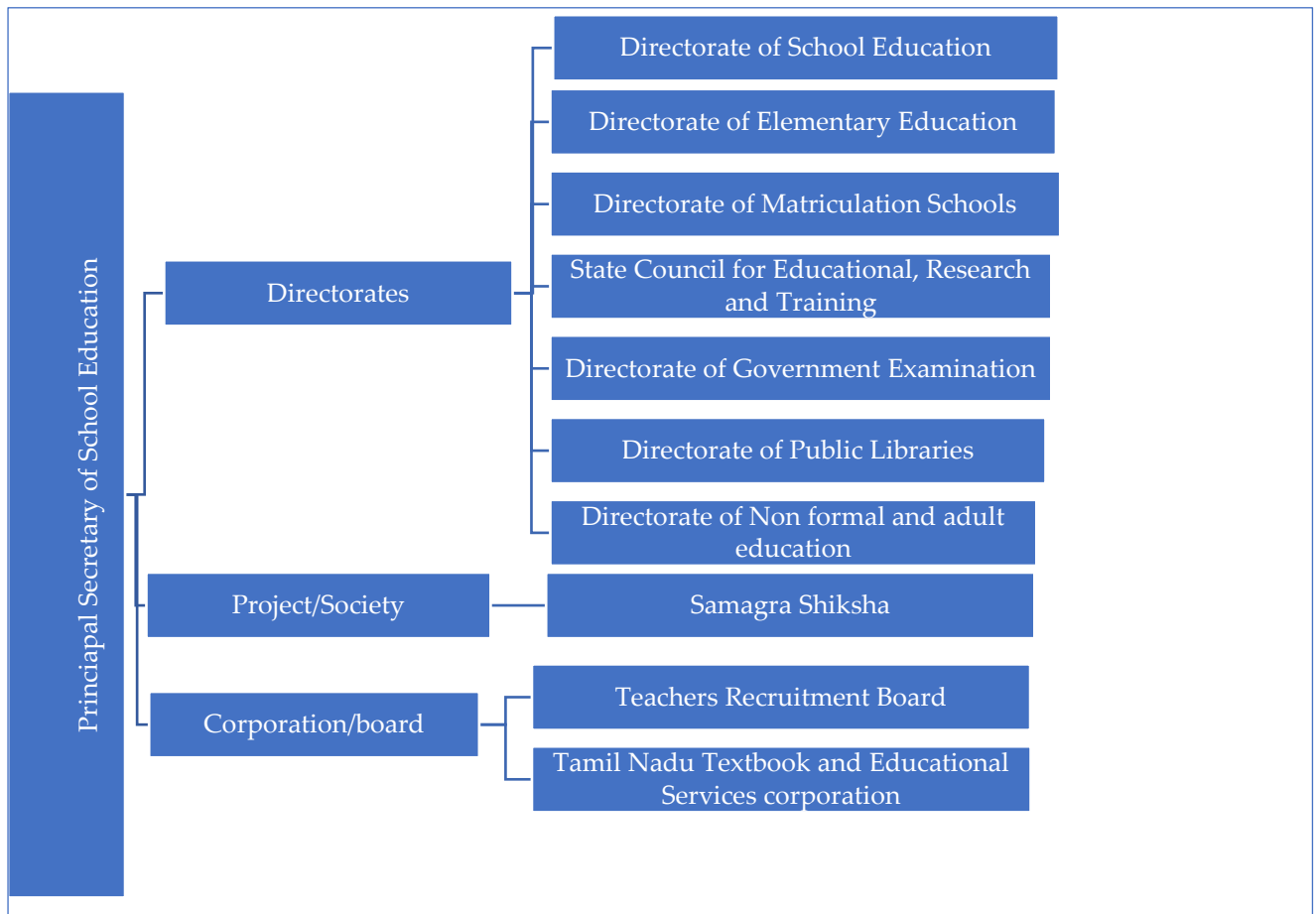
The District Collector holds the overall educational activities in a district, other officers in the district level may report to the collector. The Department of School Education is different from the Department of Higher Education, the former deals with the school and the latter deals with the college and university education. It is also to be noted that in Tamil Nadu. classes 11 and 12 are situated within the school unlike a few other states of India.

The functions of the School Education Department according to the online government sources are[24] as below:

- Overall control of education department
- Policy formulation
- Finalisation of the annual budget relates to school education
- Administrative sanctions for various projects and programmes

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[24] Role of secretariat. (2019, January 15). Retrieved from Department of School Education, Government of Tamil Nadu: http://www.tn.gov.in/schedu/roleofsecretariat.htm

- Advice to other departments in education and training aspects

Under the control of school education department, the following department/directorates function[25].

The following directorates are related to the secondary education[26]:

(a) *The Directorate of School Education* covers schools with high and higher secondary[27] schools including schools having classes from 1 to 12. The Directorate of Elementary Education administers the elementary education. The administration of the Directorate of the School Education for secondary education is given in Figure 12 where the Chief Education officers posted at the district level and District Education Officers posted at the block level are responsible to manage the administrative of schools providing elementary, secondary, and senior secondary levels in the state.

Figure 3. 2 : Administrative Structure in Directorate of School Education, Tamil Nadu

Directorate of School Education
Director, school Education
Chief Education officers
District Education officers
High school (6-10)   Higher Secondary school (6 to 12)
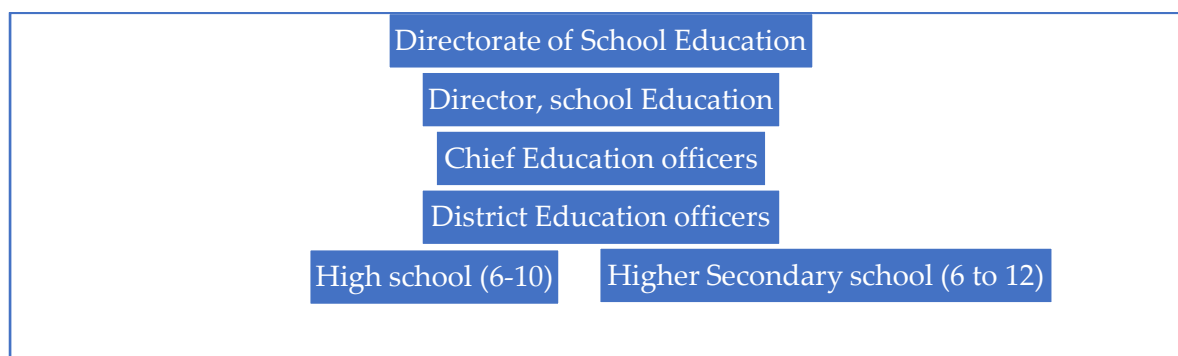
(b) *The Directorate of Matriculation Schools* was formed to ensure effective monitoring and administration of the matriculation schools. It is tasked with the responsibility of implementation and monitoring of Right To Education (RTE), training of teachers, regulation of fee structure, ensuring safety of children, and taking decisions on granting permission of matriculation schools.

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[25] School Education organisational structure. (2019, January 15). Retrieved from Department of School Education, Government of Tamil Nadu: http://tnschools.gov.in/organaisation/dept/

[26] Sengottaiyan, K.A (2018-2019). Policy Note. Department of School Education. Available here: http://cms.tn.gov.in/sites/default/files/documents/sedu_e_pn_2018_19.pdf (accessed on 15.01.2019)

[27] Sourced from the document titled "Mapping educational policy structures and processes in Tamil Nadu" by Akila R, and also the government organisation structure has positions for headmasters from higher and higher secondary schools only http://tnschools.gov.in/orgstruc/dse_org/.

(c) State Council for Educational Research and Training has been implementing qualitative practices on teaching and research on education formulated for the school education. The directorate is responsible to develop curriculum, syllabus, and textbooks for classes 1 to 12 by involving the domain experts. It also works for the teacher development and designs programmes for their academic courses and works with Sarva Shiksha Abhiyan (SSA) when in need. The institutions governed by State Council of Educational Research and Training (SCERT) are given in Figure 3.3.

Figure 3. 3: Structure of SCERT – Tamil Nadu
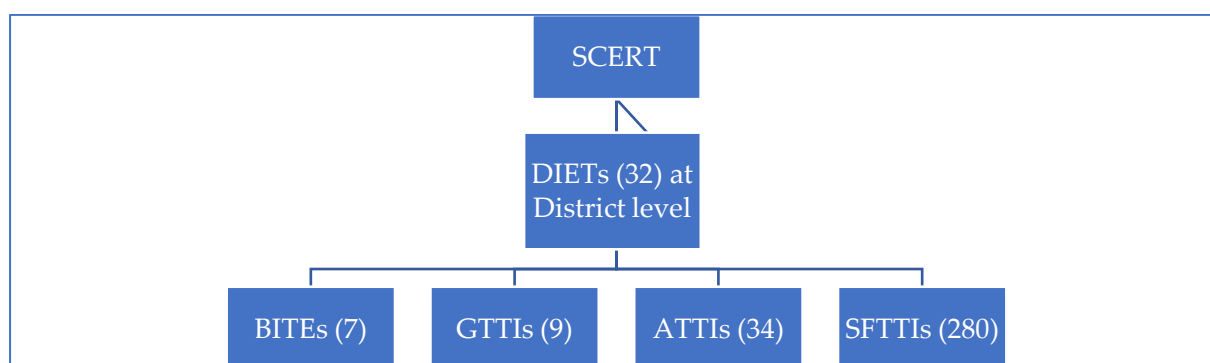
Note: DIET refers to District Institute of Education and Training; BITE refers to Block Institute of Education and Training, GTTI refers to Government Teacher Training Institute, ATTI refers to Aided Teacher Training Institute (minority and non-minority) and SFTTI refers to Self-Finance Teacher Training Institute.

Following the guidelines from the Ministry of Human Resource Development (MHRD), the SCERT now has been restructured as (i) Division of Curriculum studies, (ii) Division of Education Research, Survey and Assessment, (iii) Division of teacher education, leadership, and management, (iv) Division of ICT and (v) Division of Programme and monitoring.

(d) Directorate of Government Examination conducts state board examinations for the students studying in classes 10, 11, and 12 standards and issues mark certificates to the students. The department also conducts other 32 exams like supplementary exams, technical exams, and National Talent Search Examination (NTSE), etc. The Project/society board under Principal Secretary of School Education called Samagra Shiksha includes SSA, RMSA, and Teacher Training.

(e) Tamil Nadu Textbook and Educational Services Corporation has been publishing books for the school students from classes 1 to 12 studying in the government schools, which is cost-free. The directorate has also been publishing and republishing other books on Tamil literature and also books for various competitive exams after class 12.

(f) Teacher Recruitment Board: Kannappan, Inbaraj, and Manivel (2016) identify the government order (G.O.M No. 447 dated 16 July 1996) in 1996 which detailed the teacher recruitment policy. The policy stated that (i) secondary grade teachers would be appointed through the employment exchange of the concerned district on the basis of registration seniority; (ii) appointments on the basis of a rotation policy to remove the possibility of backlog; (iii) appointment of secondary grade teachers would be applicable to SC schools, ST Welfare schools under Social Welfare, BC, MBC, and Minorities Welfare, Local Bodies, and Corporation. In 2008-2009, the Teacher Recruitment Board was entrusted with task of conducting examination, and scheduling interviews to recruit teachers. In addition, there was also a merit-cum-communal rotation with 69% seats reserved for various social groups and 31% reserved for open competition. Here, it is important to note that there are vertical and horizontal reservations in TN. Under vertical reservation, the reservation of posts for Backward Class (other than Muslims), Muslims, MBC/Denotified category, SC, and ST is 26.5%, 3.5%, 2%, 18%, and 1%, respectively. In the horizontal reservation, it includes 30% reservation for women, 2% for physically challenged, and 20% for those who have studied in Tamil medium schools.

The process begins with the state government assessing the Pupil Teacher Ratio at the end of July/beginning of August every year in all the districts. This information, in addition to number of teachers at nearly retirement age, is collated at aggregated at different levels for the state to consolidate and estimate the number of teachers required to meet its objective of either meeting the RTE or RMSA norm. Then, this lends to a selection process that involves notification of examination, receipt of online applications from candidates, written examination, publication of answers of the question paper, receiving comments from public which takes into account for the publication of final results, verification of certificates of selected candidates, and then finally announcing the names of the successful candidates. The selected candidates are then given appointment for online counselling conducted by respective directorate. The entire process takes about six months to one year. While the entire process is transparent and reservation of posts are aimed to improve efficiency in recruitment of teachers, only about 0.39% candidates were able to clear the Teacher Eligibility test in 2011. The teachers are also provided with basic training programs conducted by Teaching Training Institutes (TTIs) and District Institute of Education and Training (DIETs) under the supervision and administrative control of SCERT.

What emerges from the above analysis is that TN is indeed a state that has taken proactive steps to strengthen its school education. It has established committees for

new curriculum and for school fee regulation and started a number of schemes to enhance student participation and improve the quality of education. Some level of initiative is visible in improving the teacher management aspects as well through the use of affirmative action on one hand and the use of technology on the other.

Chapter 4: Public Expenditure on Secondary Education in Tamil Nadu

We start by providing a brief overview of the finances to act as a backdrop to the analysis of the public expenditure on secondary education. This is followed by an analysis of budgetary allocations and expenditure related to education sector focusing on secondary education dwelling into aspects like the nature of expenditure—capital vs revenue, share of centre and state, and then expenditures that are aimed at improving or enhancing the supply and demand side.

4.1. Overview of the Finances of the State

The state government generates revenue and capital receipts from various sources such as its own taxes, central share of taxes, grants-in-aid and by borrowing. The Total Receipts of the state have grown at a CAGR of 12.03%, standing at Rs 2,395 billion in the 2018-19 Budgeted Estimate (BE).

Table 4. 1: Receipts of the State – Tamil Nadu – 2012-13 to 2018-19 BE (Rs in crore)

Item	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
Own Revenue	77808 (64)	83061 (62)	87007 (56)	89394 (54)	95855 (46)	109460 (51)	123917 (52)
Share of Taxes	14520 (12)	15853 (12)	16824 (11)	20354 (12)	24538 (12)	27100 (13)	31707 (14)
Grants-in-Aid GoI	6500 (5)	9122 (7)	18589 (12)	19260 (12)	19838 (9)	19265 (9)	20627 (8)
N-D capital receipts	1057 (1)	620 (0)	1367 (1)	684 (0)	3549 (2)	8881 (4)	5595 (2)
Borrowings	21220 (18)	24814 (19)	31080 (20)	36066 (22)	66143 (31)	47838 (23)	57664 (24)
Total Receipts	**121105**	**133470**	**154867**	**165758**	**209923**	**212544**	**239510**
Revenue Receipts	98828 (82)	108036 (81)	122420 (79)	129008 (78)	140231 (67)	155825 (73)	176251 (74)
Capital Receipts	22277 (18)	25434 (19)	32447 (21)	36750 (22)	69692 (33)	56719 (27)	63259 (26)
Total Receipts	**121105**	**133470**	**154867**	**165758**	**209923**	**212544**	**239510**
GOI Receipts	21020 (17)	24975 (19)	35413 (23)	39614 (21)	44376 (21)	46365 (22)	52334 (22)
Own+ borrowings	100085 (83)	108495 (81)	119454 (77)	126144 (79)	165547 (79)	166179 (78)	187176 (78)
Total Receipts	**121105**	**133470**	**154867**	**165758**	**209923**	**212544**	**239510**

Note: Column Percentages are given in brackets. BE stands for budget estimate and RE for revised Estimate.

Source: Comptroller and Auditor General (CAG) Report on State Finances, 2016-2017.

Non-Debt Capital Receipts and Borrowings have grown at a much faster rate as compared to the growth of overall receipts and of the Grants-in-Aid from the central government, and as per the latest CAG Report on State Finances and the Annual Financial Statement of 2018-19 for Tamil Nadu, Non-Debt Capital Receipts have shot up by nearly 550% between 2015-16 and 2016-17. The rise in Non-Debt Capital receipts between the years 2016-17 and 2017-18 has been due to a significant rise of loans for education, sports, art, and culture. On the other hand, the share of taxes from the central pool has grown at a CAGR of 13.9%, which is at par with the growth of total receipts. Capital receipts account for 33% of the overall State Receipts as of 2016-17. This figure has grown from 18% in 2012-13 and has been on the rise every year. For the revised and budget estimates of 2017-18 and 2018-19, this figure is at 26% of the overall receipts.

Figure 4. 1: Share of receipts from the Central Government and State own revenue
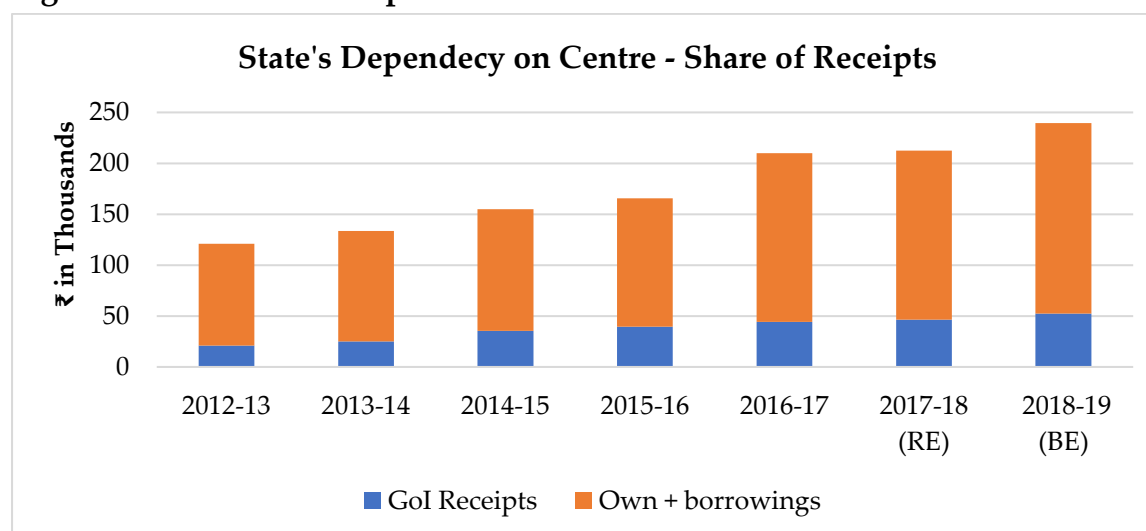
Source: Comptroller and Auditor General (CAG) Report on State Finances, 2016-2017; and Annual Financial Statement of Tamil Nadu – 2018-2019.

Table 4. 2: Expenditures of the State (in crores) – Tamil Nadu – 2012-13 to 2018-19 Budget Estimate

Item	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
Revenue Expenditure	97067	109824	128828	140993	153195	174198	193742
Capital Expenditure	14568	17173	17803	18995	20709	24298	28283
Loans and Advances	4769	2242	4319	2331	26046	6949	4302
Total Expenditure	**116404**	**129239**	**150950**	**162319**	**199950**	**205445**	**226327**

Source: Comptroller and Auditor General (CAG) Report on State Finances, 2016-2017; and Annual Financial Statement of Tamil Nadu – 2018-2019.

Note: BE stands for budget estimate and RE for revised Estimate.

In absolute numbers, the total expenditure of the state has risen nearly twofold to Rs 2,263 billion as of 2018-19 BE. The CAGR of the total expenditure of the state is 11.72%. With respect to the CAGR of Total Expenditure, the growth rates of Revenue Expenditure, Capital Expenditure and Loans and Advances rose (12.21%), were at par (11.69%), and reduced (-1.7%), respectively. Consequently, the capital share of total expenditure took a hit, falling from 12.52% in 2012-13 to 10.35% in 2016-17, before slowly rising again. This is due to stagnant growth rate of capital expenditure, while revenue expenditure was rising at a higher rate. Loans and Advances disbursed fluctuated frequently without a visible trend, and thus a CAGR in this aspect cannot be taken at its face value. In 2016-17, the state raised a loan of Rs 260 billion, a ten-fold increase from its previous year. The following years saw this figure drop to Rs 69.5 billion and Rs 43 billion, respectively.

Table 4. 3: Social Service Expenditure in Tamil Nadu – 2012-13 to 2018-19 Budgeted Estimate

Item	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
Education, Sports and Culture	40.82%	41.40%	45.51%	43.20%	44.06%	44.01%	42.89%
Health and Family Welfare	12.09%	11.58%	13.68%	13.80%	14.09%	16.04%	14.22%
Water supply and sanitation	+	3.89%	3.53%	3.65%	4.29%	3.38%	4.15%
Housing	+	4.49%	3.29%	3.47%	2.23%	4.11%	4.80%
Urban Development	15.66%[28]	7.14%	5.11%	4.06%	6.31%	6.63%	8.80%
Information Broadcasting	0.19%	0.25%	0.31%	0.19%	0.14%	0.23%	0.19%
Welfare of SC/ST and OBC	4.73%	5.76%	5.10%	5.37%	6.01%	6.37%	6.05%
Labour and Labour Welfare	0.69%	0.72%	0.75%	0.63%	0.75%	0.93%	0.94%

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[28] The value here is the sum of spending in the departments of Water supply and sanitation, Housing, and Urban Development as data was unavailable from individual departments.

Item	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
Social Security and Nutrition	25.55%	24.46%	22.43%	25.44%	21.93%	17.60%	17.49%
Other Social Services	0.27%	0.31%	0.29%	0.20%	0.20%	0.70%	0.48%
Total Social Service Expenditure (In Rs Cr.)	43773	51985	54583	60467	61338	66416	78214

Source: Comptroller and Auditor General (CAG) Report on State Finances, 2016-2017; and Annual Financial Statement of Tamil Nadu – 2018-2019.

Note: BE stands for budget estimate and RE for revised Estimate.

Similar to increase in secondary expenditure as a percentage of social sector expenditure (explained in detail in later sections), there has been a consistent rise in growth of Social Sector Expenditure, growing at 10.16% compounded annually. Two distinct patterns of interest in the composition of social sector are the yearly contributions made towards 'Education, Sports and Culture' and 'Social Security and Nutrition' departments, where the former has seen a consistent rise yearly, with contribution of nearly 43% in the budget for 2018-19 BE. Delving deeper into the largest contributor of social service expenditure, Education, Sports and Culture, it is observed that primary and secondary education account for the largest share in spending, followed by university and higher education and technical education. The break-up of spending made on education by various Major Heads and departments is explained in the following section. Social Security and Nutrition, on the other hand, has been on the losing end of this shift of expenses in the social sector. From accounting to 25.55% of the expenses in 2012-13, the budget estimates of the latest year see a much lower allocation of 17.49% of the expenses.

While TN has been regarded as a welfare state with immense importance diverted towards nutritional spending historically (Narayan, 2018), data reveals that this number has been reducing as a percentage of overall expenses[29]. While the absolute

[29] In the earlier years, Tamil Nadu had three child-focused nutrition-based projects running in parallel—the centrally sponsored Integrated Child Development Services (ICDS), the World Bank funded Tamil Nadu Integrated Nutrition Project (TINP), and the state's novel Mid-day Meal Scheme (MDM). While TINP concluded in 1997, the ICDS and MDM at the state-level did not see any major policy revisions over the recent years, except for enhancement and expansion of services to reach more children. This was because the state had managed to achieve a fair deal in terms of nutritional

figures have risen and there has been increased spending on Education, Health and Water and Sanitation, the share devoted to nutrition has fallen. However, departments like Health and Family Welfare, and Welfare of SC/ST and OBC, have seen 1.5 to 2 percentage points of increased spending over the years, as a part of overall Social Service Expenditure. The share of expenditure being spent on departments such as Labour and Labour Welfare, Information Broadcasting, Housing, and Urban Development have remained almost constant in the past seven years.

4.2. Fiscal Position of the State

Table 4. 4: Detail of Revenue Surplus and Fiscal Deficit in relation to GSDP – 2012-2013 to 2018-2019

Item	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (RE)	2018-19 (BE)
Revenue Surplus (In Rs billion)	17.6	-17.9	-64.1	-119.9	-129.6	-183.7	-174.9
Fiscal Deficit (In Rs billion)	165.2	205.8	271.6	326.3	561.7	407.4	444.8
GSDP of Tamil Nadu (In Rs billion)	8554.8	9710.9	10925.6	12126.7	13387.7		
Fiscal Deficit/GSDP	1.93%	2.12%	2.49%	2.69%	4.20%		

Source: Comptroller and Auditor General (CAG) Report on State Finances, 2016-2017; and Annual Financial Statement of Tamil Nadu – 2018-2019.
Note: GSDP stands for Gross State Domestic Product, BE stands for budget estimate, and RE for revised Estimate.

The audit report on State Finances, published by the Comptroller and Auditor General (CAG) of India's office, reveals that following a year of revenue surplus in 2012-13, the state faced revenue deficits during the following years. As of 2016-17, the state could not adhere to the deficit within the target proposed by the budget. Revenue receipts have not been responsive to the growth rate of the GSDP and the Annual Budget, and this is reflected in the Own Tax Buoyancy falling below the unit level in the last four years.

Although steps have not been taken to control the deficit on the revenue account, the net Public Debt of the state has reduced from Rs 579.43 billion in 2016-17 to Rs 388.47 billion and Rs 423.38 billion in the revised and budget estimates of 2017-18 and 2018-

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outcomes. Thus, the focus shifted to other departments such as education and health and caused the share of spending on nutrition to reduce.

19. Parallel to this change, a loss of revenues in the form of lower commercial taxes and state excise due to the shift towards the GST regime has also added up to the debt of the State. The year before the Goods and Services Tax (GST) regime, 2016-17 saw commercial taxes forming a major 58.32% of the total tax revenue of the state. If one were to remove the income the state receives in liquor sales, this figure would dip much further.[30] Adding to this pressure, TN is also the state with the fourth highest share of debt in the Ujjwal Discom Assurance Yojana (UDAY) due to its already existing debts at the Tamil Nadu Generation and Distribution Corporation (TANGEDCO) prior to the unification with the Central UDAY scheme, which has added to the fiscal pressure on revenue finances of the state.

The 2017-18 Revised Estimate (RE) and the 2018-19 Budgeted Estimate (BE) suggest better outcomes expected on the fiscal account, which is pegged at 73% of the deficit of 2016-17 and is consequently estimated not to rise further. The Fiscal Deficit of the State is far from the recommendations of the Fiscal Responsibility and Budget Management (FRBM) Act and the NK Singh committee report, which suggests that it should be under 3.2% of the GSDP. As of 2016-17, the Fiscal Deficit of the State is 4.2% of the GSDP, which is breaching the FRBM target by an additional 1%, nevertheless, this is now expected to come down in the future years with far lower estimates of Fiscal Deficit.

4.3. Budgetary allocation and spending by Education heads `2202'and `2203'

Indian budgetary accounting system codifies '2202' as General Education. 2202 is divided into six different sub-major heads which correspond to primary education, secondary education, university and higher education, adult education, language development, and general. Tamil Nadu budget's accounted figures for five years and revised and budget estimates for the latest two years see a consistent spending on the fronts of elementary and secondary education. Specific to secondary education, the Compounded Annual Growth Rate (CAGR) has been 9.55%, which is marginally greater than the CAGR of budgetary expenses in the major head of 2202 itself (9.24%).

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[30] This argument is based on our discussion with the Department of Finance in Tamil Nadu.

Table 4. 5: Spending by Major Head 2202 in Tamil Nadu – 2012-13 to 2018-19 BE

DD department	Scheme Code	Sub-Major Head	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE	CAGR (%)
Animal Husbandry	2202 80	General	-0.23	0.08	0.05	0.11	0.11	0.11	0.11	-190.03%
BC, MBC, and Minorities Welfare	2202 05	Language Development	2.12	2.30	2.07	1.93	1.94	3.12	3.12	5.65%
Higher Education	2202 03	University and Higher Education	1404	1797	1917	2114	2324	2545.44	2714.72	9.88%
Higher Education	2202 05	Language Development						0.0002		
Information Technology	2202 03	University and Higher Education	1.75	1.37	1.66	1.64	1.63	1.38	1.59	-1.41%
Law	2202 03	University and Higher Education	12.39	19.03	12.14	14.17	15.01	20.88	21.35	8.08%
School Education	2202 01	Elementary Education	6670	8117	10263	9937	10819	11765.5	13542.2	10.65%
School Education	2202 02	Secondary Education	6829	8185	9374	9950	10531	11372.6	12934.2	9.55%
School Education	2202 04	Adult Education	6.26	9.86	1.17	17.67	20.15	29.36	29.59	24.85%
School Education	2202 05	Language Development	8.24	9.70	10.58	11.84	12.49	13.64	14.45	8.36%
Tamil Development	2202 03	University and Higher Education	8.50	15.70	10.27	39.73	10.96	9.21	6.12	-4.59%
Tamil Development	2202 05	Language Development	-57.87	18.34	24.07	31.47	13.48	40.25	31.88	-191.83%
Transport	2202 80	General	335.8	622.6	480	480	505.4	540.99	766.85	12.52%
Special Programme Implementation	2202 80	General	1386	1000	816.3	1100	510.6	754.41	758.04	-8.26%
Total	**2202**		**16606**	**19798**	**22912**	**23699**	**24766**	**27096.8**	**30824.3**	**9.24%**

Note: All figures in ten million (Rs). BC, MBC, stand for Backward Classes (BC), and Most Backward Classes (MBC).

Source: Comptroller and Auditor General (CAG) Report on State Finances, 2016-2017; and Annual Financial Statement of Tamil Nadu – 2018-2019.

Tamil Nadu government spends on General Education and Technical Education over the two major heads '2202' and '2203' across nine different departments. Of this, the School Education department contributes to the most spending, varying across four sub-major heads (all except 'General'), while the Animal Husbandry department contributes to the least amount spent on general education. Apart from this, the Transport department and the Special Programme Implementation department contribute to significant spending on education, mostly catering to the senior secondary level, on their two biggest schemes—reimbursement of bus travel charges in the form of bus passes and free distribution of laptop computers to students studying in class 12 or higher, respectively. While the School Education Department spends the most on Adult Education, the Tamil Development department spends the highest share on Language Development.

The main drivers of growth in general education spending are primary education (CAGR of 10.64%) and secondary education, which accounted to 81.33% of overall spending in 2012-13, and accounts to a marginally greater share of 85.91% of the overall spending as per the budget estimates of 2018-19. If the spending on technical education (corresponding to Major Head 2202) were to be considered, then the share drops down to 81.99% (2018-19 BE), with the spending on technical education contributing to 4.55% (2018-19 BE) and 4.24% on average over the last seven years.

While spending on University, Tertiary and Technical education has been between 13% to 14% across the seven years in consideration, the spending on other education categories comprising of Language Development and General expenditure has seen a consistent dip from a shade above 10% in 2012-13 to around 4.5% in the recent years.

Table 4. 6: Sector-wise spending on General and Technical Education in Tamil Nadu – 2012-13 to 2018-19 BE

Sector/ % of budget spent	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
Primary	40.19%	39.03%	42.88%	40.30%	42.09%	41.72%	41.94%
Secondary	41.14%	39.36%	39.16%	40.35%	40.97%	40.33%	40.06%
Tertiary	8.58%	8.78%	8.07%	8.71%	9.18%	9.21%	8.57%
General	10.09%	7.95%	5.57%	6.59%	4.06%	4.80%	4.88%
Technical Education	n/a	4.87%	4.32%	4.05%	3.69%	3.94%	4.56%

Source: Comptroller and Auditor General (CAG)Report on State Finances, 2016-2017; and Annual Financial Statement of Tamil Nadu – 2018-2019.

Note: BE stands for budget estimate and RE for revised Estimate.

4.3.1. Understanding Budgetary allocation and Expenditure in Secondary Education

Budgetary data for Secondary Education catering to classes 9 to 12 is difficult to find in an exclusive manner. Often the expenditures are included in the budget heads that cater to both upper primary and secondary education. This is because the state follows a system where majority of the post primary schools cover classes 6 to 10. However, few budget codes do provide expenditures that are exclusively meant for secondary education covering classes 9 to 12.

Table 4. 7 : Heads of Account (budget codes) dedicated to Secondary Education

Major Head	Sub-Major Head	Minor Head	Meaning
2202	02		Secondary Education
4202	01	202	Secondary Education
6202	01	202	Secondary Education

Source: Author's compilation from 'List of Major and Minor Heads of Account of Union and States' – Controller General of Accounts, Department of Expenditure, Ministry of Finance.

Therefore, in order to collate secondary education spending data as accurately as possible, and for the purpose of this analysis, the data extracted from the budget documents across departments have been divided into two types – expenditures that *exclusively* cater to secondary education level and/or schemes and expenditures that *partially* cater to secondary education level. Exclusive expenditures are extracted based on budget codes or using the policy documents of the scheme which describes the coverage by classes and/or age group. For example, the TN state government provides laboratory equipment to SC welfare schools in the state—these become exclusive secondary education expenditure deciphered through the reading of scheme description and cross-verifying the details of the scheme with the Policy Note or the list of schemes of the Adi-Dravidar and Tribal Welfare department which implements it. Another such scheme is RMSA, which has been merged with SSA and rechristened as Samagra Shiksha).

Partial secondary education spending would be those establishment or those specific schemes that are in operation for age-groups or classes that include classes 9 to 12 but also other ages as well. Schemes such as the assistance given to the children of poor widows, or the free laptop scheme fall under this segment as well. In most cases, it is difficult to separate out the component that exclusively caters to secondary school students. This requires scheme-wise data with class-wise intake or distribution (for schemes) and the exact expenditure made for secondary education

(non-schemes). Without the availability of such minute data points, it calls for many assumptions to be made to arrive at the exact share of expenditure that caters to secondary education alone.

All the analyses that follow hereon, in this section, pertain to only those departments and those schemes that are exclusively classified as pertaining to secondary education. However, of the schemes that qualify for part-secondary education spending, two large flagship schemes have been apportioned and included in this analysis. They are the Free Laptop scheme and the Puratchi Thalaivar Dr MGR Nutritious Meal Programme (Mid-day meal scheme) (PTMGRNMP). The Free Laptop scheme provides free laptops to students of higher secondary level and polytechnic students. Of this, the intake of school students in this scheme is the highest, at 83.78% (between the years 2011-12 to 2017-18)[31], and this is used for obtaining the laptop expenditure for secondary education.

The case of the PTMGRNMP is little complex. Budget heads indicate the spending for the age group 10-15 years which comprises of upper primary and secondary sections. While upper primary section receives a central share of funds, and gets rice free from the centre, the expenditure made on secondary school students is entirely borne by the state. As a result, the state spends Rs 3.05 per student from its own coffers for the upper primary level, while it spends a much larger figure of Rs 8.53 for secondary school students[32].The data entered in the budget document on the spending on age groups 10-15 years by the state is recorded in 22 different places, making it more difficult. As a result, the apportionment for this scheme is done on the basis of proportion of beneficiaries belonging to secondary section (classes 9 and 10) among ages 10-15 (24.3%), without considering the unit cost that is spent on every child. This may be little lesser than the true spending made on classes 9 and 10, but the apportionment done is the most logical and safest way to getting close to the true figure.

4.3.2. Total and per-capita Budgetary allocation and Expenditure in Secondary Education

Secondary education which makes up for over 40% of the total education expenditure spending has been increasing over the past seven years. The annual expenditure on secondary education which was at Rs 83.6 billion in 2012-13 has

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[31] Policy Note (2018-19) – Special Programme Implementation department – Government of Tamil Nadu

[32] Daily Norms for food commodities per student (Variety Menu) 1.4.2018 – Social Welfare and Nutritious Meal Programme department – Government of Tamil Nadu.

increased to at Rs 143.1 billion as of 2018-19 BE (Figure 15). This has been growing at a CAGR of 7.97%. In real terms, the expenditure was Rs 95.3 billion during 2016-17 recording a decrease from previous year Rs 98.1 billion.

Figure 4. 2: Expenditure on Secondary Education in Tamil Nadu – Nominal and Real
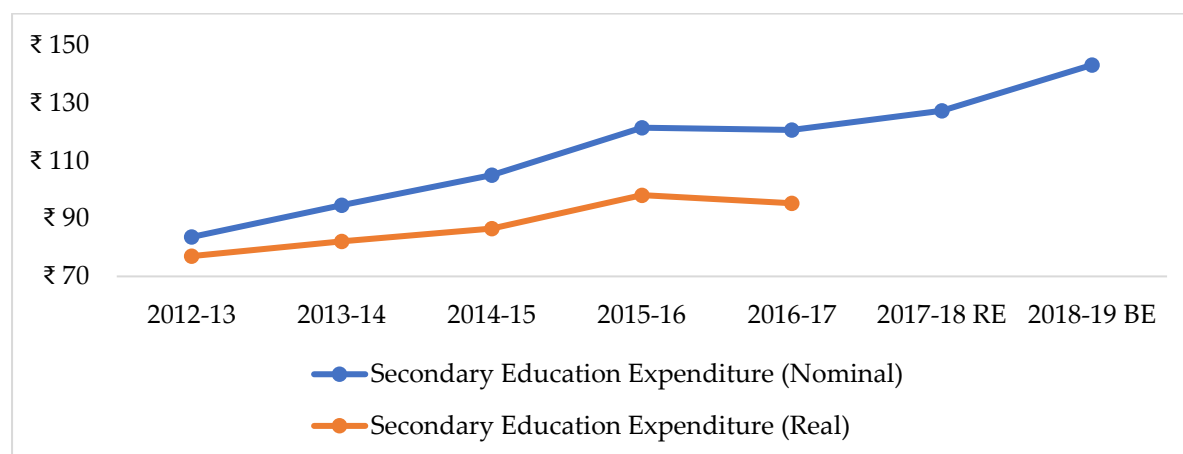
The 14-17-year-old population, corresponding to the age-group of children who attend secondary school constitute about 6.3 million as of 2018[33],which accounts for 28.22% of the total child population (0-18 years) in the state and 7.94% of the total population of the state. The per-capita annual expenditure has increased from Rs 13,449 in 2012-13 to Rs 22,722 in 2018-19 BE in nominal terms at a CAGR of 7.78% (Figure 16). In real terms, the per-capita expenditure was Rs 15,196 during 2016-17 down from Rs 15,676 in 2015-16, growing at a CAGR of 4.2% over five years. There has been a significant spike between the revised estimates of 2017-18 to the budget estimates of 2018-19 of nearly Rs 2,500, which is a 9.1% rise year-on-year and this is due to the revision of salaries of government staff (teachers) as per the Seventh Pay Commission recommendations.

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[33] Projection is estimated using age-appropriate growth rate with 2011 census data on age-wise population.

Figure 4. 3: Per-capita spending on Secondary Education – Nominal and Real
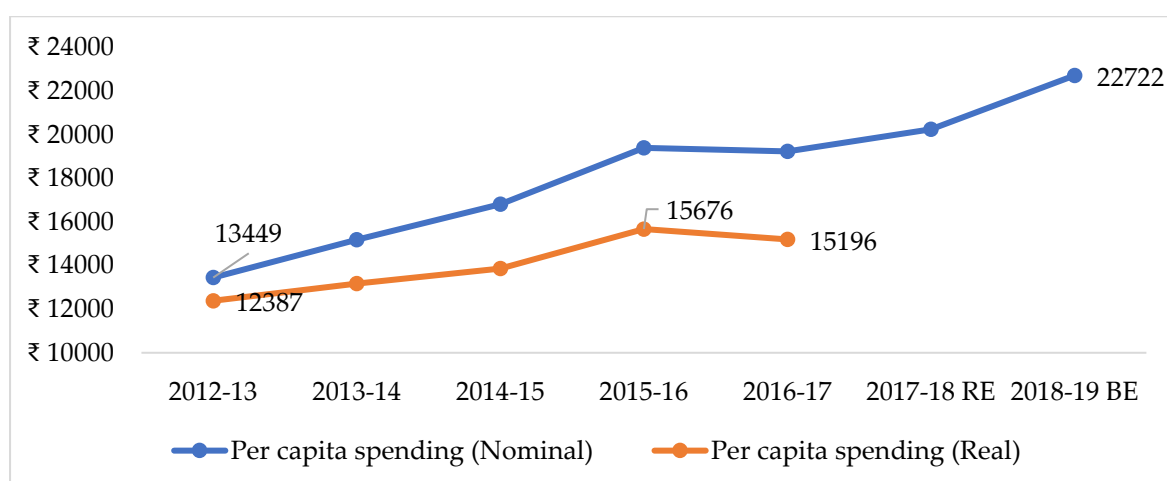
Most of the expenditures incurred go towards recurrent expenditure at the schools through respective directorates. Secondary Education spending can be further classified for classes 9 and 10, termed as secondary stage, and classes 11 and 12, the senior-secondary stage (Figure 17). Certain state-level schemes focus specifically on targeting and reaching students either at the secondary or the senior secondary level. However, most schemes cater to secondary education as a whole and do not target the particular age-group inside. About 90% of the spending at secondary stage in TN is meant for the entire secondary education. Of the remaining 10% on average, the larger share goes towards classes 9 and 10, as compared to classes 11 and 12 (senior-secondary-level). These exclusive expenditures are mostly scholarships to a particular age-group or a particular age, improving facilities at a specific education level alone, and supply of materials directed to particular classes alone.

Figure 4. 4: Share of budgetary spending on common (both), Secondary and Higher Secondary Education.
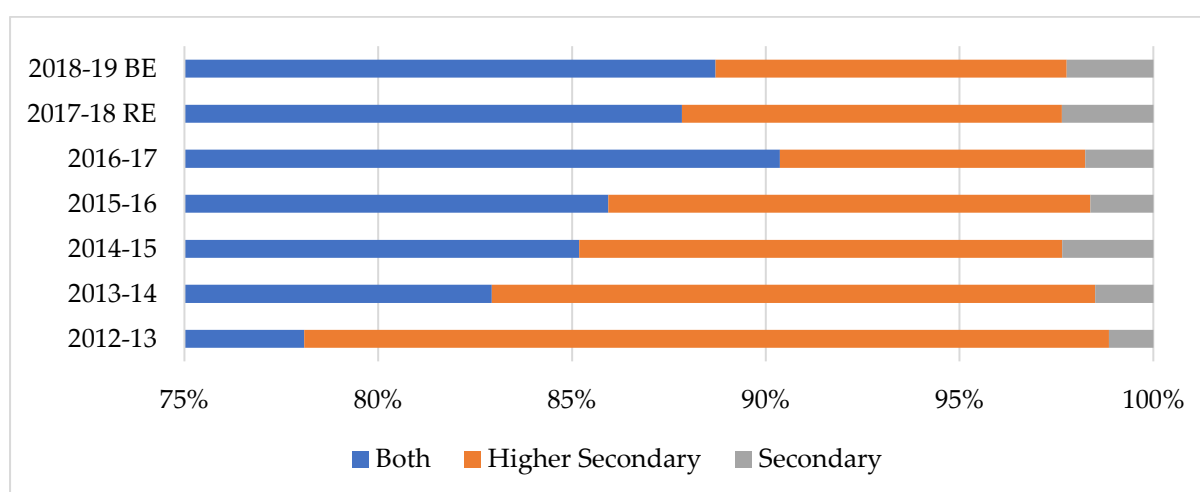
Note: BE stands for budget estimate and RE for revised Estimate.

4.3.3. Examining the expenditure incurred in secondary education by major heads

Secondary education expenditure in the TN budget document spreads across eight different Major Heads, of which all of them are a part of Social Service Expenditure, except for the Major Head 2852, which is Industries (Table 18). The most significant contributor of Secondary Education spending is naturally the Major Head 2202, which is General Education accounting for an average 93.94% of secondary education expenditure over seven years. This major head also exclusively comes from the School Education Department, which means that this department is the only one that manages the finances and functioning of all of 2202 expenditures annually, unlike the Major Head 2225, which is derived from at least two departments, Adi-Dravidar and Tribal Welfare and Backward Classes (BC), Most Backward Classes (MBC), and Minorities Welfare Department.

The spending allocated for 2017-18 as revised estimates from the Industries (2852) Major Head is through the Information Technology Department, where a new scheme has been established to provide free internet to fifty higher secondary government schools in Educationally Backward Blocks[34].Capital expenditure towards Secondary Education has been mostly derived from the Major Head 4202, which has contributed to the budget in the years 2014-15 and 2015-16. This spending has been on the construction of School Buildings under the RMSA scheme. The other major driver of Capital Expenditure is also a construction related activity—this one from the Public Works Department, where Secondary Level school buildings have been constructed, improved, or repaired over the years.

Table 4. 8: Secondary Education spending by all Major Heads – 2012-13 to 2018-19 Budgeted Estimate (Rs millions)

Major Head	State Government Department	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
2202	School Education	68298.1	81878.9	93773.6	100789.4	105326.6	113897.0	129352.9
	Special Programme Implementation	11615.6	8378.0	6839.0	9215.7	4277.4	6320.4	6350.9
2204	School Education	37.8	30.1	3.3	48.1	2.1	4.1	4.7
2225	Backward Classes, Most	1555.5	1554.4	1508.9	1683.7	1751.4	1850.8	2306.6

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[34] Refer to http://cms.tn.gov.in/sites/default/files/documents/it_e_pn_2018_19.pdf - The TN Government's Information Technology Department's Policy Note for 2018-19.

Major Head	State Government Department	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
	Backward Classes and Minorities Welfare							
	Adi-Dravidar and Tribal Welfare	784.1	1092.7	1090.7	1251.7	1434.2	1414.4	1463.2
2235	School Education	0.6		0.3	1.0	0.6	1.5	1.5
4202	Buildings (Public Works)		0.5	253.4	143.7	39.6	1.4	
	School Education	897.1	1206.6	772.6	7714.5	7078.5	2973.4	2798.0
4225	Adi-Dravidar and Tribal Welfare	7.8				56.1		
2236	Social Welfare and Noon Meals Programme	429.2	492.4	751.3	551.2	650.0	734.8	794.9
2852	Information Technology						12.4	
	Total	83625.8	94633.6	104993.1	121399	120616.5	127210.2	143072.7

Note: BE stands for budget estimate and RE for revised Estimate.

4.3.4. Revenue v/s Capital and Wage v/s Non-wage components of Secondary Education

Except for the two years 2014-15 and 2015-16 mentioned in the previous sub-section, capital expenditure has been miniscule at the secondary education level. Revenue expenditure accounts for close to 99% of the spending in the other years (Figure 4.5). The school education sector has not seen much of capital investment (construction or major repairs of new buildings or schools) in the state in the last six-seven years and this may be due to higher investments made earlier on school infrastructure. To understand better about revenue expenditure, it is useful to know the expenditure on wages. On average, over the past seven years, wage expenditure (of all kinds, including salaries, wages, travel allowances, grants-in-aid as salaries, professional fees, contractual payments etc.) have contributed to 81.56% of the overall spending; except for a dip in 2015-16, it has been increasing consistently year after year. Wages as a percentage of total secondary education expenditure increased significantly to 86.4% during 2018-19 BE and the increase in the last two years is largely due to the increase of salaries as per the recommendations of the Seventh Pay Commission.

Figure 4. 5: Revenue expenditure and Salaries as a percentage of Secondary Education expenditure
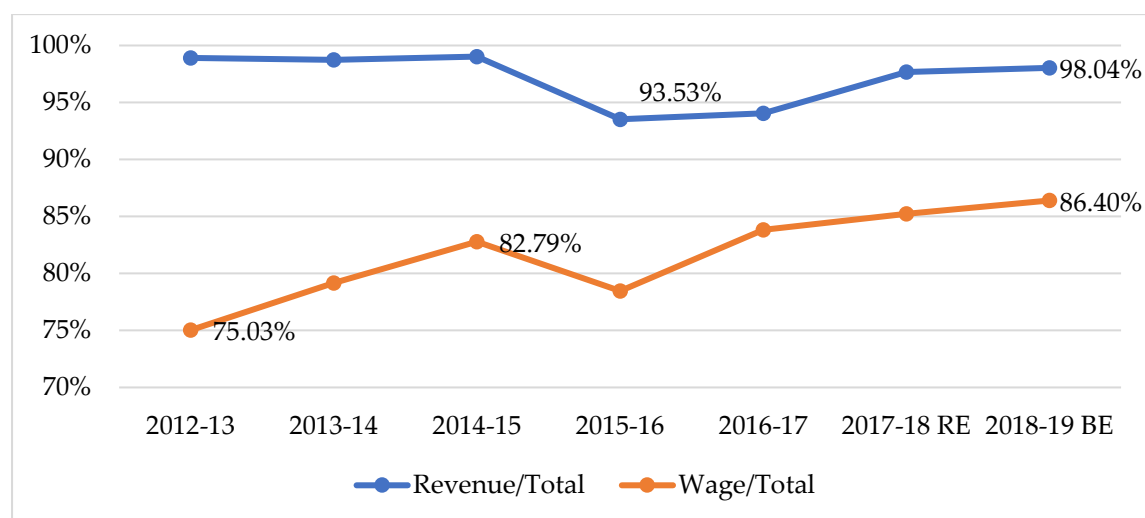
This also indicates a proportional reduction in the other revenue expenditure such as minor repairs and maintenance, electricity bills, expenditure on schemes which may have an effect on provisioning of quality education if the trend is continued.

4.3.5 Sharing pattern between State and Centre

In the secondary education sector, the pattern of sharing on expenditures is such that nearly the entire burden of the expenditure falls on the state's exchequer. The state spends 98% of all secondary education expenditures on average (Table 4.9). It is only in the year 2018-19 that the pattern of distribution changes in the secondary education level, with all schemes that are shared by the state and the centre, accounting for 6.9% of the overall spending. This is due to the shift in the expenditures made in certain large central schemes such as RMSA or the vocationalisation of secondary education which is a scheme shared between the state and the centre.

Table 4. 9: Secondary Education expenditure by Centre, State and Shared pattern (in Rs million.)

Centre/State/Shared	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
Central Sector Schemes	16.2 (0.02)	46.7 (0.05)	116 (0.11)	3.2 (0.00)	3.1 (0.00)	19.6 (0.02)	0.003 (0.0)
State-Centre Shared	471.5 (0.56)	473.5 (0.50)	628.3 (0.60)	554.8 (0.46)	570.9 (0.47)	740.7 (0.58)	9882.1 (6.91)
State Expenditure	83138 (99.42)	94113.5 (99.45)	104248.9 (99.29)	120841 (99.54)	120042.4 (99.52)	126449.9 (99.40)	133190.6 (93.09)

Note: All figures in brackets are percentages.

4.3.6. Spending by nature of transfer – Direct v/s Indirect

Direct transfers comprise of all those expenditures that goes directly in the hands of students or parents, either in the form of cash or kind. Transfers in cash, such as scholarships or reimbursement of tuition fee, or in kind, such as supply of bags, books, uniforms etc., fall under the purview of direct transfers made. This assumes importance as it is seen as compensating the direct and indirect cost that the student or the household bears for the child's education. As an absolute value, this component is a small share of the overall spending on secondary education, and the proportion has been falling over the years.

Figure 4. 6: Direct transfers as a percentage of total Secondary Education expenditure
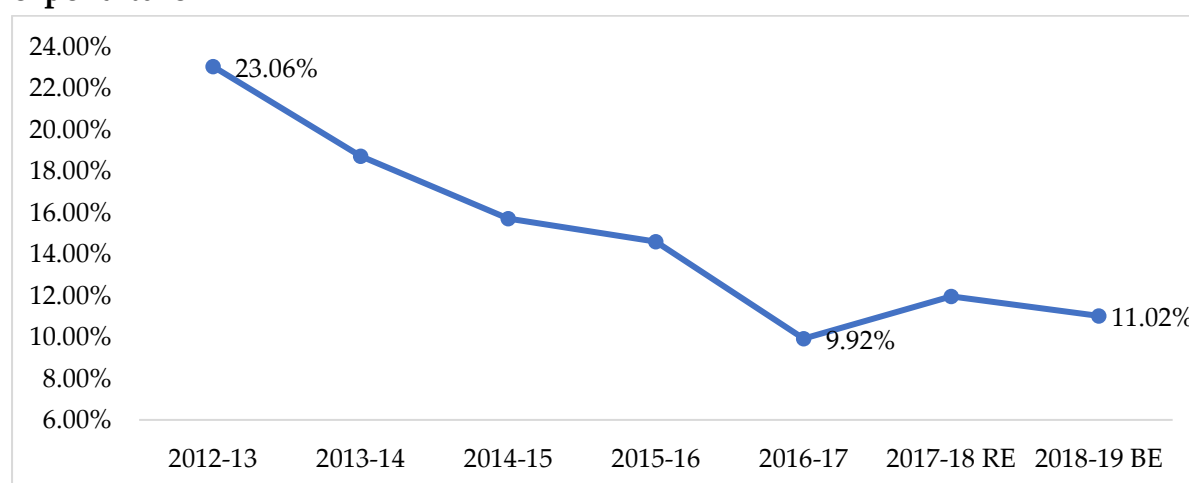
The share of direct transfers has significantly dropped from over 23 % in 2012-13 to only 11% in the budget estimates of 2018-19 (Figure 4.6). In fact, the figure has consistently dropped since 2013-14 to a lowly 9.9% in 2016-17. The absolute value of transfer has also dropped from Rs 19.29 billion to Rs 15.76 billion over the past seven years.

4.3.7. Secondary Education Expenditure by Demand or Supply Factors

Education spending can affect both, the demand for and the supply of quality, quantity, intake, reception, and growth of education and literacy in the state. Demand factors are those that drive students to attend school, and parents to be convinced to send their children to school. The most straightforward of examples for a demand side schemes (Table 4.11) would be the state-sponsored Mid-day Meal Scheme, which became a pressing reason for parents to send their children to schools, in order to guarantee them of one meal a day for free. Supply factors enhance the quality and quantity of education. Building new schools, laboratories,

grounds, improving teacher quality by training programs and installing ICT services are some examples of supply-side indicators of spending. The two, although work in different ways to achieve quality education, intake, and continuation of schooling, complement each other in their working.

Supply factors, which make up for the bulk of the spending by the state, can further be classified as scheme-based expenditures (Table 4.9) and recurrent and maintenance expenditure. All budget descriptions that read as directorial expenses, salaries, maintenance, building works, etc., are recurrent in nature, and make up for 85.87 % of the supply-side expenses.

Table 4. 10: Supply-side schemes of Secondary Education in Tamil Nadu

Name of the Scheme – Supply Side	(E)/(N)*
Improving school performance in educationally backward districts	N
Establishing Language Teaching Laboratories	E
Development of Library Facilities	E
Improvement of facilities for teaching science	E
Provision of Computers in Higher Secondary Schools	N
Upgrading Infrastructural facilities on Government High/Higher Secondary Schools with Loan assistance from National Bank for Agriculture and Rural Development (NABARD) under Rural Infrastructure Development Fund (RIDF).	E
Provision of Mathematics Laboratories at Schools in Rural Schools	N
Administrative Training and Institutional Planning Programme for Headmasters of High/Higher Secondary Schools	N
Establishment of Smart Classes in Government Higher Secondary Schools	N
Enhancing the quality of Vocational Education Stream in Higher Secondary Schools - Scheme under State Innovation Fund	N
Setting up of smart class using all in one Information and Communication Technology in select schools - Schemes under State Innovation Fund	N
Formation of Smart classroom in selected schools in Cuddalore and Thoothukudi District under State Innovation Fund	N
Improvement of Science Education in High/Higher Secondary Schools	N
Provision of Computers in Higher Secondary Schools under Special Component Plan	N

Name of the Scheme – Supply Side	(E)/(N)*
Compensation of Loss for the abolition of Special Fees in Government/Aided Schools under Special Component Plan - Controlled by Director of School Education	E
Reimbursement of Expenditure met by Schools for Uninterruptible Power Supply during Public Examination	E
Provision of Chess Board to Government High and Higher Secondary Schools	E
Supply of Maps to the classrooms of Government High and Higher Secondary Schools	E
Curriculum Development for Disaster Risk Reduction in schools and training institutions	N
Scheme for providing Quality Education to Madrasas	N
Scheme for Infrastructure Development in Minority Institutions (IDMI)	N
Integrated Education for the differently abled children in rural areas	N
Environmental Orientation to School Education	E
Educational Television Programme in Tamil Nadu	E
Change of Higher Secondary Syllabus	N
Implementation of continuous and Comprehensive Evaluation	
Enhancing Learning through Image Recognition Application (IRA) Technology - Schemes under State Innovation Fund	N
Phonetics Training in Communication English - Scheme under State Innovation Fund	N
Training of Teachers on the use of Free and Open-Source Software - Scheme under State Innovation Fund	N
Orientation of Teachers handling Virtual Classroom - Scheme under State Innovation Fund	N
Development of CCE work sheets/modules to improve reading, writing and comprehensive skills in School Education Department	N
Tamil Nadu English language Teaching Campaign	E
Installation of Electrical Incinerators in all 518 Girls Government High and Higher Secondary Schools - Schemes under State Innovation Fund	E
Encouragement for Sanskrit Education in Secondary Schools	E
Smart Classrooms in Adi-Dravidar/Tribal Welfare Higher Secondary Schools	E

Name of the Scheme – Supply Side	(E)/(N)*
Award of Prizes to best Adi-Dravidar Higher Secondary School and Tribal Residential Higher Secondary Schools to improve quality of education	E
Special Provident Fund-cum-Gratuity Scheme for Municipal and Corporation Higher/Higher Secondary Schools - controlled by the Director of Elementary Education	E
Grant for starting of secondary grade teacher training institute for the visually and orthopaedically differently abled persons	E
Provision of Free Internet in Government Schools	N

Note: 'E' refers to existing schemes, and 'N' refers to new schemes started from 2015-16

Table 4. 11: Demand-side schemes of secondary education in Tamil Nadu

Name of the Scheme – Demand Side	(E)/(N)*
Supply of Textbooks to Students	E
National Scholarships at the Secondary Stage for Talented Children from Rural Areas	E
Educational Expenses for Higher Studies of the Top rank holders in the Secondary School Leaving Certificate/Higher Secondary Public Examination of the State Board	E
Perunthalaivar Kamarajar Award	E
National Merit Scholarship scheme	E
Constitution of Private Schools Fee Determination Committee	E
Incentive to Students to reduce drop out in Secondary Education Level	E
Collaborative Learning through "Connecting Classroom"	E
Tamil Nadu excels (TANEX) - Scheme under State Innovation Fund	N
Computer Literacy and Studies in Schools (CLASS)	N
Imparting of Computer Literacy in High Schools under Special Component Plan	N
Incentive to Students to reduce drop out in Secondary Education Level	E
Supply of bags and other learning materials to students in government and government-aided Schools	E
Distribution of Free Notebooks to Students	E
Free Supply of Woollen Sweaters to Students	E
Supply of Special Education Kit for Visually Impaired Students	E
Free Supply of footwear to school going children	E

Name of the Scheme – Demand Side	(E)/(N)*
Supply of Special Education Kit for Visually Impaired Students	E
Production of Children's' Literature	E
Special Coaching for Adi-Dravidar Students of classes 9 to 10, and 11 to 12	E
Raja Puraskar Award for the Scouts	E
Assistance to the students studying 9-12 std. of Government/Aid Schools where breadwinning father or mother dies in an accident or permanently incapacitated - Controlled by the Director of Elementary Education	E
Free Supply of bicycles to the students studying in XI and XII standards in Government Schools and Aided Schools in which classes are conducted on self-financing basis	E
Scheme for providing computers as reward to 1000 top ranking Tamil Medium Students in class 10 Public Examinations	E
Conducting National and State level Sports Competition for Participation of School Students	E
Conducting of Chess competitions at Firkha/Education District/Regional level for students	E
Inclusive Education for Disabled at Secondary Stage (IEDSS)	E
Free Supply of Bicycles to all girl students belonging to Scheduled Caste/Scheduled Tribe/Scheduled Caste converts to Christianity studying in Standard XI and XII in the Government/Government Aided Higher Secondary Schools	E
Assistance to SC/ST/SC converts to Christianity for Higher Educational Special Scholarship Scheme	E
Free Supply of Bicycles to all boy students belonging to Scheduled Caste/Scheduled Tribe/Scheduled Caste converts to Christianity studying in Standard XI and XII in the Government/Government Aided Higher Secondary Schools	E
Special coaching to students studying in classes 9 to 12 in Adi Dravidar Welfare High Schools and Higher Secondary Schools	E
Special Coaching to students studying in classes 9 to 12in Government Tribal High Schools and Higher Secondary Schools	E
Free Supply of Bicycles to Backward Classes girl students studying in Standard XI and XII in the Government/Government Aided Higher Secondary Schools	E

Name of the Scheme – Demand Side	(E)/(N)*
Free Supply of Bicycles to Backward Classes boys' students studying in Standard XI and XII in the Government/Government Aided Higher Secondary Schools and Government Aided Schools in which class 11 (+1) and class 2 (+2) courses are conducted on self-financing basis	E
Free Supply of Bicycles to Most Backward Classes (MBC) and Denotified Communities (DC)- girl students studying in Standard XI and XII in the Government/Government Aided Higher Secondary Schools	E
Free Supply of Bicycles to MBC and DC boys' students studying in Standard XI and XII in the Government/Government Aided Higher Secondary Schools and Government Aided Schools in which class 11 (+1) and class 12 (+2) courses are conducted on self-financing basis	E
Free Supply of Bicycles to all girl students belonging to Scheduled Caste/Scheduled Tribe/Scheduled Caste converts to Christianity studying in Standard XI and XII in the Government/Government Aided Higher Secondary Schools	E

Note: 'E' refers to existing schemes, and 'N' refers to new schemes started from 2015-16

Source: Government Welfare Schemes, Government of Tamil Nadu, 2017.

Figure 4. 7: Supply and Demand side expenditure on Secondary Education
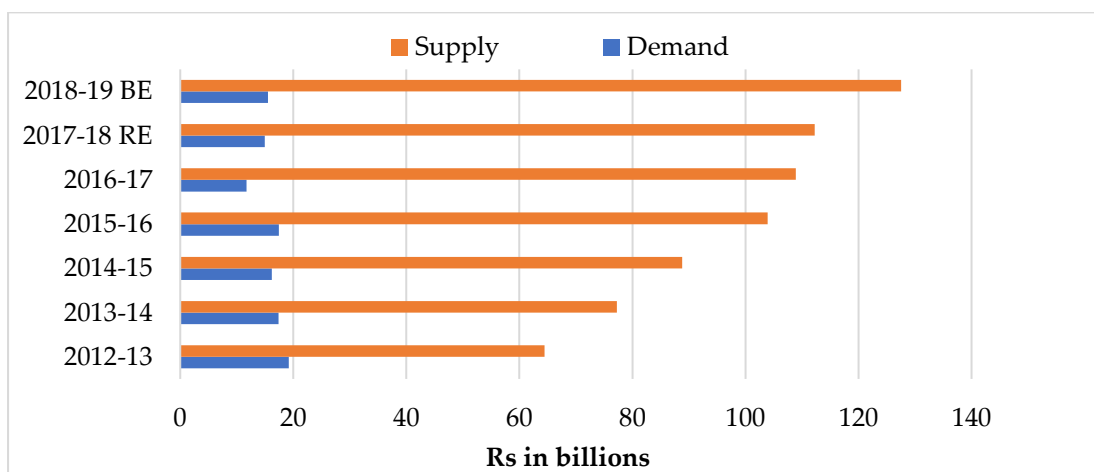
While demand-side spending by the state has been consistent in absolute terms, ranging between Rs 6.5-8.5 billion in the past seven years, the figure has dipped as a percentage of overall spending over the years significantly due to rise in supply-side spending. Supply-side expenditures have increased from Rs64.4 billion in 2012-13, to Rs 127.5 billion in 2018-19 (Figure 4.7).

Apart from this, an insignificant figure of Rs 3 million on average over all the years has been tagged as a demand-cum-supply side indicator as the scheme is the

'vocationalisation of school education', which works both ways—the state is incentivising more students to now enrol into higher school education, but also spending on tweaking the infrastructure and facility that enables students to avail of this set-up. In general, it can be observed that most recurring expenditures would fall in the category of supply-side as they are salaries and wages that are incurred annually on the maintenance, upkeep and daily running of schools and other educational centres. Again, it can be observed here as to how the stark difference between the 2017-18 revised estimates and the 2018-19 budget estimates in the supply side was driven by the increased salaries that were expected to be a significant part of the state's exchequer for the latest year.

4.3.8. Expenditure of Rashtriya Madhyamika Shiksha Abhiyan (RMSA)in Tamil Nadu

Over the years, the RMSA the spending in the state has seen a rise at a rate much above the average secondary education growth rate, at a CAGR of 25.02% over the past seven years. In the budget estimate for 2018-19, it can be observed that the central funding saw a change in the pattern of transfer with 47% of the funding reaching the state through a sharing pattern between the state and the centre, which was not the case until the year before.

Table 4. 12: Rashtriya Madhyamika Shiksha Abhiyan (RMSA) expenditure in Tamil Nadu – 2012-13 to 2018-19 Budgeted Estimate (in Rs million)

Item	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 RE	2018-19 BE
Central Sector Schemes	.25	.25	.44	.25	.25	.25	.003
Shared State-Centre							8500.25
State Expenditure	3761.41	7404.34	11356.6	17731.4	17960.8	16546.61	9458.12
Grand Total	**3761.66**	**7404.59**	**11357.11**	**17731.6**	**17961.1**	**16546.89**	**17958.37**

It is also noteworthy to observe that while the spending reached heights in 2015-16 to reach nearly Rs 17.7 billion, it has been stagnant ever since then. Another noteworthy aspect of the spending is that the average spending on salaries in the RMSA scheme in Tamil Nadu is 70.9%, which is nearly identical to that average salary component in secondary education. For the latest year, this figure rises to

nearly 96%, which is the same trend that is observed in the overall secondary education budget as well.

4.3.9 Expenditures of four large schemes– Free Laptop, Free Cycle, Incentive to reduce drop-out and MGRNMP

The four large schemes that are direct in nature and reach students at the secondary level are the Free Laptop scheme, the Free Cycle scheme, the Cash incentive scheme to reduce drop-out at secondary level, and the 'Puratchi Thalaivar Dr. MGR Nutritious Meal Programme' (PTMGRNMP), where the state exclusively sponsors the mid-day meals for classes 9 and 10 students in government and aided private schools). These large schemes account for substantial proportion of the overall secondary education expenditure and have had significant impact on secondary education in the state in increasing enrolment, retention, and transition rates.

Table 4. 13: Expenditure on large schemes, its growth and relative share (in Rs million)

Large state schemes	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Laptop	11,615.58	8,378.00	6,838.96	9,215.70	4,277.38	6,320.42	6,350.87	-0.083
Cash Incentive	3,501.66	3,810.00	3,810.00	3,110.43	2,351.92	3,135.88	3,135.88	-0.016
Cycle	2,129.52	2,169.63	2,139.37	2,350.10	2,497.77	2,602.15	3,062.10	0.053
Noon-meal	429.16	492.43	751.26	551.17	650.01	734.81	794.94	0.092
Total	17,675.92	14,850.06	13,539.58	15,227.39	9,777.08	12,793.25	13,343.79	-0.039
Total Secondary Education	83,625.82	94,633.66	1,04,993.10	1,21,398.95	1,20,616.31	1,27,210.16	1,43,072.71	
Schemes total/ Sec Education total	**21.14%**	**15.69%**	**12.90%**	**12.54%**	**8.11%**	**10.06%**	**9.33%**	

Over the years, while overall secondary education budget has grown significantly, the expenditure allocated to schemes have seen a sharp dip over time. The total spending on these four large schemes was at Rs 1.76 billion in 2012-13 and has constantly fluctuated over the years to reduce to Rs 1.33 billion in 2018-19. In one year of the analysis, 2016-17, the figure even fell under Rs 1 billion, coinciding with the year when total secondary education spending had come down as well. As a result of the dip in spending, it grew at a rate of -0.039 compounded annually. The scheme that has seen significant reduction over the years is the free laptop scheme. It has receded at a CAGR of -0.083, with the expenditure having fallen by over Rs 500 billion over the years. While the cash incentive scheme has also seen a mild

reduction in the spending, the free cycle as well as the PTMGRNMP schemes have grown over the years, with the latter seeing the higher growth with a CAGR of 0.092.

Figure 4. 8: Share of the four large schemes as a% of secondary education expenditure
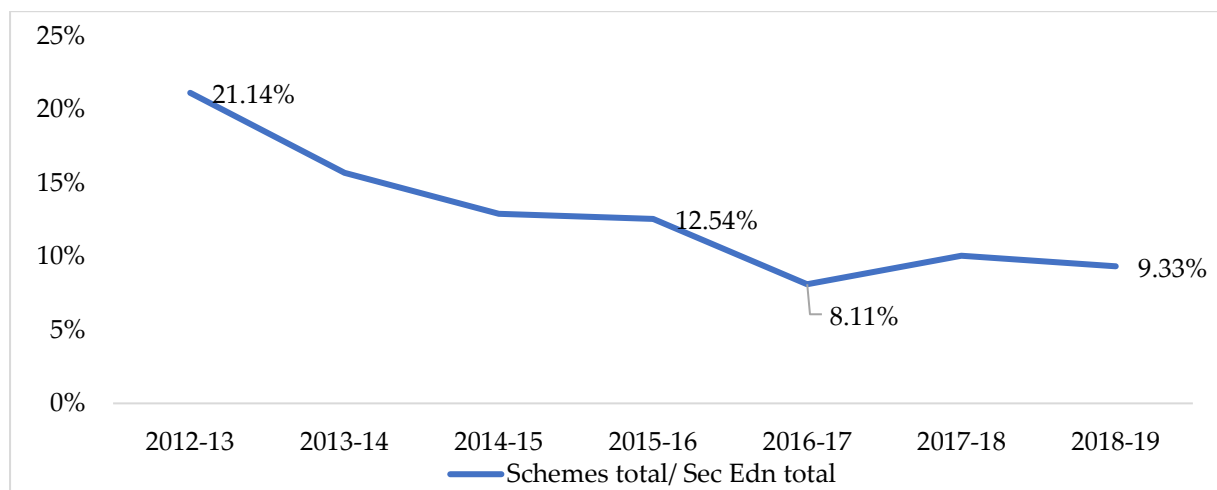
Spending on the four large schemes which accounted for 21.14% of the total secondary education spending in the year 2012-13 have sharply declined over the past seven years to 9.33% in 2018-19 (Figure 4.8) owing to huge cuts in the expenditure on free laptop scheme and decrease in expenditure of cash incentive scheme. This also has reflected in reduction of direct transfers from 23% to 11% over the seven-year period of 2012-13 to 2018-19.

4.4. Proportion of Secondary Education Expenditure

The secondary education expenditure has increased over years both in nominal and real terms. However, its share as a% of total expenditure of the state has come down from 6.89% in 2012-13 to 6.25% in 2017-18 (Figure 4.9). Similarly, the share of the secondary education expenditure as a proportion of revenue receipts has also not shown significant increase except for the year 2015-16. The secondary education expenditure as a proportion of GSDP reduced from 0.98 % in 2012-13 to 0.89% in 2017-18 indicating a reducing trend since 2015-16. It is obvious that the reduction in the large schemes' expenditure has had an impact on the overall expenditure.

Figure 4. 9: Secondary education expenditure as proportion of Total Expenditure (TE), Revenue Receipts (RR) and Gross State Domestic Product (GSDP).
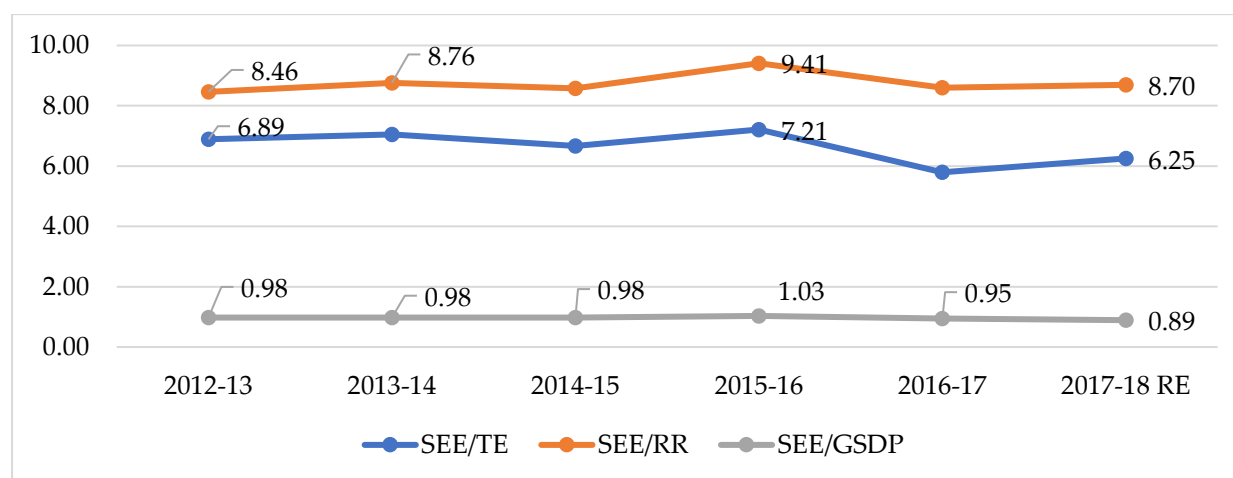
The fiscal deficit of the state has declined since 2016-17 to below FRBM limits, and this implies a greater scope for enhancing the secondary education expenditure or social services expenditure in general, but the continuing revenue deficit poses a threat to enhance the revenue expenditures. However, this also provides an opportunity for relooking into the schemes to see the potential for rationalising them or bundling them prudently alongside examine the scope for improvements in the delivery processes to enhance the efficiency. The next chapter presents the findings from the field where we attempted to examine the delivery of selected schemes in identified districts.

Chapter 5: Delivery of Selected Schemes: Understanding the implementation process and Insights from the Field

5.1. Selection of Schemes, Districts, Blocks, Schools and Tools Used

Fieldwork was included in research design to go beyond budget documents alone and see how the schemes are delivered and gain insights from the field about the implementation of the schemes. Twenty secondary schools in two identified districts were covered. Four important schemes targeting the secondary school students were identified through consultation and all four are part of the demand side schemes: PTMGRNMP (MGR Nutritious Meal Programme), Distribution of Free Bicycles, Distribution of Free laptops, and Special Cash Incentive to reduce dropouts. These were selected to understand the processes involved in planning, implementation, and supervision by the departments. The rationale for the choice lies on the fact that unlike supply side schemes, where most expenditures are rather inelastic in nature, thus not allow the state much scope for making a policy choice, these schemes are more elastic in nature, and therefore, the government has space to make policy choices based on perceived or demonstrated relevance and effectiveness. Though all are demand-side schemes, the selected schemes are diverse in nature and their intended goals and are also managed by different departments. That allowed us to also examine the issue of inter-departmental coordination and inter-district variation in terms of delivery of the schemes.

Table 5. 1: Basic Details about the Selected schemes covered in the study

	Name of the scheme	Funding Department	Benefits	Eligibility	Coverage	Starting year
1	MGR Nutritious Meal Programme	Social Welfare and Noon Meals Department	Free hot cooked mid-day meal	Students of Government and aided private schools	**Universal**	1980
2	Distribution of Free Bicycles	Backward Classes (BC), Most Backward Classes (MBC), and Minorities Welfare Department	Free Bicycle	Students of Government and aided private schools Class 11	**Universal**	2001-02

	Name of the scheme	Funding Department	Benefits	Eligibility	Coverage	Starting year
3	Special Cash Incentive to reduce dropouts	School Education Department	Cash Incentive for completing classes10, 11 and 12	Students of Government and aided private schools	**Universal**	**2011-12**
4	Distribution of Free laptops	Special Program Implementation department	Free laptops	Students in Government and aided schools of Tamil Nadu (XI, XII) First year polytechnic students	**Universal**	**2011-12**

In consultations with the School Education Department and the UNICEF team, two districts Virudhunagar and Krishnagiri were selected for the fact that Virudhunagar is an aspirational district as identified by NITI Aayog and Krishnagiri district has a higher proportion of SC/ST population and has schools run by the Forest Department as well and was expected to give us the understanding of other dimensions of the functioning of the schemes for the school students. Using the state's School Education Department data on the distribution of schools by management type in each block, Rajapalyam and Sivakasi blocks in Virudhunagar and Mathur and Shoolagiri blocks in Krishnagiri were selected. Rajapalyam had schools run by Adi-Dravidar Welfare Department while Sivakasi had a majority of municipal schools. Mathur block in Krishnagiri had schools run by Adi Dravidar Welfare Department while the Shoolagiri block had schools run by School Education Department. A stratified random selection process was adopted to select schools run by different departments and then to choose the schools for the sample. Three additional schools in each block were selected as reserve schools in the event of any difficulty experienced in the field. Five schools in each block and a total of 20 schools were selected. The list of selected schools is given in Annexure.

Virudhunagar is located in the southern part of Tamil Nadu with a population of 19,42,288 (Census 2011) and Krishnagiri is located in the north western part of Tamil Nadu with the population of 18,79,809 (Census 2011). The percentage of SC, ST in the district of Virudhunagar is 20.59% and 0.12%, respectively, and the percentage of SC, ST in the district of Krishnagiri is 14.22% and 1.19%, respectively. Virudhunagar appears to be having slightly better educational indicators as compared to

Krishnagiri . The latest board level examination results for the sample districts for the year 2018 and 2019 indicated that Virudhunagar had higher pass percentages as compared to Krishnagiri in both Secondary School Leaving Certificate (SSLC) and Higher Secondary School Certificate (HSC) levels (Figure 5.1).

Table 5. 2: Basic Human development and Education related information for the two selected districts

SL. No.	Districts	Virudhunagar	Krishnagiri
1	Literacy Rate %	80.2	74.5
2	Education Index	0.78	0.69
3	Human Development Index value	0.855	0.788
4	Human Development Index Rank	2	9
5	Gender Inequality Index value	0.048	0.091
6	Gender Inequality Index Rank	2	24
7	Child Development Index value	0.672	0.474
8	Child Development Index Rank	11	30
9	Multi-Dimensional Poverty Index value	0.62	0.6
10	Multi-dimensional poverty index Rank	29	26
11	Gross Enrolment Ratio, Elementary	102	93.5
12	Gross Enrolment Ratio, Secondary	90.9	81.9
13	Gross Enrolment Ratio, higher Secondary	76.7	65.3
14	Net Enrolment Ratio Elementary	95.7	96.5
15	Net Enrolment Ratio Secondary	64	65.6
16	Net Enrolment Ratio Higher Secondary	46.4	52.4

Sources: Tamil Nadu state planning commission report – 2017 for the first eight rows,

Unified District Information on School Education (UDISE) (2015-16) for the next six rows.

Figure 5. 1: Pass Percentages in Board Examinations, Virudhunagar and Krishnagiri

	Virudhunagar - 2018	Virudhunagar - 2019	Krishnagiri - 2018	Krishnagiri - 2019
■ SSLC	96.79	96.29	91.75	91.8
■ HSE I	91.13	93.92	78.61	86.31
■ HSE II	94.26	89.4	80.74	80.29
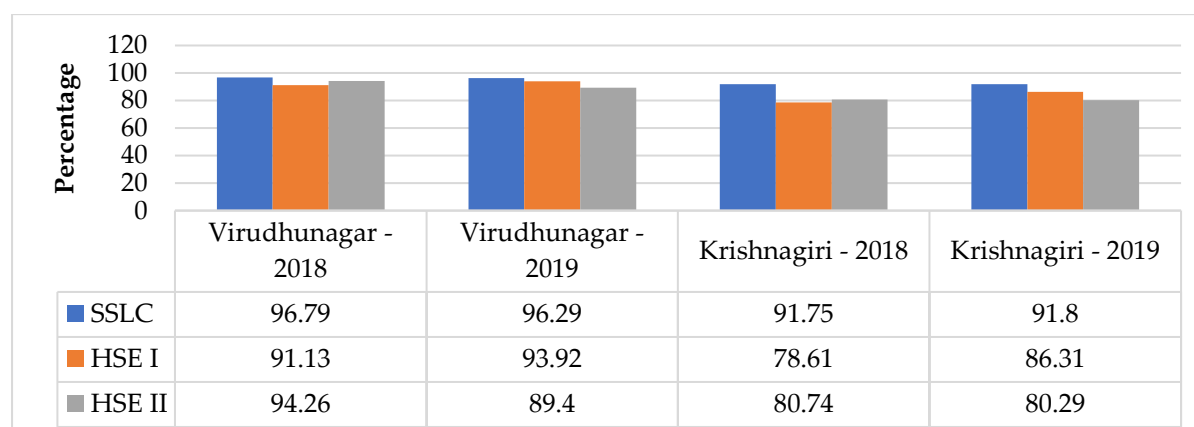
Note: SSLC- class 10, HSE1- class 11, HSEII -Class 12.

Source: Performance and statistical information, 2018-19 School Education Department, Government of Tamil Nadu

Semi-structured interviews were conducted at the level of state, district, and school to understand the organisation structure, processes of planning, implementation, fund flow, and utilisation. At the state level, the departments running the scheme were interviewed, CEO and the department chiefs were interviewed at the district level and school HMs were interviewed. Focused Group Discussions (FGDs) were conducted with students (boys and girls separately) and parents to understand their awareness about the processes of the scheme apart from their perception about the implementation of the scheme. Fieldwork also included observations at school, noon meal centres along and discussion with relevant staff.

5.2. Puratchi Thalaivar MGR Nutritious Meal Programme (PTMGRNMP)

5.2.1. Background, spending, and coverage

Tamil Nadu was one of the first Indian states to start the midday meal programme in the 1960s, which was later strengthened in view of prevalent malnutrition in the state in the 1980s. The universal provision of hot cooked midday meal in schools in TN is one of the flagship schemes of the state that covers all children in classes 1 to 10 in government, government-aided and local body schools throughout the state. A number of states introduced the noon meal programme, Kerala and Gujarat being the other two states that have provided universal cooked noon meal since the 1980s, and in 2004, a Supreme Court order on the issue of food security made the Government of India introduce this scheme nation-wide. Tamil Nadu, which was already implementing the scheme, also benefitted from the union government's support, but it continues to provide more than the mandatory state contribution,

which allows it to go for higher nutritional standards. The Government of India's scheme runs up to only class 8, whereas the state government provides meals up to class 10 by bearing the entire cost incurred on classes 9 and 10.

Table 5. 3: Midday Meal (MDM) expenditures in Tamil Nadu (unit costs per child per meal in Rupees)

Class	MDM Norms (60:40)	Centre	State	Additional state contribution	Total
Primary (classes 1-5)	4.35	2.61	1.74	2.98	7.33
Upper Primary (classes6 to 8)	6.51	3.91	2.6	1.03	7.54
Classes 9 and 10			8.78		8.78

Source: Policy Note 2018-19, Social Welfare and Nutritious Meal Programme (SWNMP) department, Government of Tamil Nadu

The Policy Note of the Social Welfare and Nutritious Meal Programme (SWNMP) department that runs this scheme in the state identifies the major objectives of the scheme, viz., maximising enrolment and reducing school dropout rates with a view to universalise elementary education, providing nutrition to the under fed and under nourished children, encouraging children from disadvantaged groups to attend school regularly, helping them in attaining formal education, and empowering women by providing employment opportunities. The Citizen Charter of the department also cites reducing morbidity and mortality and preventing classroom hunger as other major objectives. As of 2018-19, a total of nearly 52 lakh students in TN were enrolled in the noon-meal scheme programme. Of this, beneficiaries of secondary school that comprises of class 9 and 10 was around 6.5 lakh or about 12.5% of the total beneficiaries in the state.

Table 5. 4: Number of centres and number of beneficiaries in the state for 2018-19.

SL. No.	Stage	No of Centres	No of Beneficiaries
1	Primary	26.801	25,28,269
2	Upper Primary	16,134	20,14, 184
3	High School		6,47,338
4	National Child Labour Project	270	6,689
	Total	**43,205**	**51,96,780**

Source: Policy Note 2018-19, Social Welfare and Nutritious Meal Programme department, Government of Tamil Nadu

In the past seven years, the scheme has seen some changes, with the government improvising and ensuring that the major employees (Noon Meal Organisers [NMO], Cooks and Assistants) and the beneficiaries (students) are assisted in various ways. In 2012-13, the introduction of a variety menu was first announced in the assembly, where variants of 'masala' egg, such as onion-tomato egg and pepper egg were to be prepared to bring in an assortment in the food menu, which had consisted of sambar rice with boiled egg until that point. The rice menu was also extended to include dishes such as lemon rice, vegetable biriyani, etc. In achieving nutritional needs, the usage of black Bengal Gram, green gram and potatoes was introduced to enhance the protein and carbohydrate content of the food. These changes came into effect from August 2014. The Government Order[35] specifically cites that the newly upgraded menu was developed in consultation with nutrition experts and chefs, who held a training and a demonstration for students, with the students specifically enjoying the black Bengal gram pulav and the pepper egg that was made.

In the year 2015-16, a newly introduced hill and winter allowance for the noon-meal scheme employees living in hilly areas came into effect[36]. Later, in 2016-17, the lumpsum amount that noon-meal scheme employees were eligible to receive was enhanced by 20% from their original norms for organisers, cooks and cook assistants[37]. Recently, in the year 2018-19, as a part of Tamil Nadu Innovation Initiatives (TANII), iron-fortified rice, containing nine nutrients—Vitamin A, B1, B2, B3, B6, B12, Folic Acid, Iron and Zinc—were introduced in five districts[38] in the state on a trial basis[39]. In 2019, the procurement of blending machines for the fortification was going on, and the scheme is slated to begin by the end of the year.

Field visits to the two districts have focused on the various processes followed in the implementation and the financial management of the scheme at three different levels: state, district, and schools. Insights gained through interactions with head teachers, teachers and students have also thrown light on the on-ground implementation challenges and relevance of the scheme. The following sections discuss those details.

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[35] G.O.(Ms)No.267 dated 02 November 2012, Social Welfare and Nutritious Meal Programme (SWNMP) Department, Government of Tamil Nadu

[36] G.O.(Ms)No.37, dated 30 April 2015, SWNMP Department, Government of Tamil Nadu

[37] G.O.(Ms)No.24, dated 20 February 2016, SWNMP Department, Government of Tamil Nadu

[38] The five districts are Madurai, Thanjavur, Thoothukudi, Dharmapuri and the Nilgiris, chosen on the basis of the level of malnutrition in these districts.

[39] G.O.(D)No.240, dated 18 December 2018, SWNMP Department, Government of Tamil Nadu

5.2.2. Organisational structure, roles, and scheme-related processes

Supplying hot cooked meals to more than five million children on a daily basis is not a small challenge. As would be obvious from the description below, it is a massive operation and the responsibility to maintain supplies, ensure quality of food and required nutritional standards is huge. The state has developed elaborate management and delivery structures and developed norms for the smooth delivery of the scheme.

The scheme has a four-tier structure of management and implementing responsibilities. At the state level, the scheme is headed by the Minister for Social Welfare and Nutritious Meal Programme, who is responsible for all the schemes that the department runs. Under the Minister, officers at the SWNMP Secretariat and the Commissionerate for Social Welfare work for this scheme. The Joint Director (Nutritious Meal Programme) is the senior-most officer in the state who exclusively works on the PTMGRNMP scheme. At the district level, the Personal Assistant to the District Collector, Nutritious Meal Programme (PA to DC, NMP) is the person responsible for the implementation, functioning and monitoring of the scheme. Under every district-level office, a part of the Block Development Office (BDO) manages the scheme. A Deputy BDO, who works exclusively for the PTMGRNMP scheme, reports to the district office, and ensures the smooth functioning of the scheme in all the schools that fall under their block.

When a new school is started, or an existing school is upgraded, if there is enough strength to start a noon meal centre, it is done so with the HM of the school placing a request to the local BDO. The Directorate of School Education (DSE) also circulates a Government Order at the start of a new school and informs the SWNMP Secretariat of the need for a new noon meal centre in a school.

The major role performed at the office of the Commissionerate for Social Welfare, where the section that deals with the PTMGRNMP is headed by a Joint Director is that of the budget and financial planner for the scheme, and the timely transfer of funds to the district level. For the implementation part, the most direct role they play is for the procurement of eggs. Eggs are centrally procured by the state, unlike condiments and vegetables that the NMO buys directly. Thus, the tendering and monitoring of the supply of eggs are also managed by the Commissionerate. Apart from this, they are involved in the monitoring and supervisory aspect of the scheme. They act as the bridge between the districts and the government (the SWNMP Secretariat and the Finance Department).

Figure 5. 2: Organisational structure of Puratchi Thalaivar Dr MGR Nutritious Meal Programme (PTMGRNMP) at different levels.
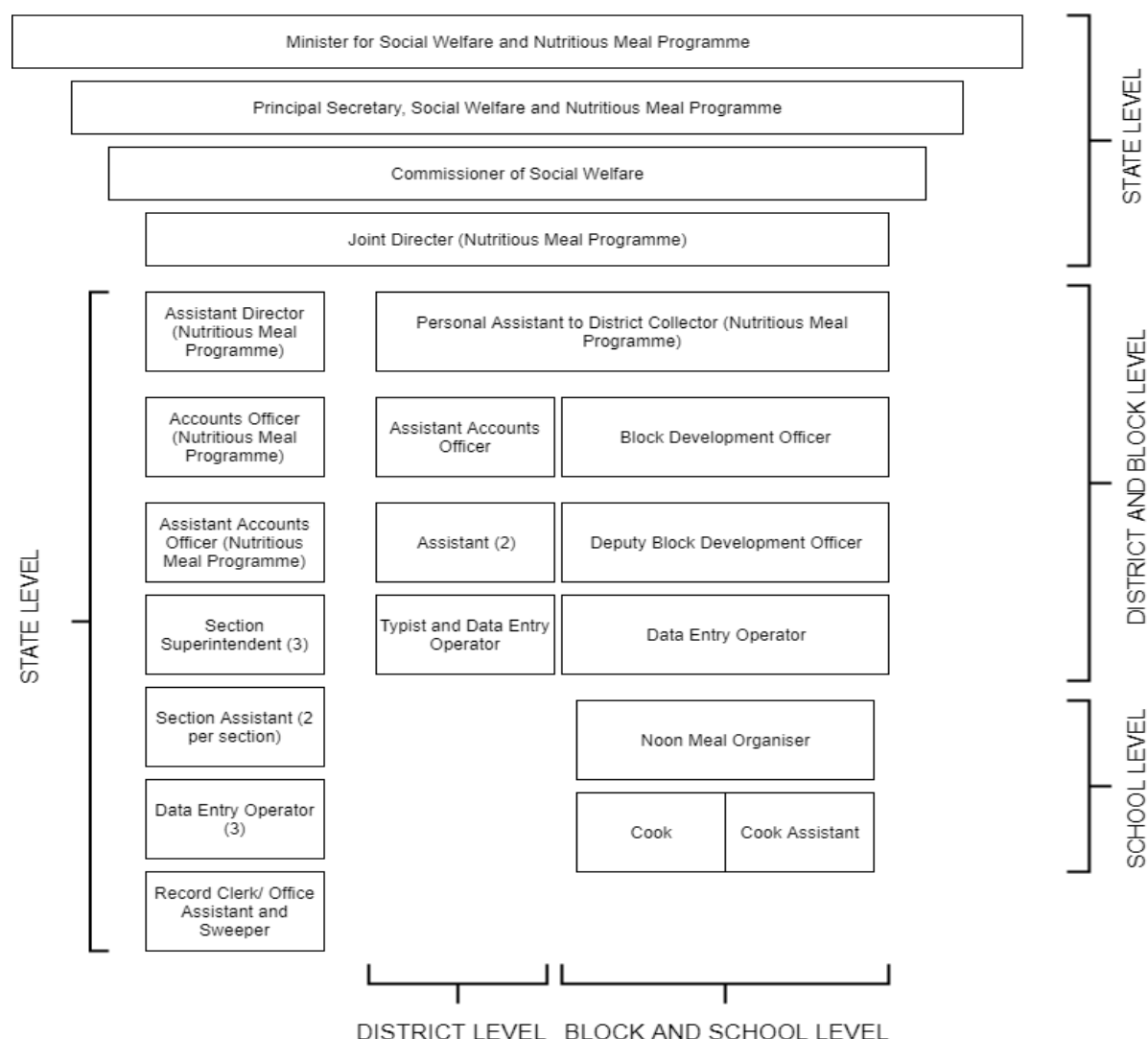
Source: Policy Note 2018-19, Social Welfare and Nutritious Meal Programme Department, Government of Tamil Nadu.

The Commissionerate's office interacts and engages with various departments and agencies of the government to ensure the smooth functioning of the scheme. The beneficiaries of the scheme are school students; hence, the role of a school HM is of primary importance for this scheme. Thus, the District Superintendent of Education (DSE) acts as a significant contact point. The Tamil Nadu Civil Supplies Corporation (TNCSC) is responsible for restocking all the centres with the food grains, dal, and the oil meant for cooking. They keep track of the register maintained by the Noon Meal Organiser and periodically supply the grains when requested. They produce a bill to the Personal Assistant to the District Collector (NMP) for the supplies made to the cooking centres. The District Collector's office is an important contact point for the Commissionerate. Financial sanction for all expenditures to be made in a district

needs the Collector's approval, and they are also responsible for the appointment of new noon meal staff for their district. The Collector's office is also the office of the Personal Assistant to the District Collector (NMP) who heads the scheme at the district level and coordinates with the BDO and the schools. Apart from these organisations of the government, there is also a minimal level of linkage with the Health and Family Welfare department that administers the School Health Programme.

Figure 5. 3: Social Welfare and Nutritious Meal Programme SWNMP) department's interlinkages with other government departments/offices/agencies
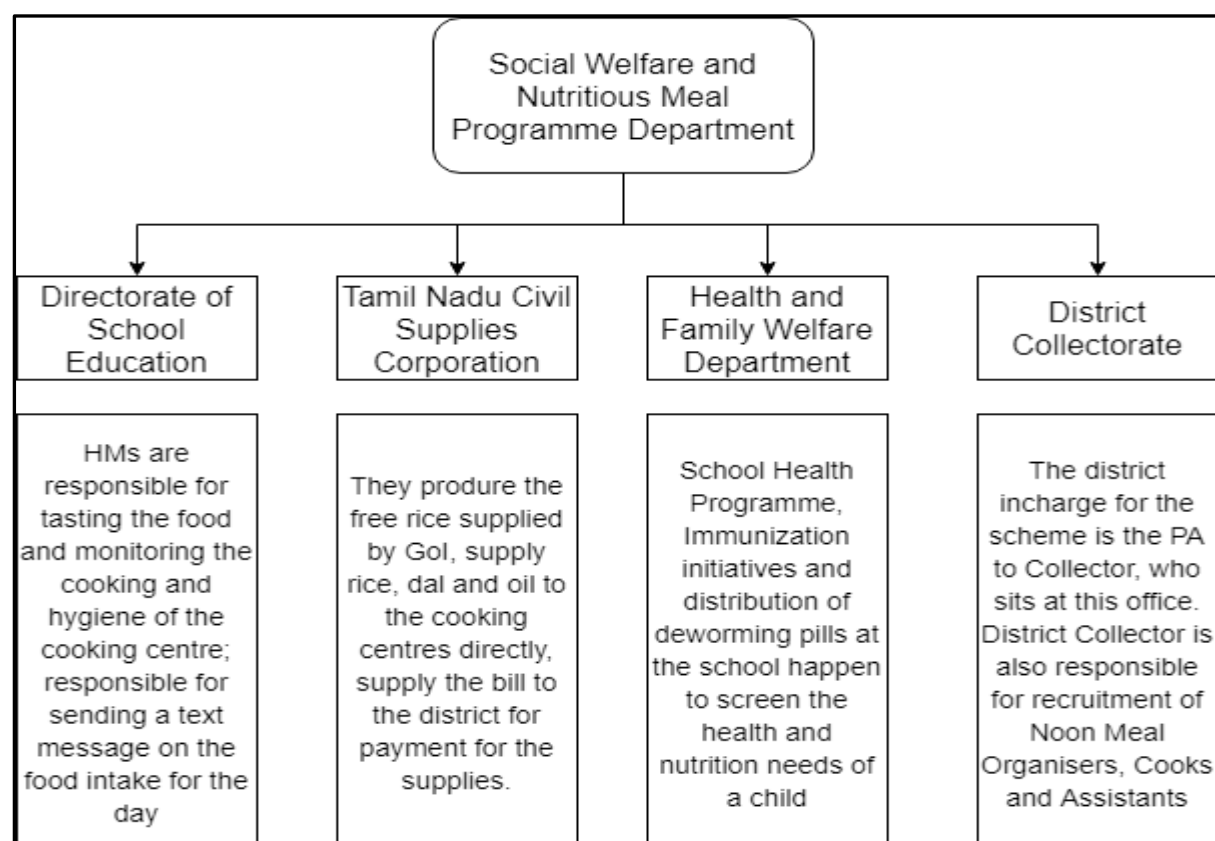
The Commissionerate plans for training programme at the district level on an annual basis (based on a central schedule that is prepared every year) for noon meal employees. They also train new recruits before they start as noon meal organisers or cooks. All the training programs happen at the district level only, with the PA to DC (NMP)'s office hosting the training sessions and the Commissionerate staff monitoring it. A trainer from the Commissionerate's office also joins the training activities. Apart from these, guest lectures with experts from the government and civil society are invited for these programmes. The noon meal training happens as per the Government of India guideline for training, including aspects of maintaining hygiene and cleanliness.

Monitoring visits happen from the Commissionerate, but more frequently at the level of district and blocks. At the district level, officials from the PA to DC (NMP) have a fixed schedule of 20 schools to be visited in a month's time, and members of their team will also undertake centre visits regularly. They review the stock diaries maintained by the NMO and supervise the block and their monitoring schedule. They collect periodical reports from the Deputy BDO on the same.

At the district level, where the scheme is headed by the PA to DC (NMP), the primary task is of collecting beneficiary details, monitoring the centres through the BDO office, and conducting training programs for the noon meal staff. Every year, as of end September, a school's beneficiary feeding strength is finalised. This is further categorised by the students who choose to eat eggs and students who eat bananas.

Based on a schedule prepared post the beginning of the academic year, officials from the BDO visits a centre thrice to measure the intake and feeding strength on those three days. In accordance with the school's HM, the NMO and the officials, the strength is finalised by that time. An indent is sent to the district office, which is collated and sent to the Commissionerate. Based on indent given, funds are sanctioned to the district. It is based on these figures that the state prepares the scheme's demand for grant for the following year.

The Deputy BDOs are also responsible for the consolidation of information pertaining to the total quantum of food grains delivered to the cooking centres under their control. Simultaneously, the district office collects data directly from the registers of the NMOs and these figures are cross verified with the TNCSC delivery challan that is submitted to them. Post verification, the payment for the bills submitted is done from the PA to DC (NMP)'s bank account, through ECS payment service. As a part of monitoring, a reconciliation statement is submitted to the Commissionerate. All payments made are done so with the District Collector's approval.

Vegetables needed for daily cooking, condiments such as tamarind, turmeric, masala, and cooking gas need to be purchased directly by the noon-meal organiser. The funds required for these purchases go from the BDO office to their account directly. They need to purchase items in such a way that these purchases are within the budget amount that has been allocated, calculated on the per-child basis as per the state government policy.

The noon meal organiser should ensure that there is a 45-day buffer stock of supplies that is always available in the cooking centres and the indent for additional requirement is given to the Deputy BDO calculating based on the 45-day necessity. The organiser is also responsible for checking and reporting the remaining stock at the end of every day. The Deputy BDO makes an abstract of all the food required by the centres under its control, and the TNCSC will supply it to the individual centres based on this exact indent provided. Upon supplying to schools, they procure an acknowledgement slip and a delivery challan for preparing the bill.

5.2.3. Fund-flow processes and monitoring and supervision of the scheme at all levels

Budget preparation for the ensuing year is done alongside the current year's revised estimates. The key information that is needed for the determination of the quantum of funds required is the change in the number of beneficiaries—the estimated value from that is always an approximation of the figure but is situated around the true figure that ends up being spent. For food grain supplies and eggs, a per-student requirement-based calculation is made and that amount is used to calculate the total figure necessary for a block to a district, and hence, for the whole state. The Commissionerate of Social Welfare is the office responsible for deciding the figures and submitting it to the government (SWNMP Secretariat and the Finance Department). The key personnel at the Commissionerate responsible for this task are a Superintendent and an Accounts Officer. The budget plan and allocation happen district-wise although this district-wise separation is not reflected in the budget book.

For the purpose of budget planning, data from the district and block levels is requested for at the Commissionerate. Districts individually seek out for data on the increase/decrease in the number of beneficiaries from the respective blocks and compile a total requirement for the district based on the block level information provided. From each district, the Assistant Accounts Officer comes to the Commissionerate's office with the data on beneficiaries and details pertaining to pensions for retired noon meal staff during the budget preparation process and the state compiles the data from all the districts and sends it to the SWNMP Secretariat as well as the Finance Department. They are reviewed by the Principal Secretary (SWNMP) and then finalised.

Figure 5. 4: Budget planning process – chain of beneficiary and staff pension data compilation
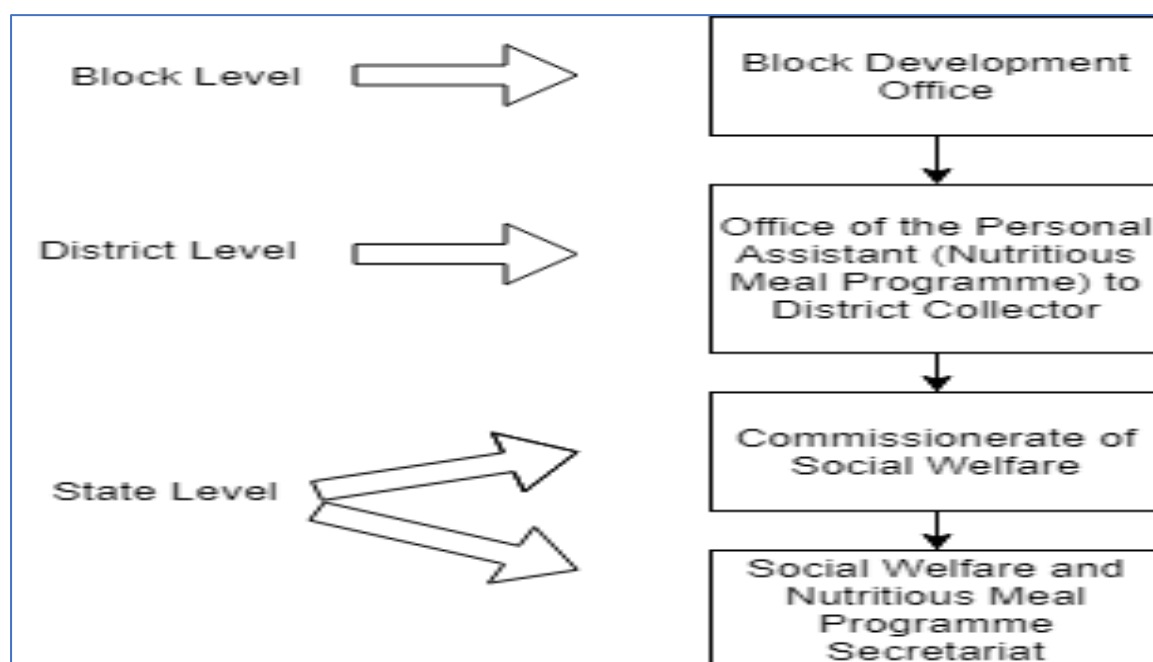
Source: Social Welfare and Noon Meals Department

The Commissionerate decides the final requirement for a year and the allotment is done by the Finance Department based on the requirement provided. If there is a discrepancy or if the Finance Department wishes to make changes to the allocation amount, they contact the SWNMP Secretariat and the SW Commissionerate for the same.

The transfers made to the districts are quarterly in nature, accounted for April of the current year to March of the following year. This includes both recurrent and non-recurrent transfers. The bulk of the funding is recurrent in nature and the non-recurrent expenditures are generally for purchase of kitchen equipment, construction of buildings etc., which are usually allotted once in five years. For the supply of eggs, the Commissionerate directly transfers the money to the vendor from its account, with the condition that the vendor delivers the eggs to every centre directly.

The funds transferred on a quarterly basis can be withdrawn and used anytime and as many times as the district needs to base on its plan and its immediate requirement. The district office, through the bank account of the PA to DC (NMP) transfers the money directly to the TNCSC for rice, dal, oil, and salt bills through the ECS payment mode or through cheques. Apart from this, they also transfer the feeding charges (meant to reach the NMO's bank account) to the BDO who in turn

transfers the money to the NMOs. Lastly, on any non-recurrent expenditures such as charges on purchase of equipment and construction and maintenance of buildings, the PA to DC (NMP)'s office transfers the funds as per their annual plan.

No material transfer of funds takes place between the Commissionerate and the district office. It is an on-paper sanction that is accorded to them, and it is the PA to DC (NMP)'s office that places a bill proposal at the Treasury department and withdraws the funds for its own use; it also grants sanction to the BDO for withdrawing its planned share of funds. Sanctioned funds can only be used for the exact purpose the head of account specifies and the Treasury department does not permit the withdrawal/use of the funds for any other needs.

Generally, there are no cases of over-expenditure in the scheme. For salaries alone, if the required funds are in excess of the budgetary provisions made, the Accountant General's office permits such circumstantial expenses. If there is an urgent, unaccounted need, then the Commissionerate places the request for a transfer during the revised estimates (September-October period) and based on the emergency, during final modified appropriation, the funds are sanctioned. The cost for feeding charges, which the NMO has to spend from their bank account, is carefully estimated such that there is no need of additional funds—this also means that whatever is transferred to the NMOs on a weekly or a monthly basis, they have no option other than to stick to the allocated amount and spend money within that budget they receive.

Fund use monitoring is done in different ways for different heads of expenditure. For all expenditures made in the previous month, an expenditure report needs to be submitted to the Commissionerate within 10 days of the current month. The SWNMP Secretariat and the Financial Controller at the SWNMP department also receives a reconciliation certificate prepared by the Commissionerate that compares the budgeted expenditure with the actual spending for a month. The government scrutinises this document in detail and seek for explanations for under-spent funds. Utilisation certificate is prepared for any expenditure on special purposes, and a training report document is prepared with the expenditure incurred for any training programmes conducted in a month or during a quarter.

There exist norms for the number of times inspection needs to be done at different levels. For every level, the number of visits that they must complete on a monthly and annual basis is fixed. For the BDO, there is a minimum number of schools they must visit every month. Apart from this, from the Commissionerate and the

Secretariat, random visits to noon meal centres also take place. During the district and block level officials' visits, the quality of cooking, quantity of food cooked, stock maintenance, hygiene and cooking vessel availability are checked. By norm, all cooking centres in the state must be visited at least once in a year. The PA to DC (NMP)'s office also seeks for details on the visits made by the BDO. Based on the issues faced, requirements for a centre and suggestions proposed, communication is sent to the Commissionerate on a regular basis.

5.2.4. Functioning and relevance: insights from the field

The state has an uncomplicated funding mechanism for this scheme as compared to various other large secondary education schemes. The simplicity also makes it an effective fund-flow mechanism, with defined roles for usage of funds at various levels of the government. The scheme design has been evolving over the years, while the functioning has some practical issues that could be addressed and solved. Here, we present the insights gained from the field from various stakeholders on different aspects of the scheme including the management ones such as budget, fund flow, communication and monitoring as well as its functioning and relevance.

Inter-departmental coordination

The head master (HM) does not have a firm control over the noon meal centres in the schools, solely because the department that runs the PTMGRNMP scheme has no direct relationship or regular communication with the DSE (at the decentralised level of the BDO or cooking centres), which is represented by the schoolteachers and the HM. The noon meal staff, who are employees of the SWNMP department, share no direct communication channel with the HMs, often only reporting to their direct higher authorities, the BDO. However, on a regular basis, often such situations arise where the HM needs to step in and support the centre in some way or share feedback of the food cooked. The teachers or the HM cannot give any sort of directives or place requests to the cooking staff, and, on-paper, they are quite helpless when it comes to resolving matters of the PTMGRNMP scheme.

However, this does not mean complete absence of any coordination at the level of school. Most of the HMs visit the centre daily and taste the food before it is served to the children. All schools have appointed teachers that will take turns to go to the cooking centre, sometimes during the cooking process to inspect the cleanliness and hygiene of the food cooked, and, at most times, during food distribution to ensure that all the children get the food in sufficient quantity and sit and eat in an orderly manner. However, evidence from the field also suggested that, in some cases, apart

from noting down the attendance for the day, there is no other communication between the HM and the NMO in general. In a few schools alone, on special days such as Independence Day or festivals such as Pongal, the teachers and the HM pool in money and request the noon meal staff to prepare a special sweet dish or a chicken biriyani for students at the end of the academic year. Only in the rare cases where the noon meal organiser and the HM do not see eye to eye, the centre's functioning suffers.

Quality, taste, and relevance of the meal

Feedback from the field suggested that students coming from poor households genuinely benefit from this scheme as they do not even eat breakfast and come to school. For them, these meals are very necessary, and it allows them to sit through and concentrate for the second part of the day. However, there have been quite a few instances of children (only focused on classes 9 and 10) not eating the food provided in the centre. Multiple reasons seem to cause this; officials at the PA to DC, NMP and the Chief Education Officer's offices believe that elder children, especially boys are shy of standing in a queue amongst much younger children with a plate waiting for food to be served. In one school, the HM noted that kids these days are more likely to eat "fast food" and prefer chips and samosa at a roadside shop outdoors rather than the boring rice-based meal. Generally, "richer" children (who could even be slightly better off than poor) do not enrol themselves into the scheme. Additionally, there are cases of students who just take the eggs and bring home-cooked food. Some HMs coax the students into at least taking the eggs if they do not want to eat the rice. One HM also said "students complain of stomach-ache if they eat this food. Sometimes, because there is no other option, they have to eat it."

Headmasters have varying opinions on the quality of the food supplied and its consumption. A few HMs have observed that a lot of the food goes wasted and there are specific days such as the 'Bengal gram rice' or the 'Keerai rice' day when almost the entire food is wasted. One HM suggested that it is only the days when the sambar rice is made that students end up consuming it fully without any wastage. On the contrary, another HM seemed to suggest that variety rice such as 'lemon rice' and 'vegetable pulav' are often enjoyed by the children. Headmasters themselves agree that the food quality is not standardised on all days and there are times when the rice is not boiled or the egg is under/over-boiled, times when the food does not have enough salt, etc. In these situations, they try to speak to the cooks and advise on standardising the cooking style. It was observed that in some cooking centres, the variety meals menu was not being followed and, in most schools, at least one dish

was different from what was prescribed for that day. Only a few centres visited were following the prescribed menu pertaining for eggs such as preparing the pepper egg or the onion-tomato masala egg. Most centres supplied only boiled eggs irrespective of what the menu suggested for that day.

It seems that the cooking standards are not even across the schools—for the same meal, there are schools where the students eat the food and others where the students waste it. The sambar rice that was prepared earlier was a risk-free dish that could generally not go wrong when it is prepared. The introduction of a variety of food items have also caused varying levels of taste and acceptance among the children. The fund allotted for vegetables is only Rs 0.87 per student per day. With the exorbitant rise in consumer price index, especially affecting the cost of vegetables in the past few years, students are often left to eat plain rice with an egg on most days, without any vegetables added to the meal.

Parents and students in general have a positive opinion about the scheme. Parents of secondary grade children are aware of this scheme as their wards have been eating the school cooked noon-meal for years together. Some parents are unsure, however, as to the grade up to which the scheme functions. On most days, over 60% of the students have reported that they like the food that is served and do take a liking for the variety menu as well. Based on the menu, they gauge the days of the week that they do not particularly enjoy the food that is prepared. A section of parents and some students belonging to classes 11 and 12 believe that an option of extending the scheme to have a small breakfast menu for them would be helpful as well given that these students attend special morning classes quite frequently. Most children do not eat anything in the morning and thus a morning meal would be very helpful for them. Students' complaints on the quality of food are usually about the ration rice, which is coarse and has a different taste from the farm-harvested rice that the children eat at home. They also find the eggs and rice not to be boiled well enough on days, and sometimes find issues with the amount of salt in the food.

While the policy has been for providing to school children only up to class 10 since 1984, HMs and NMOs have ceded to the fact that children in classes 11 and 12, who cannot afford to bring food from home and have been eating in the centre during their younger classes are also not denied the meals during lunch time and more often than not, there is adequate food available for their consumption as well. A quantity of 150g of rice per student is a sometimes more than what is required for an individual, and often when the food is made for the strength of students attending

that day, there is enough food that is left for students in classes 11 and 12 if they need it.

Infrastructure, space, and amenities

Noon-meal centres are often fraught with issues relating to infrastructure and facilities that they need to deal with on an everyday basis. Lack of clean drinking water that is exclusive to the use of the centre is a major issue that centres must confront. Often, they resort to seeking for drinking water from the school's supply (more than 50% of the schools we visited did this), while others use public borewell supply near the school. The state government has been upgrading new kitchen-cum-store centres with enough storage and cooking place, but nearly 80% of the centres we had visited lacked adequate space for both storage and cooking. In these cases, the cook resorts to cooking the food outdoors as it becomes too difficult to sit in the confining room and cook in the ensuing heat and smoke. Storage space is inadequate in some centres, and in one specific case, the HM of a newly constructed school offered the space under the staircase with a simple grill and a lock to store the food grains. This has the dual issue of the food being eaten up by rats or rodents as well as it being easy for anyone to steal from, due to an inept safety apparatus.

All schools have a gas connection that has been installed in the cooking centre; however, it was only one among 20 schools visited that uses this connection (an aided private school). Every other school has noon meal staff that manage cooking with firewood, which is neither healthy for the cooks nor for the children who eat it. Headmasters often mention about firewood being used in the cooking, but they do not have the capacity to do anything to change it. In addition to cooking food outside, doing it with firewood exposes the food to particulate matter that may affect the hygiene of the food. Noon meal staff argue that the funds they receive for fuel (Rs 0.45 per student) is inadequate to manage cooking with it for a whole month—the gas tends to run out in 10 days' time, and they are left with no funds for fuel after that. Officials at some levels also tend to agree that the gas funds are inadequate. This needs further investigation and, if needed, a solution in terms of enhanced budget provision for the purpose of supplying adequate cooking gas.

5.3. Distribution of free bicycle to the higher secondary school students

5.3.1. Background, spending, and coverage

The distribution of free bicycle scheme for class 9 students in TN had its inception in the year 2001-02 for the SC and ST government school students, especially for girls,

and later it was expanded to all students from the year 2005-06[40]. The BC, MBC, and Minority welfare Department holds the responsibility for the delivery of the bicycle to school students. From the year 2006, the TN government included the students who are availing free bus passes into the bicycle scheme[41]. The major objective of the scheme is to enable mobility and encourage students to participate in higher secondary school education[42]. While addressing the issue of mobility especially in view of bus timings and lack of adequate and timely public transport the scheme also aimed at giving greater confidence and independence to girls—'for nurturing their confidence, they need their own vehicles', said an official from the BC, MBC, and Minority Welfare department.

The BC, MBC, and Minority Welfare department funds all the students except the OC category. The OC category students are funded by school Education Department. The number of beneficiaries increased more than twice in a period of fifteen years, i.e., from nearly three lakhs in 2004-05 to more than six lakhs in 2013 onwards. But the total spending on the scheme increased nearly five times during the same period: from about 53 crores to about 245 crores in 2016-17 (Table 5.5).

Table 5. 5: Free Bicycle Scheme - Total Beneficiaries and Expenditure (2004-05 TO 2018-19)[43]

Sl. No	Year	Total No of Beneficiary (In Lakhs)	Total Expenditure (Amount in Crore)
1	2004-2005	2.98	52.56
2	2005-2006	6.36	114.15
3	2006-2007	4.84	102.82
4	2007-2008	5.24	112.47
5	2008-2009	5.6	136.81
6	2009-2010	5.58	3.65
7	2010-2011	5.6	2.73
8	2011-2012	5.6	3.83
9	2012-2013	5.6	4.74
10	2013-2014	6.3	200.98
11	2014-2015	6.3	216.04
12	2015-2016	6.38	219.5
13	2016-2017	6.21	245.07
14	2017-2018 and 2018-2019*	11.56	429.3

[40] TNN. (2015, July 17). Jayalalithaa wheels out free bicycle scheme: Chennai News - Times of India. Retrieved from https://timesofindia.indiatimes.com/city/chennai/Jayalalithaa-wheels-out-free-bicycle-scheme/articleshow/48105799.cms

[41] Performance budget 2015-16, BC MBC and Minorities welfare department, Tamil Nadu

[42] Policy note 2013-14, BC MBC and Minorities welfare department, Tamil Nadu

[43] Data obtained from Director of School Education, School Education Department, Tamil Nadu.

5.3.2. Administrative and Delivery Process

This scheme is run by the state's funding alone and the process is initiated immediately after the government sanctions fund for the scheme at the starting of the financial year. The Department of BC, MBC and the Minority Welfare is delegated to begin the process by sending a G.O (Government Order) to the School Education Department. The G.O from the BC, MBC, and Minority Welfare department requests indent from the School Education Department. The beneficiaries are classified by their social category, Other Classes (OC), BC, MBC, and SC/ST, to enable respective departments to share the costs as per the design. The rationale behind why the BC, MBC and Minority Welfare department runs the scheme instead of the School Education Department is not stated but it could be guided by political economic reasons to be able to assert the level of expenditure for socially deprived groups. The same channel of communication is followed from the school principal to the state while sending back the enrolment details. The verification of the number of beneficiaries is done at the DEO and the CEO level. There is no definite timeline prescribed for the start and end of the scheme's process.

Figure 5. 5: Administrative Process of sanctions for the Bicycle Scheme
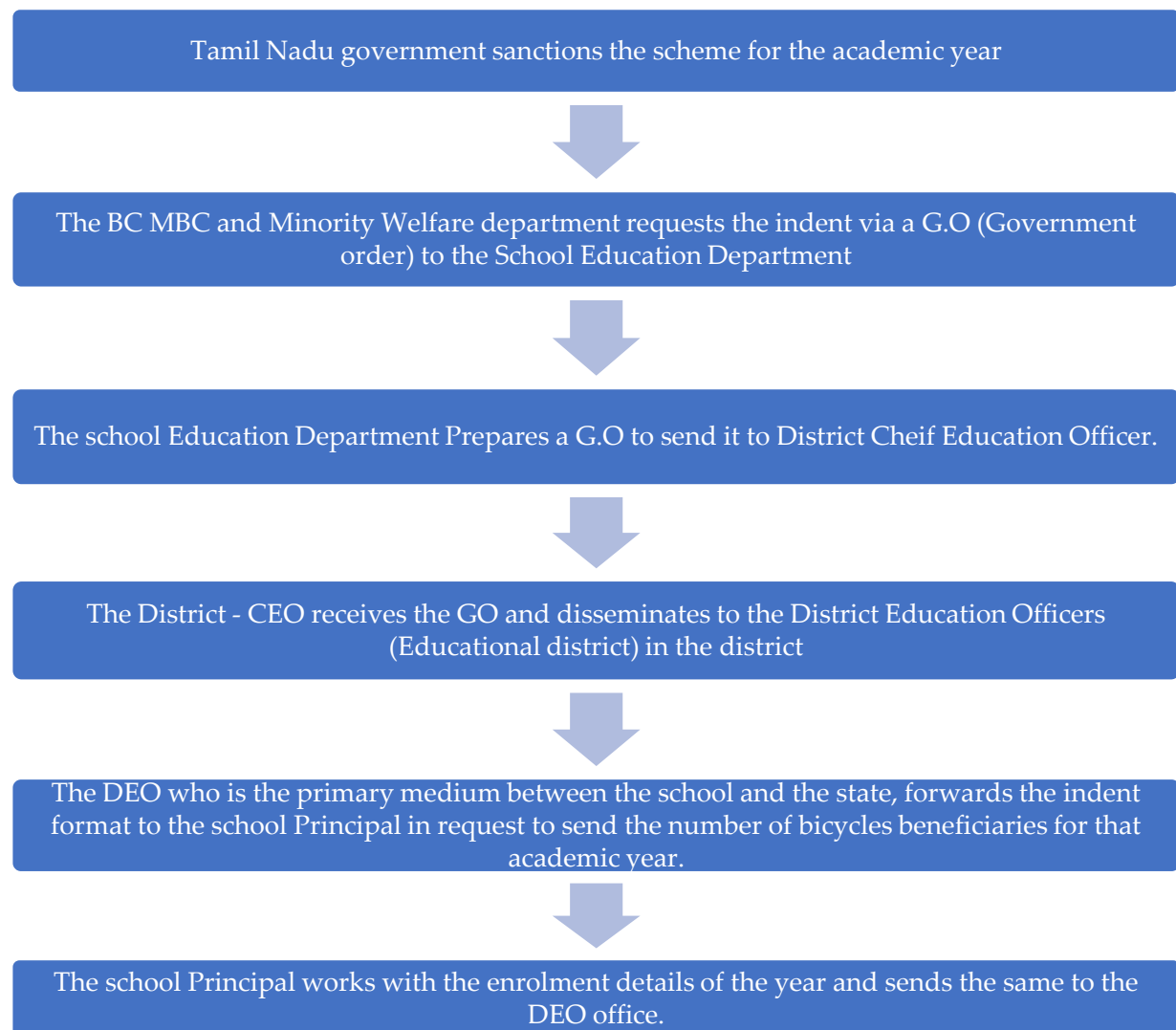
The Education Management Information System (EMIS) is a government educational portal, where data regarding all the educational activities including the number of schemes that are availed by the student are uploaded from the school. This portal also provides the enrolment data by social group, which is also the beneficiaries number of the academic year of any scheme. Even though the state departments can access all these data from the portal, the departments communicate in a physical copy through Government Order from the start of the scheme to till the end. The use of already available technology could perhaps make the process more efficient.

Figure 5. 6: The tender, supply, and distribution process

Tamil Nadu Government sanctions the fund for the Bicycle scheme for the academic year.	The Backward Classes (BC), Most Backward Classes (MBC), and Minority Welfare Department sends the indent requirement G.O (Government Order) to the School Education Department as well as floats the tender.	The process of tender announcement, bidding, committee formation and tender approval is conducted.
The bicycle companies are given the tender to manufacture the cycles. To distribute the work load, the department allows more than one company to take up the tender to manufacture the cycles.	Manufacturing is completed and distribution process begins.	The unassembled parts are brought to a school along with the labourers who fits it. The bicycle comes into a final shape.
Transportation to the schools nearby	Comes under the Principal's purview	Bicyle reaches the student

Figure 5.6 describes the process of tender, supply, and distribution. The tender process follows the Tender Transparency Act 1998 of Tamil Nadu and the tender is floated taking into account the last year's beneficiaries' number. The assumption is that the actual for the present year can fluctuate for about 500 on either side. An important feature is that the company that gets the tender supplies unassembled parts of the requisite number of bicycles to the school where these are assembled using local labourers

The school principal is de facto given the duty to distribute bicycles to the school students. The principal, after the bicycles reach the school, receives those completing the documentation process that involves the principal's signature against the number of bicycles received. The time of the arrival varies as the bicycle can be delivered at a given time as instructed in the tender document. If not delivered as agreed, a fine is levied as per the rules by the department. The principal is responsible for safe keeping of the bicycles till those are delivered. Some school principals found it challenging because of the lack of basic infrastructure. A few school principals reported during the fieldwork that they have appointed security guards or informed the local police station about the bicycles (or any other such items to be transferred to students) kept in the school.

The principal often distributes the bicycles in a pre-fixed date in the presence of the PTA in a function. The PTA members' presence ensures the accountability to people. At the time of distribution, the bicycle body number is documented against the student's name, and these details are sent to the DEO office, from where these are reported to the state department. The principal often forms a distribution committee of four-five teachers to distribute the cycles in a 'disciplined way'. When enquired about the time and amount of work taken for the principal and other teachers for such deliveries, a school principal in Krishnagiri district said, at least 40 academic days are spent in an academic year for all such deliveries to the school students; it means we have to forego as many classes. Most other principals echoed this estimate. This feedback does not include only the bicycle distribution but also refers to other schemes and needs further investigation.

The quality of the product is checked initially during the tender process by taking a sample piece from the manufacturing company by the committee formed during the tender process. There is a prescribed procedure for the quality testing even after the bicycle reaches the school, but during our field observation, we found no instances of quality check by the state department at the school level. If the cycle is defective on receipt, the principal may ask for replacement with the delivery agent, but these are rarely practiced. After the principal receives and distributes it, any defect, if detected, has to borne by the student only, even though the tender document says that the bicycle would carry a three-year warranty card with it. The warranty card should be given by the manufacturing company during the time of delivery of the scheme, and it should carry a warranty period of three years; in case of a defect, the company should replace it within a month from the Collector's intimation[44]. However, during the fieldwork we see no trace of any knowledge about the free bicycle carrying a warranty period among the students and as well as teachers at the school; the students did not receive any warranty cards with the bicycle delivered.

At the district level, the interactions suggested that in the CEO's office, the staff members are overburdened by the work on delivering the scheme. As one respondent noted that when he was appointed at the district office, there were only eight such schemes over the period. While the number of such schemes have more than doubled or nearly tripled, the number of sanctioned staff to manage those at the district level had remained the same.

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[44] Tender Document - 2018, Directorate of Backward classes welfare, Tamil Nadu.

5.3.3. Quality and relevance: Insights from the field

The overall reception of bicycle scheme among the student, teachers and the parents appeared to be satisfactory in the two districts of TN. What was clear that even though what is received may not always be fulfilling the purpose for which it is meant, or it may involve an additional expenditure, it is not frowned upon because it does mean a definite object in hand at a highly subsidised price, and it also has alternative usage. For instance, in certain places like Krishnagiri, where the terrain is not always flat, the students felt that improving the bus facility could be more relevant for reaching the school but still welcomed the bicycle as it had other usage—everyone in the family used it for commuting to other places that were not as inaccessible as the school. A student studying in a higher secondary school in Krishnagiri district shared that even though his school is only two kilometres away from his house, he was unable to reach the school using the bicycle provided by the government because of the uneven terrain. He relies on private or government buses to reach the school and back home, which costs more than 30 rupees in a day. But he uses the bicycle for other domestic purposes.

The quality of the bicycle is also considered good by parents and students and provisions have been made to assure the quality by addressing the glitches that existed by the departments providing it. Some glitches relating to the fitting and assembling of the cycle were reported during our field work, which have further been comprehensively addressed by the school education department by ensuring stricter controls and random checks[45].

What emerged is that though the scheme is functioning smoothly there are ways of improving the delivery by using enrolment portal, ensuring timely delivery, making

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[45] The director, School Education, echoed the same during the presentation on 08 January 2020 emphasising the fact that the issue has been comprehensively addressed by way of stricter controls and random checks. As mentioned earlier, the bicycles are brought without fitting them to school by the manufacturing company, who also bring the labour for fixing those. The students reported spending at least Rs 500 -1000 to get the bicycles fixed in the local cycle shops. While the principal of the school is supposed to do 'visible observation' to ensure whether the cycle is complete or not before distribution (as told by the BC MBC and Minority Welfare Department officials during interviews), none of the HMs in schools covered by the study knew about this expectation or responsibility during the time of our fieldwork in 2019. However, this, as informed by the Government of Tamil Nadu later, has changed, as the department has addressed the issue effectively.

provisions for better storage and quality checks, ensuring access to service centre for free assembly of the bicycle and other services during the warranty period, and creating a bottom-up channel for grievance and reporting. What was also clear that though students and parents are welcoming, this rarely plays a part in school related decision-making. Girls anyway outnumber boys at secondary levels; therefore, disparity is not against them though free bicycle may have enhanced their mobility.

5.4. Free laptop scheme

5.4.1. Background, spending, and coverage

The distribution of free laptops to students started in the year 2011 and is being implemented by Department of Special Program Implementation. In the Governor's address to the Assembly session that year, it was mentioned that the Government of Tamil Nadu would procure and distribute free laptops to the students of class 11 (plus one), class 12 (plus two), first year polytechnic students covering all government and government-aided schools, and colleges of the state. The move was expected to aid students in learning by opening them to technology assisted learning and also to use of technology.

The distribution of laptops by Department of School Education, Department of Collegiate Education, and Department of Technical Education in a phased manner for the first three years (first three phases) was also decided.

Table 5. 6: The Laptop Distribution Plan proposed in 2011

Year	Schools	Art/ Science Colleges	Engineering Colleges	Polytechnics
2011-12	Class 12	I and III-year students	II- and IV-year students	I and III-year students
2012-13	Class 12	III-year students	II- and IV-year students	I and III-year students
2013-14	Class 12			I year students

Source: G.O.(Ms.) No.1, Special Programme Implementation Department, Government of Tamil Nadu dated 03 June 2011.
Till 2019, 37.88 lakh students have received laptops at the cost of Rs 5,552 crore.

5.4.2. Administrative and Delivery Process

The Electronics Corporation of Tamil Nadu (ELCOT) has been entrusted with the task of procuring the laptops through competitive bidding process as per Tamil Nadu Transparency in Tenders Act 1998 and Rules 2000, after finalising the specifications of the laptop considering the usage by the student community. The

school education department estimates the number of students eligible for the laptop scheme and accordingly communicated in the budget process. Once the Special Program Implementation department receives the budget, ELCOT is requested to submit the proposal to supply the laptops to the Special Program Implementation Department, which forwards it to Finance Department after according the administrative sanction. After obtaining the administrative sanction with float a tender, ELCOT selects the vendor for the supply of laptops through a committee formed for the purpose. Accordingly, the funds are released from the Special Program Implementation department to ELCOT.

The Director of Technical Education, the Director of School Education and the Director of Collegiate Education were expected to prepare the list of schools and colleges along with the list of eligible students (consignee list) in the prescribed format and send it to ELCOT to facilitate the supply of laptops who would in turn share it with the suppliers after sharing a copy of the same with Department of Special Program Implementation. Heads of each of the institution were expected to provide the list of eligible students (excluding dropouts, discontinued, and transferred students) duly signed by them after verifying the information.

A District Level Monitoring Committee has been set up to under the chairmanship of District Collector for monitoring the distribution of laptops. The monitoring committee is constituted with the following members: District collector (chairperson), District Nodal officer (Project Director DRDA/Project officer Mahalir Thittam/District Revenue officer), Chief Education Officer, one representative each from collegiate education and technical education department. The District Nodal Officer is expected to furnish an Assembly Constituency-wise summary of beneficiary students furnished by respective heads of institutions.

The Electronic Corporation of Tamil Nadu has to ensure the checking of the laptops before supply through third party verification as per terms and conditions of supply. In addition, 5% verification needs to be conducted by the heads of institutions to ensure quality and ELCOT has to orient the heads of institutions to conduct the verification at the institutions level. It is expected to ensure demonstration at the institution level by concerned suppliers to facilitate familiarising of computers by the students who receive the laptops, prepare an operation manual and a handout on do's and don'ts for the use of students.

The Electronic Corporation of Tamil Nadu needs to ensure the distribution of laptops across all districts simultaneously. The order of distribution within the

district is decided by District Level Monitoring Committee. The heads of the institutions are responsible for the proper storage of laptops till those are distributed. The Directors of the School Education, Collegiate Education and Polytechnics are responsible for providing the space and proper storage by the respective institutions.

The heads of the institutions are responsible for the distribution for which usually public representatives like ministers, Members of the Legislative Assembly, Members of Parliament, are invited to handover the laptop to the students. The format prescribed by the Department of Special Program Implementation is filled with information of student along with the serial number of the laptop; the student would put their signature on the receipt of the laptop in the presence of the head of the institution, who would also sign. The directors of respective education streams are responsible for the random verification of laptops before and after its distribution to the extent of 10% by to ensure the quality. Similarly, District Collectors are responsible for carrying out 10% checks to ensure that the laptop has reached the eligible students. Payments are done once the heads of the institutions confirm the receipt of the laptops. Laptops carry a warranty of three years, except for the battery that has a warranty for one year.

With the Education Management Information System (EMIS) portal coming into existence, which has the complete details of the student across government, aided private and unaided private schools, the students have to submit applications online through the designated portal and upload their class 10 marksheet. Following the submission, the student is allotted a registration number that is used to receive the laptop upon the supply of the same to the institution.

5.4.3. Quality and relevance: Insights from the field

The introduction of EMIS has improved the efficiency as it contains the entire data pertaining to schools, teachers, students, and officials on real time basis. This data is being made available to all stakeholders and officials to take policy decisions. This has improved the availability of quality data for data analytics and data mining for initiating any major policy decision to improve quality of education. This EMIS is also being synchronised with UDISE database, maintained by the MHRD as this data is being utilised by MHRD for finalisation of annual work plan for the state.

However, there are issues of delay in the funds release to the ELCOT, which is apparently affecting the timely supply of the laptops. The backlogs were registered

during the years 2017-18 and 2018-19, and this was expected to be cleared in 2019-20. In the year 2019, the decision of not to give laptops to students who have failed in the class 12 examination was implemented, which is expected to save about Rs 200 crore to the state exchequer.

5.5. Distribution of Special Cash Incentive to students completing higher secondary education

5.5.1. Background, spending, and coverage

The scheme was introduced to reduce the dropout rate especially at the level of class 10. All students who are studying in class 10, and complete classes 11 and 12 are provided with a cash incentive of Rs 1,500 each for completing classes 10 and 11, and Rs 2,000 for completing the class 12. The total incentive of Rs 5,000 and additional interest, is made available to the student after completing class 12. The funds are deposited with Tamil Nadu Power Finance and Infrastructure Development Corporation and this fetches interest for the cash incentive transferred from the school education department. Till 2018-19, 113.35 lakh students have benefited at the cost of Rs1,810 crore.

5.5.2. Administrative and Delivery Process

The scheme operates through a designated portal where in the student can register, login with the EMIS ID number. The portal populates the data from the EMIS database, and the student has to provide the details of the bank account along with the IFSC code and submit the application. The EMIS data base also gets the results of the students which is used to verify and transfer the funds to the student's bank account.

5.5.3. Quality and relevance: Insights from the field

Regarding the cash incentive scheme for reducing dropouts, both HMs and students opined that it has had a positive impact on the continuation of education till class 12. However, some schools reported delays in the cash transfers, i.e., students received the money only after they got into college for their graduation course. It was also shared that few students who were getting scholarships (merit cum means, SC/ST scholarships) often do not maintain the minimum balance in the bank account and they lose out money because of the compulsory deductions by the banks for the same.

5.6.   Overall observations from the field

Although we were interacting with the students, parents, and headmasters mainly from the perspective of the four schemes, we received some critical feedback in response to open-ended questions; hence, we include those here as well.

5.6.1. Transfer schemes

Most of the schools visited had classes from 6 to 12. The HMs were very cordial and discussed the studies, implementation of schemes, and facilities of the school. Most HMs opined that the transfer schemes were very helpful for the students and has encouraged the students to perform better. The free school bag, books notebooks, cycle, uniforms, footwear, geometry box, colour pencils, atlas, etc., have equipped them to concentrate on learning, especially given the poor economic status of students who would have otherwise found it difficult to purchase these. Except for a few glitches in timing of the supplies and the need for repairs required for uniforms and bicycles, the distribution of the cash and non-case benefits were reported to be fairly well-organised and timely.

This was corroborated by the feedback received from FGDs with students and their parents in most cases, but they also had several negative feedbacks to add. Most of the students at the schools participating in the FGDs belonged to SC and OBC groups; as seen earlier, these are anyway the largest school attending population groups for the government schools. The students expressed their satisfaction about the cash and non-cash benefits received in the school. They received books, bags, uniform, geometry box, atlas, colour pencils, etc, but not necessarily always in time. The uniforms often require slight alteration and would cost Rs 20 to 50 per set. The quality of bicycle is also often good but needed a refitting which may cost between Rs 200 to Rs 500. There were complaints about poor quality food in the midday meal scheme, and of irregular supply of sanitary napkins. The state government also supplies footwear free of cost (*chappals*), which students felt they were not able to use as most were too big for their foot sizes. They also shared that notebooks supplied were not enough for their needs and they expressed their preference for long notebooks with more pages.

The HMs also opined that the monitoring of these scheme through EMIS portal is very helpful as the data is readily available for the departments to estimate the requirements. However, the monitoring and updating the EMIS information relating to school is causing a few challenges including that of allocation of human resources and connectivity issues at the school. As discussed earlier, few schools (3-4 out of 20) complained about the quality of the noon meal being served and the use of firewood

for cooking. The use of firewood was largely to mitigate the costs meant for cooking food and the costs would go up if LPG alone is used.

5.6.2. School infrastructure, transport, teachers, and counselling

Safe transport emerged as a major requirement in some of the sample schools. The issue of long distance for senior secondary stage schooling also emerged. In one sample school, students suggested the adjustment of bus timings to suit school hours.

In more than half the schools covered, the need for improvement in infrastructure emerged as an important issue. In some cases, it was the need for school compound and playground facilities, while the need for clean and usable toilets was also mentioned in some other cases. Poor infrastructure in terms of fewer number of rooms and desks, and poor lab and library facilities, especially at senior secondary level was also reported. Although the schools have been advised to access local resources and philanthropy, only a small number of schools have been successful in getting some furniture; the rest are not finding it easy to tap this channel.

An important concern was regarding the shortage of teachers in all areas: subject teachers, vocational courses, music, dance, sports was mentioned strongly by students and parents[46]. The need for strengthening English and vocational course teaching was mentioned almost everywhere. Parental concern of improving the quality was visible everywhere, also implicit from the fact that the PTA Meetings regularly discussed this issue. The HMs also shared that most parents of the school students are now very keen to get their children educated. The focus apparently is much more on the quality of education rather than on the implementation of schemes and scholarships in the PTA meetings. They also spoke about the need for career counselling sessions to understand the scope of vocational education and opportunities after secondary and higher secondary schooling.

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[46] Only one of the schools has separate teachers for yoga, dance (Bharatanatyam) and sports and about 25 students enrolled for each of them.

Chapter 6: Conclusions and Policy Implications

6.1.   Main Conclusions

The state of TN is definitely one of the educationally advanced states that has given high priority to education over the years. It has been a proactive state and has taken many steps to strengthen its school education. Like all Indian states, it has a combination of government, aided private, and unaided private schools, but it is also one of the states that has established committees for school fee regulation and renewal of curriculum. The commitment to education is visible even in the analysis of public expenditure at secondary stage (classes 9 to 12). The per student public expenditure increased both in nominal and real terms between 2012-13 and 2018-19; however, it did experience a small decline and flattening of the curve during the post 14th Finance Commission (FC) period, starting 2016-17when the transfers for the Centrally Sponsored Schemes started declining from the union government. The share of secondary education expenditure as a percentage of GSDP, Revenue Receipts, and Total Expenditure has clearly seen a declining trend in this post 14th FC period although some recovery is also visible. The share of the entire Social Sector Expenditure saw a decline in 2016-17, and although has started increasing since then, it has not yet reached the 2015-16 level. However, since the state has already been spending well on school education, perhaps the implications of these reductions may not be serious.

The state has invested both in strengthening the supply and provisioning of schools and on schemes that would act as incentives and enable parents to send their children to school; a number of these are aimed at reducing the burden of private expenditure on various educational or school-participation related requirements (e.g., food, uniform, foot ware, notebooks, bicycles, etc.) and some on promoting technology-based learning (e.g., laptops). Prudent investment in school education through various schemes have successfully led to a higher enrolment, retention, and transition rates at the level of secondary education. While the enrolment levels are high at secondary level, transition to senior secondary is an issue, especially for boys, despite an improvement on transitions rates for both secondary and senior secondary stages. This phenomenon needs further explanation. As the scope of this study was limited to the analysis of public expenditure on secondary schooling, it has not gone deeper into understanding this.

The availability of schools has also gone up at secondary level and this could have contributed in the in the betterment of transition rates from upper primary to

secondary grades. One of the important factors that has had a positive influence on retention and transition rates is the provisioning of both elementary and secondary education in one place. Most of the schools are upper primary to secondary (classes6-10). Model schools had been proposed during the year 2018-19 (at the cost of Rs 50 lakh per school) for augmenting the infrastructure that includes spacious classrooms, laboratory, conference hall, library, toilets, bio-digestive unit, and safe drinking water) in educationally backward blocks, were extended to the current year and next year as well. About 85% and 98% of the secondary and senior secondary schools have been equipped with computer and internet. Only 65% of senior secondary schools have laboratories for physics, chemistry, biology, computer, and language in TN. Only 10% or less senior secondary schools have laboratories for mathematics, geography, home science, and psychology. These were raised by parents and students in the limited fieldwork that we undertook as important issues to be addressed. Inclusive infrastructure for CWSN is still far from universal.

The fieldwork clearly indicated the presence of a strong social norm in favour of secondary education, and both parents and students viewed this as an important step for entering higher education or work life. About 70% of secondary and senior secondary schools have constituted parents-teacher association, which is far greater than the 45% observed at the national level. However, participation of parents and other stakeholders still seems to be low as gathered during fieldwork. On the other hand, the use of GIS (Geographical Information System) and EMIS (Education Management Information System) for school management has been generally efficient and advantageous although there is still potential for further use, e.g., estimating the number of bicycles for purchase every year. While increased use of technology for greater efficiency is welcome and needs to be further promoted wherever appropriate, it is also important that it is not used to undermine the participation of people- and parent-based bodies in education planning.

As stated earlier, the state has also been spending well in schemes that either substitute or compensate private expenditure and, in turn, is expected to push the demand for schooling. Seven departments and two welfare boards together implement 81 schemes, largely focusing on promoting the SC, ST, OBC, minorities, and girls' participation in secondary education. Of these, 21 schemes have universal coverage, about 49 schemes are aimed at providing monetary rewards, 12 schemes are focused on learning enhancement and 5 on improving access. While departmental coordination is managed well, there is scope for greater convergence and streamlining of the processes. For instance, EMIS, which has the latest data on

the students, could be used by the other departments too to approve and release funds for schemes instead of collecting data from schools again. This will also help in removing glitches, if any, in EMIS and streamlining the data management as well.

Puratchi Thalaivar Dr MGR Nutritious Meal Programme (PTMGRNMP), the midday meal programme, has served an important goal of keeping the nutritional status of children high and, over the years, has become an integral part of the schooling system though delivered through a different department. Those from poorer backgrounds still view this as the backbone of their school education choices. However, some parents do not consider it as important. It may be timely and prudent to reinvent the scheme as also being important for developing a 'community' and 'social learning' purpose by questioning the caste, gender, and religious divides; hence, a change of messaging from the government may be desirable. Some issues pertaining to the cooking space, storage, and LPG-based (rather than firewood) cooking, and the enhancement of funds towards vegetables to make the meal more wholesome need to be addressed. The interaction between the departments of School Education and SWNMP at the school level remains an issue on many locations and it may be desirable to reconsider this, especially if the scheme is also linked to life skills and social learning.

The bicycle scheme implemented by the BC MBC and Minority Welfare Department in coordination with the School Education Department seemed to have some issues regarding assembly and high demand on time of personnel, but most of these have already been addressed by the departments. However, the bigger issue of relevance still remains there. Although students and parents are happy to receive it, the use by the students for reaching school did not seem to be as wide spread; given that the roads and transport system are well-functioning in the state, a dedicated bus service could be provided for the school children. In this regard, there is a need to review both the schemes i.e., providing bus pass and bicycle for their relevance and the cost of implementation before arriving at a policy choice.

Personnel at different levels spend substantial time in collection, safe storage, and distribution of bicycles, and other such non-cash transfers such as chappals. The state departments can access the enrolment data from the portal, yet the departments communicate in a physical copy through a government order from the start of the scheme to till the end, adding to the time-demand of functionaries.

The laptop distribution and special cash incentive use the EMIS portal for distribution and transfers, and, therefore, are relatively smoother in their process. The laptop distribution process is streamlined to ensure that it reaches the real

beneficiary, but it also means heavy demand on the time of related personnel. The cash transfer, on the other hand, has the least time-demand but the need for minimum balance from the bank at times means that the beneficiary receives less than the amount transferred. Both schemes have experienced some delays in the supply of laptops or transfer of funds.

Our fieldwork was designed to understand the delivery process of the identified schemes and was not focused on understanding the impact or relevance per se. Given that some of these schemes are new while others such as midday meal have been in existence for long, it is also difficult to gauge the impact easily. In our FGDs, we gathered that these schemes are well-received by students and parents, but it is difficult to surmise if their decisions to continue/drop out-of-school are influenced by these or not, and how heavily it they are. Accessibility to schools and connecting infrastructure such as better roads and affordable transportation seem to be very crucial in making decisions for continuing secondary education. The quality of schooling in terms of better infrastructure, adequate and sincere teachers, and learning materials coupled with perceptions about potential economic returns of education seemed to play a greater role in influencing that decision. However, it would take a more focussed study to come up with a more conclusive feedback on what really matters in decision-making for schooling. It is also possible that students and parents are so used to receiving these goods and other support that they, therefore, talk more about what they see now as remaining issues. Also, important to note is that these support at times serve multiple purposes and even if universally not perceived as important, they remain critical for the more marginal sections. And literature suggests that when the services are universal, the quality is generally better because all sections including those who have greater influence are covered. Therefore, it would be simplistic to make any suggestion regarding the relevance of these schemes based on few non-representative feedbacks.

6.2.   Policy and research suggestions

Based on the above discussion, we draw five main policy and research suggestions here for the consideration of the Tamil Nadu government. These are as below:

1. Review of cash and in-kind transfers for their relevance, efficiency, and effectiveness

As mentioned earlier, the state has a number of in-kind and cash transfer schemes operational at the stage of secondary education. The literature clearly suggests that there is no standard rule regarding what is better: cash or kind. It depends on circumstances, context, and the need. However, since schemes like free bicycles at

class 9 and free bus pass schemes prove to be costly in terms of time-spent in delivery discussed earlier, it may be prudent to reconsider their continuation. This study provides pointers to the fact that improvement and synchronisation of transport services is a major need; though useful, bicycles are not necessarily used for reaching the schools, or in certain cases, they cannot be used for a variety of reasons including distance. Reliable and affordable transport services can ensure timeliness for schools and be helpful for all: teachers, non-teaching staff and students. Since girls' participation is not an issue in TN, their mobility is also not necessarily linked with bicycles unlike in some states in other parts of India. Same logic is applicable to other schemes such as footwear, where the size of the chappal was a major issue and many students could not use what they received. In these cases, centralised purchases and their distribution pose a serious challenge that needs to be weighed against the usefulness and relevance while estimating the costs and deciding the policy options for alternative use of these financial resources.

Similarly, the laptop scheme is efficient in its delivery but the communication regarding warranty, etc., could be improved. The relevance can be further improved by complementing it with formal computer courses and trainings for technology-assisted learning at the higher secondary level to make it really useful for better learning.

On the other hand, as discussed earlier, the meal scheme has served multiple purposes but has the potential to be positioned differently to make it more relevant in contemporary times as a tool of social learning to address social norms pertaining to caste, gender, class, and religion. This will require designing a curricular approach around this and also developing compatible communication approach for all: teachers, parents, students. Inter-departmental coordination needs to be viewed also from the angle of decentralisation; at the moment, it is highly centralised and the HMs in schools have no say.

The issue of centralisation is perhaps an issue with all in-kind transfer schemes in the state and any review must take that into consideration. While the centralised system with effective EMIS works well to an extent, any centralised system undermines the autonomy of both the HM/teachers and parents' bodies at the school. A system that uses technology well with adequate space for local decision-making could be the best solution.

Any review and reform in this area is bound to have implications for public expenditure if it releases additional resources that can be used for improving the school infrastructure and supply of teachers—this is something that we discuss next.

2. Improvement of school infrastructure and teacher-provisioning.

Although TN is positioned much better than the all-India average, large proportions of schools at secondary levels need better laboratories, libraries, and related facilities, and enhanced public expenditure is definitely needed in this respect. The option of accessing local resources does not work equally for all schools and, in principle, it acts against those located in poorer areas or districts.

Similarly, provisioning for adequate teachers is equally important for the quality of education. Some innovative solutions in the form of shared teachers in closely located schools in case of singing, music, dance, art may be a good solution for reducing the resources required for this but in general, teacher supply cannot be compromised.

3. Inter-departmental coordination, school provisioning and the use of technology.

At present, different departments and bodies run secondary schools. The state may consider transferring all schools to one department. i.e., to the Department of School Education, and have representation of other departments such as Adi Dravidar and municipal bodies to address specific concerns that the School Education department must address. This would remove many anomalies in norms and also would perhaps lead towards more inclusive education.

The issue of decline in the number of senior secondary schools needs to be explored further and any link with enrolment at that level be understood better. This study has not been able to go deeper into this. It is also important to see if it has any implication for boys' enrolment at that level as their numbers are declining at that stage. A deeper district level study using the EMIS data to understand the possible ways for rationalisation of provisioning of school education could be helpful in this regard.

In the context of technology, it is also important that staff is retrained to use these, and the processes are reengineered to replace paper-based inter and intra-departmental coordination.

Given the high rate of urbanisation, the state has a lot of potential that could be realised based on the district level skill development plans. This requires a focused deepening of the vocationalisation of secondary education with a strong industrial interface. This could also be used to substitute the Industrial Training Institutes (ITI) courses in a comprehensive manner. This could also include the concept of vocationalisation or work-based pedagogy as advocated in the National Curriculum

Framework. Given that the state has a strong manufacturing base, a comprehensive skill-based senior secondary education policy and system would be helpful.

4. States needs flexibility in Samagra Shiksha planning and greater clarity in its reporting.

The Samagra Shiksha Abhiyaan merged the SSA and RMSA, and Teacher Training into one centrally sponsored programme. While it appears to be a positive initiative as it could allow an integrated view of school education, in reality, it has offered only limited flexibility for the states because expenditures continue to be rigidly classified under same heads as before. Southern states including TN need higher funding for secondary education owing to expanding secondary education and funding needs for certain critical components (say adolescent education, training, or vocationalisation) could be higher. Unless the merger comes with greater flexibility for states, it may not serve much purpose. Greater clarity is also needed in its reporting as the funds to the state Samagra Shiksha Abhiyaan society (both the state share as well as the receipts of Government of India), if represented in either elementary or secondary education without dividing between the two, would increase the expenditures shown in the respective sub-sector's budget significantly, which could be misleading.

5. Addressing inter-district inequalities

The state has registered high growth rates alongside growing inequalities in terms of wider variations in the inter-district per-capita income. Inter-district variations in HDI are less marked as compared to economic indices but the range is higher for education indices as compared to health indices (please refer to annexures). Hence, educational policies need to be either carefully planned for each district wherein the localised needs and gaps are prioritised and addressed, respectively.

Decentralised planning and processes, as suggested earlier, could also help in the process of distribution of resources and its matching with the specific needs.

6. Addressing gender disparity

Tamil Nadu is experiencing higher dropouts and lower transition rates for boys at secondary stages, and that needs to be understood better quickly before the phenomenon becomes worse. Experiences of other countries have shown that this has to do with social and gender norms of labour as well as those of masculinity. Only targeted research will be able to tell what the reasons are and what solutions could be adopted.

References

Akila, R. (2009). Mapping educational policy structures and processes in Tamil Nadu. Education Policy Research Series

Dharmara, P., Nelson, J., and Ramesh, S., (2017), Role of parent, teacher association in school management: Case analysis, International journal of Management and Development Studies.http://www.ijmds.in/journalfile/5-2746353.pdf

Government Welfare Schemes, (2017). Government of Tamil Nadu.

Guidelines for School Infrastructure and Strengthening (Civil Works), 2014, Ministry of Human Resource Development, Government of India

Jha, J and Kelleher, F. 2006, *Boys Underachievement in Education*, Commonwealth Secretariat and Commonwealth of Learning, London
http://oasis.col.org/handle/11599/168)
Jha, J. Menon, N. and Chatterjee, D. 2017, Boys' Underperformance in Education: Revisiting the Issue in the Commonwealth, Commonwealth of Leaning
http://oasis.col.org/handle/11599/2810)

Narayan, S. (2018). The Dravidian Years: Politics and Welfare in Tamil Nadu, Oxford University Press

Policy Note on Information Technology, (2018), Information Technology Department, Government of Tamil Nadu

Sengottaiyan, K.A (2013-2019). Policy Note. Department of School Education, Available at http://tnschools.gov.in/policy_notes (accessed on 15January 2019).

Annexure 1

Table A1. 1: Per Capita Income by districts in Tamil Nadu (at 2004-2005 prices)

Districts	2004-2005 (in Rs)	2010-2011 (in Rs)	Per Annum Growth Rate (%)
Kanniyakumari	38,475	81,094	15.82
Tiruppur	37,089	72,479	13.63
Thiruvallur	34,820	70,778	14.75
Virudhunagar	40,394	70,689	10.71
Kancheepuram	33,564	70,667	15.79
Coimbatore	35,702	65,781	12.04
Tiruchirappalli	32,809	65,011	14.02
Thoothukudi	39,746	63,467	8.53
Erode	39,186	61,631	8.18
Karur	32,452	61,181	12.65
Namakkal	34,619	58,133	9.70
Chennai	37,676	57,706	7.59
Madurai	31,512	56,506	11.33
Krishnagiri	25,854	55,719	16.50
Tirunelveli	31,334	54,529	10.58
Vellore	29,037	52,900	11.74
Salem	29,271	48,802	9.53
Dindigul	28,448	47,812	9.72
Cuddalore	27,578	47,042	10.08
Dharmapuri	24,727	46,828	12.77
Nilgiris	28,234	44,993	8.48
Sivaganga	23,879	41,912	10.79
Thanjavur	24,150	40,366	9.59
Ramanathapuram	24,778	37,707	7.45
Pudukkottai	22,490	37,390	9.46
Theni	23,986	35,539	6.88
Tiruvannamalai	19,949	35,241	10.95
Nagapattinam	22,110	34,640	8.10
Villupuram	18,180	30,181	9.43
Thiruvarur	18,395	27,408	7.00
Perambalur	13,926	17,922	4.10
Ariyalur	12,654	16,559	4.41

Source: Department of Economics and Statistics, Tamil Nadu (retrieved from
http://www.tn.gov.in/dear/State%20Income.pdf)

Table A1. 2: Level of Development in the districts in Tamil Nadu (2017)

District	Standard of Living Index	Health Index	Education Index	Overall HDI Index	CDI Index
Kanyakumari	0.68	0.63	0.88	0.71	0.18
Namakkal	0.60	0.70	0.78	0.68	0.74
Tiruvannamalai	0.73	0.55	0.79	0.67	0.64
Salem	0.57	0.71	0.74	0.66	0.64
Theni	0.57	0.62	0.80	0.65	0.49
Thoothukudi	0.50	0.73	0.83	0.65	0.61
Nagapattinam	0.60	0.60	0.78	0.65	0.53
Cuddalore	0.63	0.56	0.74	0.63	0.54
Virudhunagar	0.54	0.58	0.86	0.63	0.49
Erode	0.54	0.63	0.71	0.61	0.57
Karur	0.57	0.56	0.75	0.61	0.58
Ariyalur	0.48	0.70	0.82	0.61	0.57
Tiruvallur	0.54	0.56	0.78	0.60	0.63
Thanjavur	0.57	0.62	0.69	0.60	0.56
Ramanathapuram	0.62	0.52	0.71	0.60	0.49
Nilgiris	0.56	0.47	0.91	0.60	0.62
Sivaganga	0.49	0.56	0.84	0.60	0.53
Perambalur	0.51	0.55	0.80	0.58	0.59
Coimbatore	0.61	0.63	0.54	0.58	0.56
Thiruvarur	0.53	0.48	0.81	0.57	0.47
Tiruchirappalli	0.51	0.59	0.66	0.57	0.46
Dindigul	0.60	0.53	0.60	0.57	0.53
Vellore	0.52	0.60	0.62	0.57	0.55
Krishnagiri	0.58	0.52	0.65	0.57	0.46
Tiruppur	0.53	0.58	0.61	0.56	0.59
Tirunelveli	0.51	0.61	0.60	0.56	0.56
Villupuram	0.56	0.56	0.58	0.55	0.61
Dharmapuri	0.47	0.49	0.69	0.54	0.53
Kancheepuram	0.49	0.44	0.74	0.53	0.55
Madurai	0.50	0.51	0.55	0.50	0.55
Pudukkottai	0.51	0.60	0.44	0.49	0.58

Note/Source: The indicators for each block in the districts mentioned in the table were collated from the reports available on the website of State Planning Commission, Government of Tamil Nadu, ((retrieved from http://www.spc.tn.gov.in/tnhdr2017.html)). The values of the above indices for the blocks in a district was averaged to derive the value at the district level. HDI stands for Human Development Index and CDI stands for Child Development Index (CDI).

Table A1. 3: Schemes implemented by different department in Tamil Nadu (2017)

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Laptop	For students in class 12.	SED	UN	0	0	0	1	0	0	0	0	0	0	0	0
Special cash incentive to reduce dropouts at secondary level	For students in classes 10, 11 and 12.	SED	UN	0	0	0	0	1	0	0	0	0	0	0	0
Textbooks	For students in classes 1 to 12.	SED	UN	0	0	0	1	0	0	0	0	0	0	0	
Notebooks	For students in classes 1 to 10.	SED	UN	0	0	0	1	0	0	0	0	0	0	0	0
School bags	For students in classes 1 to 12.	SED	UN	0	0	0	1	0	0	0	0	0	0	0	0
Geometry box	For students in classes 1 to 6, andnewly enrolled students in classes 6 to 9.	SED	UN	0	0	0	1	0	0	0	0	0	0	0	0
Atlas	For students in class 6 and newly enrolled students in classes 6 to 10.	SED	UN	0	0	0	1	0	0	0	0	0	0	0	0
Footwear	For students in classes 1 to 10.	SED	UN	0	0	0	0	0	0	0	0	0	0	0	1
Cycle	For students in class 11.	SED	UN	1	0	0	0	0	0	0	0	0	0	0	0
Bus Pass	For students in classes 1 to12.	SED	UN	1	0	0	0	0	0	0	0	0	0	0	0
Financial assistance for students who have lost their bread-winning parent/s	For students whose bread-winning parent (father or mother) dies or becomes permanently incapacitated in an accident.	SED	UN	0	0	0	0	0	0	0	0	0	0	0	1
Registration in employment exchanges	For students in classes 10 to 12.	SED	UN	0	0	0	0	0	0	1	0	0	0	0	0
Incentive of Rs3000 to SC and ST girls who pursue their secondary education in class 9	For girls in class 9.	SED	GC	0	0	0	0	0	1	0	0	0	0	0	0
Textbooks supplied through	All students studying up to class 12 in Adi	ATWD	SC/ST	0	0	0	1	0	0	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Educational department	Dravidar/Tribal Welfare Schools.														
Notebooks	All students studying in classes 3 to 9in Adi Dravidar/Tribal Welfare Schools and students belonging to Adi Dravidar/Tribal/Converted Christian Communities studying in classes 4 to 9.	ATWD	SC/ST	0	0	0	1	0	0	0	0	0	0	0	0
Uniforms	All students studying in classes 1 to 12in Adi Dravidar/Tribal Welfare Schools.	ATWD	SC/ST	0	0	0	1	0	0	0	0	0	0	0	0
Special guidebooks at no cost	All students studying in Adi Dravidar/Tribal Welfare Schools and appearing for classes 10 and 12examinations.	ATWD	SC/ST	0	0	0	1	0	0	0	0	0	0	0	0
Supply of Bicycles	Students belonging to Adi Dravidar/Adi Dravidar converted to Christianity Tribal communities and studying in class 11(all schools).	ATWD	SC/ST	1	0	0	0	0	0	0	0	0	0	0	0
Free boarding and lodging facility	Annual income of the family should be less than Rs2,00,000. Distance between school and parents' residence should exceed 5km (this will not apply to girls).	ATWD	SC/ST	0	0	0	0	0	0	0	0	0	0	0	1
The bright students selected from Adi Dravidar, Tribal, and converted to Christianity communities studying in class 5 are admitted in the reputed residential schools in class 6 and the entire expenditure of	Adi Dravidar/Adi Dravidar converted to Christianity/Tribals.	ATWD	SC/ST	0	0	0	0	0	0	0	0	0	0	0	1

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
these students is borne by the government till class 12. Under this scheme, one girl or one boy who secures the highest mark in the special examination conducted in 385 blocks is admitted in reputed residential schools.															
Exemption from paying tuition fees for students studying beyond class 12 in government/aided educational institutions.	Adi Dravidar/Adi Dravidar converted to Christianity/Tribals (there is no income limit).	ATWD	SC /ST	0	0	0	0	0		0	0	0	0	0	1
Payment of special fees for students studying in classes 6 to 12.	Adi Dravidar/Adi Dravidar converted to Christianity/Tribals (there is no income limit).	ATWD	SC /ST	0	0	0	0	0	1	0	0	0	0	0	0
Pre-matric scholarship scheme for the children of those engaged in unclean occupation in classes 1 to 10.	For children of those cleaning dry latrines/scavengers/tanners/flayers/waste pickers, irrespective of their religion, caste, and income.	ATWD	SC /ST	0	0	0	0	0	1	0	0	0	0	0	0
Post-matric Scholarship Scheme (from class 11onwards)	Students studying beyond class 10 and belonging to Hindu Adi Dravidar/Tribal (Family's annual income should not exceed Rs2,50,000).	ATWD	SC /ST	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
State Special Post-Matric Scholarship Scheme	Adi Dravidars converted to Christianity students who are not eligible for availing scholarship under Post-Matric Scholarship Scheme (family annual income should not exceed Rs2,00,000). For government employees, annual income excluding dearness allowance.	ATWD	SC/ST	0	0	0	0	0	1	0	0	0	0	0	0
Scholarship Scheme for SC/ST students studying in classes 9 and 10. Pre-matric Scholarship is sanctioned to the students studying in classes 9 and 10 in recognised institutions	Parents'/Guardians' annual income up toRs2,00,000.	ATWD	SC/ST	0	0	0	0	0	1	0	0	0	0	0	0
Payment of special fees and examination fees for students studying in class 11 (+1) and class 12 (+2) and B.A./B.Sc./B.Com., and post-graduate courses.	For those who are not eligible to avail themselves of the above mentioned two scholarships and studying in day colleges. No income limit.	ATWD	SC/ST	0	0	0	0	0	1	0	0	0	0	0	0
State Level Awards: the students who secure the highest marks in standards class 10 and class 12 public examinations at the state level	One student from each of the communities of Adi Dravidars/Tribals/Adi Dravidars converted to Christianity.	ATWD	SC/ST	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
are given cash awards.															
District Toppers Award: the students who secure the highest marks in class 10 and class 12 public examinations at the district level are given cash awards	One student from all the three communities of Adi Dravidars/Tribals/Adi Dravidars converted to Christianity	ATWD	SC /ST	0	0	0	0	0	1	0	0	0	0	0	0
Awards to Bright Students Scheme: two boys and two girls in each category i.e., Adi Dravidars, Tribals and Adi Dravidars converted to Christianity who secure highest marks in class 10 examination in each district are granted financial assistance for the next six years for pursuing higher education. A sum of Rs1,600each for the first year and Rs2,000 per annum for the subsequent years is paid.	Two boys and two girls obtaining first and second rank at the district level in each category. They should pursue higher studies. There is no income limit.	ATWD	SC /ST	0	0	0	0	0	1	0	0	0	0	0	0
Annal Gandhi Memorial Award Cash award is given to Hindu Adi Dravidar Student (one boy	Students belonging to Hindu Adi Dravidars who secure first rank at district level in class 12 public examination. There is no income limit.	ATWD	SC /ST	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
and one girl) who secure first rank in each district in class 12public examination. A sum of Rs2,000 for the first year and Rs1,500 for the next five years															
Chief Minister's Merit Award to1,000 boys and 1,000 girls belonging to Adi Dravidars, Tribals, and Adi Dravidars converted to Christianity Communities in order of marks obtained in class 12 std public examinations and who continue their higher studies are given cash awards.	Students should secure marks at the first 1,000 ranks in class 12 public examinations and continue higher studies. A sum of Rs3,000 per annum for five years is paid.	ATWD	SC/ST	0	0	0	0	0	1	0	0	0	0	0	
Education Tour: Rs25,000provided to each headmaster	Students studying in 207 ADW High/Higher Secondary Schools.	ATWD	SC/ST	0	0	0	0	0	0	0	0	0	0	0	1
Scouts/Guides: Rs55,000provided to each headmaster.	Students studying in 207 ADW High/Higher Secondary Schools.	ATWD	SC/ST	0	0	0	0	0	0	0	0	0	0	0	1
Regional, District, State Level Sports Competition	Students studying in 207 ADW High/Higher Secondary Schools.	ATWD	SC/ST	0	0	0	0	0	0	0	0	0	0	0	1

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Scholarship of Rs 1000 for girls studying in or passing class 10. Girls studying in or passing class 11 get –Rs 1000. Girls studying in or passing class 12get Rs1500.	i. Scholarship is allowed only for two children of the registered member of the board. ii. If both husband and wife have applied for scholarship, it will be sanctioned to one only. iii. If son/daughter of the member belonging to Adi Dravidar/Tribals Community is eligible for availing scholarship provided by the department, he/she can avail either of the scholarships only.	ATWD (Welfare Assistance through sanitary workers Welfare Board)	GC of SC/ ST	0	0	0	0	0	1	0	1	0	0	0	0
For Backward Classes community only															
Hostel for BC/MBC/DNC students. Free boarding and lodging facilities are provided to the hostel students. Uniforms are issued to students. The special guides are issued to students of classes 10 and 12for scoring high marks.	For BC community only. Annual income of parents should not exceed Rs1,00,000.	BC, MBC and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0
Pre-matric scholarship scheme for BC/MBC/DNCs Students. Students studying in classes 9 and 10 in English medium in government and government-aided schools are being	For BC community only. 1. Annual income of the parents should not exceed Rs2,00,000. 2. There should not be any graduate in the family.	BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0

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Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
sanctioned Rs250 per annum. at rate of Rs25 per month for 10 months.															
Pre-matric scholarship scheme. Examination Fee is fully reimbursed for class 10 students who write the Govt public exam.		BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0
Post-matric Scholarship Scheme. a. BC/MBC/DNCs Students studying in classes 11 and 12in English medium in government and government-aided schools are being sanctioned Rs 50 per month or Rs 500/- for 10 months. b. Examination fee is fully reimbursed for class 10 students who write the Govt. public exam.	For BC community only. 1. Annual income of the parents should not exceed Rs2,00,000. 2. There should not be any graduate in the family.	BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
State level prizes are awarded to the BC/MBCs/DNCs who secured first three places at state level in class 10 and class 12public examinations.	For BC community only. 1. Students should belong to BC/MBC/DNC 2. Students should have studied Tamil as a subject. 3. State Level Toppers who are awarded prizes in Education Department are not eligible to receive prize in this department. 4. If more than one student secure same mark, awards are granted to all students 5. There is no annual income limit.	BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0
District level prizes are awarded to the BC/MBCs/DNCs who secure first three places at district level in class 10 and class 12 public examination.	For BC community only. 1. Students should belong to BC/MBC/DNC 2. Students should have studied Tamil as a subject. 3. State Level Toppers who are awarded prizes in Education Department are not eligible to receive prize in this department. 4. If more than one student secure same mark, awards are granted to all students 5. There is no annual income limit.	BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0
Perarignar Anna Memorial Award is awarded at Rs10,000 per annum (maximum 4/5 years) to the boys and girls	For BC community only - 1. Students should belong to BC/ MBC/DNC 2. There is no annual income limit.	BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
who secure the first and second ranks in the class12 public examination in each district and pursue their studies in professional colleges in Tamil Nadu.															
Students of Backward Classes, Most Backward Classes/Denotified Communities (BC/MBC/DNC), who secure high marks in class 10 public examination in government schools at the district level are provided with financial assistance for pursuing their higher secondary education in the best private schools of their choice in Tamil Nadu. The scheme supports three boys and three girls of BC, and two boys and two girls of MBC/DNC in each district.	For BC community only. 1. Students should belong to BC/MBC/ DNC/ 2. Annual income of parents should not exceed Rs 2,00,000.	BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Chief Minister's merit award scheme.500 Girls and 500 Boys of BC/MBC/DNC who score high marks in the class 12 public examination at the state level are awarded Rs3,000 per annum till the completion of their degree/diploma/ professional courses for a maximum period of five years.	For BC community only. 1. Students should belong to BC/MBC/DNC 2. Students should have studied Tamil as a language in class 12 (+2). 3.Students who have received Perarignar Anna Award of this department are not eligible to receive this award. 4. There is no income limit.	BC, MBC, and MNW	BC	0	0	0	0	0	1	0	0	0	0	0	0
Free Bicycles are supplied to BC/MBC/DNC students studying in class 12 in government, government-aided and partially aided schools.	For BC community only. 1. Students should belong to BC/MBC/DNC. 2. There is no income limit.	BC, MBC, and MNW	BC	1	0	0	0	0	0	0	0	0	0	0	0
The Free boarding and lodging facilities are provided to the hostel students. Uniforms are issued to students. The special guides are issued to students of class 10 and class 12 for scoring high marks	For MBC and DNC community. Annual income of parents should not exceed Rs 1,00,000.	BC, MBC, and MNW	MBC and DNC	0	0	0	1	0	0	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Kallar Reclamation school - The People belonging to the Piramalai Kallar Community are predominantly concentrated in Madurai, Dindigul and Theni Districts. For the educational advancement of the Piramalai Kallar Community people, 290 Kallar Reclamation schools are functioning in these three districts. About 28,790 pupils are studying in these schools. Textbooks - Students of classes 1 to 12. Notebooks for students of classes 1 to 10. Uniforms - Students of classes 1 to 8. Laptops - Students of class 12 only. School Bags - Students of classes 1 to 11. Bus- passes - Students of classes 1 to 12 Special Incentive to reduce the dropout students of	Eligible for all community Students studying in the schools.	BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	0	0	0	0	0	0	1

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
classes 10 and 11Rs 1,500/- Students of class 12 - Rs 2,000/-															
Pre-matric scholarship scheme - MBC/DNCs Students studying in classes 9 and 10 in English Medium in government and government-aided schools are being sanctioned Rs 250/- p.a. at rate of Rs 25/- per month for 10 months		BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	1	0	0	0	0	0	0
Pre-matric scholarship scheme - Examination Fee fully Reimbursed for those class 10 students who write the Govt. public exam.	No condition for MBC/DNC students	BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Post-matric scholarship scheme - MBC/DNCs Students studying in classes 11 and 12 in English Medium in government and government-aided schools are being sanctioned Rs 500/- p.a. at the rate of Rs 50/- per month for 10 months	No Condition for MBC/DNC students	BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	1	0	0	0	0	0	0
Post-matric scholarship scheme - Examination Fee fully Reimbursed for those class 12 students who write the Govt. public exam.		BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	1	0	0	0	0	0	0
State level prizes are awarded to the BC/MBCs/DNCs who secured first 3 places at State level in class 10 and class 12 std Public Examination	1. Students should belong to MBC/DNC 2. Students should have studied Tamil as a subject. 3. State Level Toppers who are awarded prizes in Education Department are not eligible to receive prize in this Department. 4. If more than one student secure same mark, awards are granted to all students 5.There is no annual income limit for receiving awards	BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Prizes are awarded to the BC/MBCs/DNCs who secured first 3 places at District level in class 10 and class 12 Public examination	1. Students should belong to MBC/DNC 2. Students should have studied Tamil as a subject. 3. State Level Toppers who are awarded prizes in Education Department are not eligible to receive prize in this Department. 4. If more than one student secure same mark, awards are granted to all students 5. There is no annual income limit for receiving awards	BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	1	0	0	0	0	0	0
Students of Backward Classes, Most Backward Classes/Denotified Communities, who secure high marks in class 10 public examination in Government schools at the district level are provided with financial assistance for pursuing their Higher Secondary Education in the best private schools of their choice in Tamil Nadu. The scheme supports 3 boys and 3 girls of Backward Classes and 2 boys and 2 girls	1.Should belong to MBC/DNC. 2.The parental annual income should not exceed Rs 2 lakh	BC, MBC, and MNW	MBC and DNC	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
of Most Backward Classes/Denotified Communities in each district.															
Bicycles are supplied to BC/MBC/DNC students studying in class 11 in Government, Government aided and partially aided schools.	1. Students should belong to MBC/DNC & MW. 2. There is no parental annual income ceiling.	BC, MBC, and MNW	MBC and DNC	1	0	0	0	0	0	0	0	0	0	0	0	0
Minorities Welfare															
Pre-matric scholarship - a) Students should belongs to Minorities Communities b) Students pursuing studies in classes 1 to 10 in Govt./ Govt Aided/ Govt. Approved Private Institutions. c) Should have obtained not less than 50% marks in the previous year Annual Examinations (Except for std I) d) Annual Income of the Parant/ Guardian (from all sources) not		BC, MBC, and MNW	MN	0	0	0	0	0	1	0	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
exceeding Rs 1 Lakh.															
Post matric scholarship - 1. Students should belong to Minority Communities. 2. Students pursuing studies from XI Std to Research Studies (PhD) in all Govt./ Govt. Aided/ Private Institutions (Except professional studies) 3. Should have obtained not less than 50% of marks in the previous year exams. 4. Parant/ Guardian annual income does not exceed Rs 2 Lakh (from all sources)		BC, MBC, and MNW	M N	0	0	0	0	0	1	0	0	0	0	0	0
State and district level prizes	1. Should belongs to Minorities Communities 2. Boys/ Girls without any conditions who had obtained first, second, and third level highest marks in class 10 and class 12 public	BC, MBC, and MNW	M N	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
	examinations and opted Tamil as first language are awarded prizes. All students who scored similar marks will be awarded prizes.														
State level prizes for Urdu students	1. Students belongs to Minority Communities. 2. Given to one Boy and one Girl who scored first, second, and third level highest marks in class 10 and class 12 public examinations and opted Urdu as first or second language.	BC, MBC, and MNW	MN	0	0	0	0	0	1	0	0	0	0	0	0
Minorities hostel	a) belongs to Minority Communities. b) Parent/ Guardian Annual Income (from all sources) does not exceed Rs 1 Lakh. c) Studying from class 4 to class 12 will be admitted in school hostels. d) Studying ITI/Polytechnic/ Arts and Science Colleges will be admitted in College Hostels.	BC, MBC, andMNW	MN	0	0	0	1	0	0	0	0	0	0	0	0
Assistance for Having Secured Higher Marks: An Assistance of Rs 5,000/-, Rs 3,000/- and Rs 2,000/- is being given to Members' Children, who have secured high marks in class 10 and class 12(i.e.) first 3 rank holders in the State.	Members who have registered with this board	CTR	UN	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Assistance for Having Secured Higher Marks: An Assistance of Rs 5,000/-, Rs 3,000/- and Rs 2,000/- is being given to Members' Children, who have secured high marks in class 10 and class 12 (i.e.) first 3 rank holders in the State.	Only tribal students	ENFR	SC/ST	0	0	0	0	0	1	0	0	0	0	0	0
Educational Incentives Cash Awards of Rs 2,000/- for class 10 and Rs 3,000/- for class 12 is being given to the children of the workers who secured first 10 places in Government Public Examinations in each Educational District.	1. Worker should be a contributor to Labour Welfare Fund. 2. Should apply on or before 31 October.	LE	UN	0	0	0	0	0	1	0	0	0	0	0	0
Educational Assistance Rs 1000/- (Only Two Children) for those who pass class 10.	1. The registered manual worker is eligible to avail this benefit for the education of his/her children. 2. The claim application form shall be submitted in prescribed format with relevant documents. 3. Where both husband and wife have applied for assistance, one of them alone shall be eligible for such assistance	TN UWW B	UN	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Educational Assistance for those who pass class 12Rs 1500/-	1. The registered manual worker is eligible to avail this benefit for the education of his/her children. 2. The claim application form shall be submitted in prescribed format with relevant documents. 3. Where both husband and wife have applied for assistance, one of them alone shall be eligible for such assistance	TN UWW B	U N	0	0	0	0	0	1	0	0	0	0	0	0
Only for Girl children. Rs 1,000 for those in classes 10 and 11, and Rs 1,500 for those in class 12 (should apply before completion of academic year).	1. The registered manual worker is eligible to avail this benefit for the education of his/her children. 2. The claim application form shall be submitted in prescribed format with relevant documents. 3. Where both husband and wife have applied for assistance, one of them alone shall be eligible for such assistance	TN UWW B	GC	0	0	0	0	0	1	0	1	0	0	0	0
Educational Assistancefor those studying in class 10 (only for girl child) of Rs 1,000.	1. Registered manual worker of Tamil Nadu Construction Workers Welfare Board. 2. Application shall be in prescribed form 3. Where both Husband and Wife have applied for assistance, one of them alone shall be eligible for such assistance. 4. Only two children are eligible for given this assistance.	TN CWD	GC	0	0	0	0	0	1	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
	5.Should apply in that academic year itself.														
Educational Assistance–Rs 1,000 for those who pass class 10.	1. Registered manual worker of Tamil Nadu Construction Workers Welfare Board. 2. Application shall be in prescribed form 3. Where both Husband and Wife have applied for assistance, one of them alone shall be eligible for such assistance. 4. Only two children are eligible for given this assistance. 5.Should apply in that academic year itself.	TN CWD	U N	0	0	0	0	0	1	0	0	0	0	0	0	0
Educational Assistance–those studying in class 11Rs 1000/- (only for girl child)	1. Registered manual worker of Tamil Nadu Construction Workers Welfare Board. 2. Application shall be in prescribed form 3. Where both Husband and Wife have applied for assistance, one of them alone shall be eligible for such assistance. 4. Only two children are eligible for given this assistance. 5.Should apply in that academic year itself.	TN CWD	U N	0	0	0	0	0	1	0	0	0	0	0	0	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Educational Assistance - Rs 1500/- (only for girl child) in class 12.	1. Registered manual worker of Tamil Nadu Construction Workers Welfare Board. 2. Application shall be in prescribed form. 3. Where both Husband and Wife have applied for assistance, one of them alone shall be eligible for such assistance. 4. Should apply in that academic year itself.	TN CWD	GC	0	0	0	0	0	1	0	0	0	0	0	0
Educational Assistance - Rs 1500/- for those who pass class 12.	1. Registered manual worker of Tamil Nadu Construction Workers Welfare Board. 2. Application shall be in prescribed form. 3. Where both Husband and Wife have applied for assistance, one of them alone shall be eligible for such assistance. 4. Should apply in that academic year itself.	TN CWD	UN	0	0	0	0	0	1	0	0	0	0	0	0
Scholarship scheme (above class 9) Scholarship for students studying from class 9 to class 12Rs4,000/- per annum		WDA	DA	0	0	0	0	0	1	0	0	0	0	1	0
Reader Allowance for Visually impaired students - The visually impaired students are given readers allowance. Readers allowance is	Must be a visually impaired student of class 9 and above of a bonafide institution. Must produce certificate from the Reader, who reads the lessons.	WDA	DA	0	0	0	0	0	0	0	0	0	0	1	1

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
being paid at the following rate:Rs3,000(per annum) for classes 9 to 12.															
Scribe Assistance to The Persons Who Assist in Writing Examination - A sum of Rs300/- per paper is paid to each Scribe. Scribes are engaged to write the answer, which visually impaired students dictate in government examinations for classes 9 to 12.	Visually impaired students who appear for Government examinations.	WDA	DA	0	0	0	0	0	0	0	0	0	0	1	1
Providing DVD Players to Facilitate Education of The Visually Impaired Students - Visually impaired students studying in classes 10 and 12 in Govt. Blind Schools will be provided with Pre-recorded. Text CDs along with DVD and CD Players with accessories.	Students studying in Government schools for the blind are eligible	WDA	DA	0	1		0	0	0	0	0	0	0	1	0
Cash Prize to Visually Impaired Students Securing Top	Meritorious students who secured top three ranks at District and State level.	WDA	DA	0	0	0	0	0	1	0	0	0	0	1	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Three Ranks in Public Examination															
Cash Prize to Hearing Impaired Students Securing Top Three Ranks in Public Examination – Hearing impaired students who secure first three ranks in class 10 and class 12 at the district level and at the state level with Tamil medium of instruction will be given special awards	Meritorious students who secured top three ranks at District and State level.	WDA	DA	0	0	0	0	0	1	0	0	0	0	1	0
Cash Incentive to Prevents Dropouts from Schools – Cash incentives are provided to the differently abled students studying in classes 10 to 12in government and government-aided Special Schools to motivate them to continue their studies and to prevent dropouts.	Students studying in classes 10 to 12 in government and government-aided Special Schools	WDA	DA	0	0	0	0	1	1	0	0	0	0	1	0

Name of the state scheme	Caters to/ eligible to/ eligible for	BY	A	B	C	D	E	F	G	H	I	J	K	L	M
Social Security Schemes (D) Scholarship To Son And Daughter Of Persons With Disabilities – Scholarship is given to son/daughter of Persons with disabilities as follows: (for every academic year of the course) (a) Daughter studying in class 10 =Rs1,000/- b) For son who has passed class 10 =Rs1,000/- c) Daughter studying in class 11 =Rs1,000/- d) For daughter studying in class 12 =Rs1,500/- e) For son who has passed class 12 =Rs1,500/-	Children of any differently abled person registered in the Welfare Board for the differently abled.	WDA	DA	0	0	0	0	0	1	0	0	0	0	1	0
Puratchi Thalaivar Dr. MGR Nutritious meal programme	Up to class 10	SWD	UN	0	0	1	0	1	0	0	0	0	0	0	0

Source: Government Welfare Schemes, Government of Tamil Nadu, 2017.

Note: 1. The abbreviations for departments are as follows: (a) SED – School Education Department; (b) ATWD – Adivasi and Tribal Welfare Department; (c) BC, MBC, and MNW – Backward Class, Most Backward Class and Minority Welfare Department; (d) CTR – Commercial Taxes and Registration Department; (e) ENFR – Environment and Forest Department; (f) LE – Labour Employment Department; (g) TN UW WB – Tamil Nadu Unorganized Workers Welfare Board; (h) TN CWD – Tamil Nadu Construction Workers Welfare Board; (i) WDA – Welfare of Differently Abled and (j) SWD – Social Welfare Department.

2. The abbreviations for intended objective of the scheme are as follows: (a) A – Access defined as schemes to facilitate the students to reach the school; (b) B – Infrastructure defined as schemes to provide/upgrade infrastructure facilities to the schools; (c) C – Nutrition defined as schemes to improve the nutritious level among the children in the school; (d) D – Learning defined as schemes to aid the children in learning; (e) E – Retention defined as schemes to retain the child in the school/ reduce the dropouts; (f) F – Any form of monetary rewards are defined as schemes to assist/to encourage the child in education; (g) G – Employment are defined as schemes to help the child in exploring career opportunity/helping to secure employment or its related activities; (h) H – Girl children are schemes designed especially for girl children to encourage them to schooling; (i) I – ICT are defined as schemes to build information and communication technology.

3. The abbreviations for target group of the scheme are as follows: (a) UN – Universal; (b) GC – Girl Children; (C) SC/ST – Scheduled Caste/Scheduled Tribe; (d) BC – Backward Class; (e) MBC and DNC – Most Backward Class and Denotified Community; (f) MN – Minority; and (g) DA – Differently Abled.

Table A1. 4: Number of Schools by type of management – Districts in Tamil Nadu (2016-2017)

Districts	Government			Private			Within Percent share Government		Within Percentage - Private	
	Secondary	Senior Secondary	Total	Secondary	Senior Secondary	Total	Secondary	Senior Secondary	Secondary	Senior Secondary
Chennai	176	111	287	475	348	823	61.32	38.68	57.72	42.28
Coimbatore	377	191	568	482	344	826	66.37	33.63	58.35	41.65
Cuddalore	259	114	373	186	105	291	69.44	30.56	63.92	36.08
Dharmapuri	222	100	322	92	58	150	68.94	31.06	61.33	38.67
Dindigul	180	87	267	186	119	305	67.42	32.58	60.98	39.02
Erode	257	137	394	238	156	394	65.23	34.77	60.41	39.59
Kancheepuram	330	175	505	386	227	613	65.35	34.65	62.97	37.03
Kanniyakumari	153	72	225	300	180	480	68.00	32.00	62.50	37.50

Districts	Government			Private			Within Percent share Government		Within Percentage - Private	
	Secondary	Senior Secondary	Total	Secondary	Senior Secondary	Total	Secondary	Senior Secondary	Secondary	Senior Secondary
Karur	116	58	174	87	51	138	66.67	33.33	63.04	36.96
Krishnagiri	286	105	391	129	84	213	73.15	26.85	60.56	39.44
Madurai	222	116	338	273	200	473	65.68	34.32	57.72	42.28
Nagapattinam	169	70	239	113	66	179	70.71	29.29	63.13	36.87
Namakkal	172	102	274	163	111	274	62.77	37.23	59.49	40.51
Perambalur	204	86	290	107	58	165	70.34	29.66	64.85	35.15
Pudukkottai	211	100	311	112	63	175	67.85	32.15	64.00	36.00
Ramanathapuram	134	67	201	120	75	195	66.67	33.33	61.54	38.46
Salem	305	152	457	251	167	418	66.74	33.26	60.05	39.95
Sivaganga	142	69	211	139	82	221	67.30	32.70	62.90	37.10
Thanjavur	235	104	339	179	113	292	69.32	30.68	61.30	38.70
Nilgiris	113	55	168	104	42	146	67.26	32.74	71.23	28.77
Theni	108	65	173	95	64	159	62.43	37.57	59.75	40.25
Thiruvallur	302	133	435	372	228	600	69.43	30.57	62.00	38.00
Thiruvarur	139	71	210	73	44	117	66.19	33.81	62.39	37.61
Thoothukudi	94	60	154	213	130	343	61.04	38.96	62.10	37.90

Districts	Government			Private			Within Percent share Government		Within Percentage - Private	
	Secondary	Senior Secondary	Total	Secondary	Senior Secondary	Total	Secondary	Senior Secondary	Secondary	Senior Secondary
Tiruchirappalli	247	114	361	230	142	372	68.42	31.58	61.83	38.17
Tirunelveli	176	106	282	323	213	536	62.41	37.59	60.26	39.74
Tiruvannamalai	345	138	483	158	90	248	71.43	28.57	63.71	36.29
Vellore	375	188	563	279	175	454	66.61	33.39	61.45	38.55
Villupuram	382	183	565	194	99	293	67.61	32.39	66.21	33.79
Virudhunagar	197	96	293	161	109	270	67.24	32.76	59.63	40.37
Tamil Nadu	6628	3225	9853	6220	3943	10163	67.27	32.73	61.20	38.80

Source: Unified District Information on School Education (UDISE) Dashboard – Secondary Education (retrieved from http://udise.schooleduinfo.in/dashboard/Secondary#/ -on 14 January 2019)

Table A1. 5: Net Enrolment Ratio (NER) in secondary and senior secondary level in Tamil Nadu and India (2015-2016)

By Gender	Tamil Nadu		India	
	Secondary	Senior Secondary	Secondary	Senior Secondary
Male	64.93	47.4	50.66	31.97
Female	67.03	56.94	51.93	32.67
Total	65.98	52.17	51.30	32.32

Source: Estimated using the survey dataset provided by National Sample Survey Office (NSSO) 71st round census in 2014.

Annexure 2

Table A2. 1: List of Schools visited during fieldwork

Sl. no	District	Block	School Name	Type of School	Classes taught in school	Medium of Instruction in the school	Students
1	Virudhunagar	Sivakasi	Municipal Higher Secondary School, Ammankovilpatti	Municipal school	6 to 12	Tamil and English	555
2	Virudhunagar	Sivakasi	GHSS, Reserve Line	Government	6 to 12	Tamil	544
3	Virudhunagar	Sivakasi	Muslim Higher Secondary School	Government aided	6 to 12	Tamil and English	763
4	Virudhunagar	Sivakasi	AVT Municipal High School	Government	6 to 12	Tamil	38
5	Virudhunagar	Sivakasi	GHS, M. Pudhupatti	Government	6 to 10	Tamil and English	71
6	Virudhunagar	Rajapalyam	Perunthalaivar Kamarajar HSS, Meenatichiyapuram	SS/AV	6 to 12	Tamil	416
7	Virudhunagar	Rajapalyam	P.A.C.R. Ammani Ammal Girls Higher Secondary School	Aided	6 to 12	Tamil and English	1035
8	Virudhunagar	Rajapalyam	Govt (A.D.W) Higher Secondary school,	Government SC welfare	6 to 12	Tamil	

Sl. no	District	Block	School Name	Type of School	Classes taught in school	Medium of Instruction in the school	Students
			Sundararaj apuram				
9	Virudh unagar	Rajap alyam	GHS, Mount Zion	Govern ment	6 to 10	Tamil and English	92
10	Virudh unagar	Rajap alyam	GHSS, Chokkanat hanputhur	Govern ment	6 to 10	Tamil and English	910
11	Krishn agiri	Math ur	Govt (A.D.W) High School,Ath ippalam	Govern ment - SWD	6 to 10	Tamil	55
12	Krishn agiri	Math ur	Govt Higher Secondary School,Ma darahalli	Govern ment	6 to 12	Tamil and English	162
13	Krishn agiri	Math ur	Govt High School, Saloor	Govern ment	6 to 10	Tamil	43
14	Krishn agiri	Math ur	Govt Boys Higher Secondary School, Mathur	Govern ment	6 to 12	Tamil and English	732
15	Krishn agiri	Math ur	Govt Higher Secondary School, M. Nadupattu	Govern ment	6 to 12	Tamil	312
16	Krishn agiri	Shool agiri	GHS Berigai (Urdu)	Govern ment	6 to 10	Urdu	48
17	Krishn agiri	Shool agiri	Model HSS, Shoolagiri	Govern ment	6 to 12	Tamil and English	425
18	Krishn agiri	Shool agiri	Govt HSS (Girls), Shoolagiri	Govern ment	6 to 12	Tamil and English	100
19	Krishn agiri	Shool agiri	GHSS, Enusonai	Govern ment	6 to 12	Tamil and English	480

Sl. no	District	Block	School Name	Type of School	Classes taught in school	Medium of Instruction in the school	Students
20	Krishnagiri	Shoolagiri	GHSS, Haleseebam	Government	6 to 12	Tamil and English	

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