District Human Development Report - 2017

Thiruvarur District

State Planning Commission
Tamil Nadu

THIRUVARUR

DISTRICT HUMAN DEVELOPMENT REPORT 2017

District Administration, Thiruvarur and
State Planning Commission, Tamil Nadu
in association with
Thiru.Vi.Ka.Government Arts College,
Thiruvarur

CONTENTS

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MESSAGE

Tamil Nadu is a pioneer in implementing welfare programmes. The State's Twelfth Five Year Plan insists upon the betterment of Human Development status. Tamil Nadu is on the path of development for achieving accelerated, innovative and inclusive growth.

The State Planning Commission had earlier published Human Development Reports for the State and 8 districts. The analysis on the inter district and intra district disparities has led to policy recommendations and formulation of specific schemes like State Balanced Growth Fund to address backwardness. As a sequel, State Planning Commission has taken up the preparation of Human Development Reports for all districts.

This report is prepared with an objective to address Human Development concerns at the block level. An in-depth analysis on the Human Development status through Health, Education, Standard of living, Gender, Demography, Social Security sectors has been made to study the performance of blocks at the sub-district level. This could play as an effective tool for grassroots level planning.

I take this opportunity to place on record my sincere appreciation to the District Collector and Line Department Officials for sharing data on various parameters for the preparation of District Human Development Report. I thank all the stakeholders for their contributions to this report.

ANIL MESHRAM
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PREFACE

The Human Development Report of UNDP (1997) describes human development as "the process of widening people's choices and the level of well being." HDI, measures of Human Development, is a composite statistics of life expectancy, education and per capita income indicators. HDI Index, prepared every year by UNDP, has been considered as an indispensible tool for achieving equity in development. By recognizing the importance of HDI, Tamil Nadu State Planning Commission Prepared and published HDR for 8 districts during the period between 2003-2008. The reports provided a compressive status of these districts in terms of Health Education and Income. The findings were used for developing appropriate strategies for improving the social and economic status of the people.

After having achieved success in its earlier endeavor, the State Planning Commission has again initiated the process of preparing Human Development Report for all districts in Tamil Nadu. This initiative will help to understand the concept of Human Development in the era of inclusive and sustainable Growth.

The Department of Economics, Thiru.Vi. Ka. Government Arts College of Thiruvarur was entrusted with the task of preparing the DHDR for Thiruvarur district under the assistance of UNDP and SPC.

The report has been prepared with relevant statistical data provided by the Department of Education, Health, Rural Development and the Department of Economics and Statistics. It provides the intra-district level, disaggregated data on various Socio-economic parameters. The report also reveals both positive and negative sides in the area of Human Development in Thiruvarur district.

Successful Implementation of strategies for human development depends on a perfect report of the real conditions and this has been provided by this study. This report is almost a SWOT analysis presenting the Strength, Weakness, Objectives and Tools for growth and development. The SPC has provided this opportunity for Thiruvarur district in improving its HDI.

I thank all those concerned who have put lot of efforts in preparing this report which covers all aspects of human development in Thiruvarur district. Moreover, I believe that the report will help to formulate suitable policies and strategies to achieve the ultimate goals of inclusive and sustainable Development.

Date: .05.2016

Place: Thiruvarur.

18/5/16

District Collector

ACKNOWLEDGEMENT

It is the imitative of the State Planning Commission (SPC) Government of Tamil Nadu to prepare District Human Development Report (DHDR) for Thiruvarur district with the financial support received from the UNDP and Government of India. The State Planning Commission took up the task as a constructive exercise towards streaming the Government programmes to yield the deserved intended results. The endeavor of preparing this report has been assigned to Thiru. Vi. Ka. Government Arts College, Thiruvarur by the State Planning Commission in Collaboration with the district Administration. A district level core committee was constituted with the district Collector as the Chairman and Mr. M. Nagentran, Assistant Professor and Head, Post Graduate Studies and Research Department of Economics, Thiru. Vi. Ka. Government Arts College, Thiruvarur as the Coordinator. This Human Development Report has been kept contract and has been seen through to completion with the support and encouragement of innumerous people. It is a pleasant task to express my thanks to all those who contributed in many ways to the preparation of the report. First of all I would like to express my sincere thanks to Tmt. Santha Sheela Nair (Retd), IAS Former Vice Chairman, State Planning Commission, Government of Tamil Nadu for constantly reviewing the progress of this exercise and supplementing with valuable suggestions.

I convey my heartfelt gratitude to Thiru. M. Balaj, I.A.S and offering Dr. Sugato Dut, IFS., Member Secretary (i/c) State Planning Commission respectively for providing all necessary administrative support and resource to accomplish the endeavor. I owe a deep sense of gratitude to Thiru. Anil Meshram I.A.S, Member Secretary, State Planning Commission.

My thanks are also due to Thiru. P. Selvarajan, Head of Division, Rural Development and District Planning, State Planning Commission whose encouragement, and Selvi. S. Namagiri, Senior District Planning Officer, State Planning Commission, whose encouragement, and support from the preliminary to the concluding level enabled me to complete this task. I thank to Dr. G.N. Krupa, Planning Officer, State Planning Commission for providing critical inputs which helped me in enriching the report.

I would like to place on record my sincere thanks to our district Collector Thiru L.Nirmal Raj, IAS and my sincerely thanks to Thiru.T.N.Venkatesh, IAS, Dr. M. Mathivanan, IAS., Thiru. S. Natrajan, IAS, former District Collectors, Thiruvarur for their constant encouragement and periodical reviews. My special thanks goes to Project Director of, Thiruvarur district, Dr. D. Madhavan, District Planning Officer, Thiruvarur, and I would like to place on record my sincere thanks to Dr. S. Suresh and Thiru. K. Rajagopal former District Planning Officers, Thiru. K. Murugesan, Technial Assistant, Thiru. K. Muruganantham, Assistant, District Planning Office, Thiruvarur and this work would not have been possible without their continued Support.

I would like to place on record my sincere thanks to our Principal Mrs. Dr.C.Bernes Bennet for her valuable suggestions for the improvement of the report and also I extended my sincere thanks to Dr. G. Ramanathan and Dr. P. Sivaraman, former

Principal (i/c) of our college. I am grateful to Dr. R. Rajendran, Associate Professor and Head of the Department of Economics Government Arts College, Kumbakonam, and Dr. R. Rajendran, Associate Professor of Economics, Periyar E.V.R College, Thiruchirappalli, for their interest in the preparation of this report. I thank them for their valuable suggestions and constant encouragement. The preparation of the DHDR was possible owing to the untiring efforts of the study team that gathered good deal of qualitative and quantitative information. I thankful to my fellow staff members of our department of economics Mrs. K. Kamalabai, Dr. P. Baburaj, Dr. K. Jayaraman, Dr. A. Sakthivel, Dr.V.Thandapani, Dr.P.Ragu, and Mr. R. Elangovan, Assistant Professors, and also thanks to Dr.M.Rajadurai and Mr. R.Balamurugan for spending their precious time with me travelling all the areas of the district to take part in several stakeholders meet and focus group discussion and providing critical inputs.

I express my deep sense of gratitude to Dr. Mohan Gnana Olivu, Faculty of Arts and former head of the Department of Economics, for meticulously reviewing the technical aspects of the support. I also take pleasure in thanking Dr.N.Geethanjali, Associate Professor in English, Periyar E.V.R College, Thiruchirappalli, for looking out for syntax and semantic errors in the report.

It is my pleasure to acknowledge the help rendered by the Block Development Officer (BDOs) the elected representatives of the district local bodies, SHG members, and Municipal Commissioners. Besides, the various department at the district level provided in valuable assistance. Specifically Superintendent Engineer, TNEB Joint Director, Health and Family Welfare, Joint Director, Agriculture, Deputy Director, Health Services, Chief Educational Officer, Chief Educational Officer (SSA), Project Officer, Mahalir Thittam, Executives Engineer. (Urban), TWAD; Executive Engineer, (RWS), TWAD, Deputy Director, Statistics, Special Deputy Collector, SSS, Thiruvarur, District Elementary Educational Officer; District Social Welfare Officer, Project Officer, ICDS, Labour Officer; Manager, Lead Bank; Manager, NABARD, Executive Officers of All Town Panchyats, all Block Medical Officers Thiruvarur district and others who have also coordinated with us in executing the work.

M.Nagentran

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THIRUVARUR DISTRICT - A PROFILE

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THIRUVARUR DISTRICT –A PROFILE

Introduction

Topography

The erstwhile composite Thanjavur district was trifurcated into three districts, namely, Thanjavur, Thiruvarur and Nagapattinam districts. The district is situated between 10.20^0 and 11.07^0 of the Northern latitude. The mean annual maximum and minimum temperature of the district are 39.7^0 C and 22.60^0 C respectively. The district is bounded on the East and North by Nagapattinam district on the South by Palk Strait and on the west by Thanjavur district. Though Thanjavur, Thiruvarur and Nagapattinam districts are collectively called the Delta districts, Thiruvarur district is in the heart of the delta districts. The Cauvery, the chief river of the district is fostering agriculture and Tamil culture for ages together. The rainfall in the coastal area is 1200 mm to 1600 mm and the mid district receives from 1000 mm to 1200 mm of rain on an average. There are three types of soil found in the district. They are alluvial soil, sandy soil and clay soil. The alluvial soil is generally found in the river bed and its adjacent areas of the river Cauvery and the sand soil is found to occur along the coastline areas. The remaining part of the district is covered with the clay soil. Out of the total geographical area of 209709 heactars, the net area under crop is 1,50,900 hectares. At present, this district comprises of seven revenue Taluks viz., Thiruvarur, Kudavasal, Mannargudi, Needamangalam, Thiruthuraipoondi, Nannilam and Valangaiman taluks and ten blocks of Thiruvarur, Nannilam, Koradachery, Kudavasal, Valangaiman, Needamangalam, Mannargudi, Kottur, Thiruthuraipoondi and Muthupettai.

History

Thiruvarur has been considered an important historical place from the ancient period. It was a part of the erstwhile the Chola Mandalam. The Chola Mandalam rendered great services for the development of the region by establishing a great Temple to Lord Thiyagarajar. Since then it has been an important religious center both for rulers and the ruled. This temple city centre was also patronized by the various ruling dynasties those had ruled after the decline the Cholas. Many land endowments were provided to the Temples by Vijayanagar, Nayak and Maratha rulers. The Maratha rulers made

Thiruvarur as their cultural center. As a result, this Temple city became the center of all activities. It has its impact on the socio-economic life of the local people.

Thiruvarur district has its own glorious past to cherish and nurture for the years to come and this district is known for its religious significance and the historical importance. The district is associated with kings like Muchukanta Chola and Manuneethi Chola. The sanctum sanctorium of Thiyagaraja temple in Thiruvarur was built by Muchukanta Chola. Manu Neethi Chola is known for justice by killing his son Uthamachola in order to establish justice with equity. Thiruvarur is mentioned and hailed in the works of Thirugnana Sambandar and Thirunavukkarasar, the foremost Saiva Saints of the Seventh Century. The granite structure of the Thiyagaraja Swami Temple was the first one in its kind constructed by Aditya Chola I in the Ninth Century and this was renovated and extended by Rajendra Chola I. Due to the continued royal patronage the district flourished as a cultural centre during the rule of Nayaks, Vijayarajar kings and Marathas.

Religion and Language

As far as religion is concerned majority of the people are Hindus followed by Muslims, Christians. The main language spoken in this district is Tamil. A small portion of people speak Telugu, Malayalam, Urudu, Kannadam, Sowrashtra and Hindi.

Art and Architecture

Many festivals are celebrated in this district. The Brahmotsavam in Panguni and Adi Pooram are the two major festivals celebrated annually. Muthupettai Santhana Koodu Festival which being celebrated every year and it attracts devotees from all over the parts of Tamil Nadu is another notable festival celebrated in the district Thiyagaraja big car festival in Thiruvarur is very famous one.

Temples in Thiruvarur and its surrounding places were built with granite stones and for its architectural excelence. The great Saiva-Saints Nalvar, Appar, Sambandar, Sundarar and Manickavasagar sang pious songs in praise of the deities enshrined in the Temples. This district is known for its best art and architecture. A number of temples were built by the kings and rulers throw light on their art and architectural skills and talents. Many historical events and happenings were inscribed on the walls of the

temples. Carvings on Temple towers and walls reflect the talents and skills of the artician and taste of the rulers of medival period.

Formation of the District

Figure 1.1
Thiruvarur District Map

Source: www.Mapsinindia.com

The predominant reason for the advent of the district came from the prolonged aspiration of the sons of the soil of the district. Nagai-Quaid-E- Milleth district was formed in 1991 and it became a separate district carved out from the mother district of Thanjavur. The devolution of power to Nagai-Quad-E- Millet from Thanjavur district made the surrounding Towns like Thiruvarur, Thiruthuraipoondi, and Mayiladuthurai to avail themselves of the all administrative measures as quickly as possible. Further devolution of powers from Nagaipattinam to Thiruvarur district facilitated the whole administrative machinery to be easily accessible by the people. The new district of Thiruvarur came in to force, with the Government G.O Ms.No.681, dated 57.7.1996. Mr. Mohan I.A.S was posted as a Special Officer from 28th August 1996 up to 31st

December. And also appointed as the first Collector of Thiruvarur district from 1.9.1997.

Demographic Trend

Table 1.1

Basic Demographic Indicators of Thiruvarur District

		Male	Female	Total	Density	Sex Ratio	Decadal Growth Rate
Thiruvarur	2001	580784	588690	1169474	492	1014	7.51
	2011	626693	637584	1264277	556	1017	
Tamil Nadu	2001	31400909	31004770	62405679	480	987	15.60
	2011	36158871	35980087	72138958	555	995	
India	2001	532223090	496514346	1028737436	325	914	17.64
	2011	623724248	586469174	1210193422	382	940	

Source: Census of India 2001-2011.

The total population of the district was 12,64,277 in 2011 with 6,26,693 male population and 6,37,584 female population. This district had a total of 10,06,482 (79.61 percentage) under the rural population. Of them, 4,99,954 and 5,06,525 were males and females respectively. Regarding the urban population, this district has a total of 2,57,595 (20.39 Percent) urban population of which 1,26,730 were males and 1,31,056 were females as per the 2011 Census. The density of population in this district as per the 2011 Census was 556 persons per Square k.m. As far as the literacy rate of the district was concerned, the male literacy rate was 89.65 percent and that of female was 77.02 percent. The total literacy rate is 83.3 percent. The district indicates a favourable sex ratio with the numbers of females per thousand males literature when compared to the state average. The percentage of SC population was 34.08 and only 0.24 percent constituted ST population. Only three blocks, Valangaiman (77.37 %) Kottur, 47.63%) and Thiruthuraipoondi (46.81 %) recorded considerable SC population. Among the ST population, Thiruthuraipoondi Block has registered 0.61 percentage of total population and both Thiruvarur and Needamangalam recorded 0.28 percentage of a ST Populations in total the population.

ECONOMY

Agriculture

Agriculture plays a crucial role in the life of people. More than 80 per cent of the population is engaged in agricultural and allied activities. Agriculture is the mainstay of the rural mass. The major crops grown in this district are paddy, pulses, ground nut, cotton, gingili and sugarcane. Paddy, pulses and vegetables are grown in larger areas. Since this district is situated in the heart of the delta, and produce major share in paddy production of the state it is called the rice bowl of Tamil Nadu. During the off season, farmers cultivate pulses and other crops. Out of the total cultivable area, (2,87,264 hectares) the gross sown area is 3,00,713 hectares whereas net zone area is 1,51,920 and 16,139 hectares are sown more than once. Rice, black gram and green gram are the important food crops cultivated in this region. Cotton, groundnut, coconut, gingili, palmolin and flowers are the important nonfood crops. In Thiruvarur district, paddy is cultivated in 1,74,366 hectares with the production of 8,20,538 tonnes. Green gram and Black gram are cultivated in 56,184 hectares and 61,097 hectares respectively.

Total pulse cultivation is in 1,11,335 hectares. And the total production is 1,17,283 tonnes. Sugarcane is cultivated in 503 hectares with the production of 52,098 tonnes. Cotton is cultivated in 3676 hectares and the production of which is 9189 tonnes. Groundnut cultivation is taking place in 3394 hectares and its production figure is 17,733 tonnes. Gingili is cultivated in 1187 hectares and the production is 859 tonnes.

Sources of Irrigation

The gross area irrigated in this district is 1,92,411 hectares. The main source of irrigation in this district is canal Irrigation. Cauvery runs through the district with so many branches and they facilitate irrigation in this district. The distributory of Cauvery are Odampokki, Vettar, Vennar, Mudikondan, Nandalar, Nattar, Thirumalairajan, Koraiyar, Valavaikkal, Kaattar, Pandavaiar, Arichandranathi, Mullaiyar and Pamaniyar. The river Cauvery receives water from Mettur dam during the sowing season. And also main source of irrigation for the paddy crop ot the district. Besides, this district has many ponds and they also facilitate irrigation. A few farmers have wells in the areas of the river bed for cultivation purpose.

Fisheries Sector

Muthupettai is the only block in this district's fishery hub. It includes 14 Marine Fishing Villages which produce 12,360 tonnes of fish, with a value of Rs.1472 lakhs. The district consists of 5750 marine fishermen families with 33 country boats and 110 Catamaram (FPR). Inland fishing contributes 9730 tonnes of fish products worth of Rs.657 lakhs and 1758 families were engaged in this sector in the year 2011-2012.

Industry

Thiruvarur district is classified as an industrially backward district in Tamil Nadu. The district has 128 working factories, five medium scale industries and 330 small scale industries. The overall industrial sector produces 4,14,395 man days per annum. There are 155 cottage industries functioning in this district. The notable industries in this district are Pamani Fertilizers and Chandramohan Ceramics in Mannargudi. Besides there are some Khadi and Village industries producing cotton, woolen, silk and Polyester. There are few families engaged in silk weaving in Mannargudi, Koradachery and Valangaiman Town Panchayats. There are three large scale industries in this district like., Southern Energy Development Corporation Limited in Nallur, Kottur Block, TNEB Power Generation Plant in Kovilkalappal, Kottur Block and Southern India Edible Oil in Karppur, Thiruvarur Block.

Transport

Thiruvarur Municipality accommodates 94.06 km of roads of which 54.9 km are of BT roads, 10.91 km of metal roads, 9.48 km of cement roads and 18.75 km of Highways. There is only one National highways i.e NH 67, which connects Thiruvarur with Nagapattinam in Tamil Nadu and Gundlpet in Karnataka. The district is connected with Chennai, Coimbatore, Thiruchirappalli, Karaikkal and other major Towns of Tamil Nadu through the State Highways of SH 23, SH65 , SH 66, SH 67, SH 146, SH 147 and SH 151 . The Tamil Nadu State Transport Corporation operates 175 daily services connecting various places with the district headquarter of Thiruvarur. Thiruvarur Railway Junction is a four way junction connecting Thanjavur in the West, Mayiladuthurai in the North, Nagapattinam in the East and Thiruthuraipoondi in the South. Gauge conversion between Mayiladuthurai and Thiruvarur was completed in August 2012. There are passenger trains going to Trichy, Thanjavur, Mayiladuthurai, Karaikkal, Mannargudi and Thiruthuraipoondi. Gauge conversion between Thiruvarur

and Karaikudi is in progress and there is only a partial connectivity in the segment connecting Pattukottai, Thiruthuraipoondi and Karaikudi. The nearest airport of Thiruvarur is Thiruchirappalli Airport located at a distance of 110 km (68 miles) from the Town.

INCOME AND POVERTY

Sectoral Distribution of Gross Domestic Product

Table 1.2

Sectoral Distribution of Gross district Domestic Product

(in Lakhs of ₹)

District and State	Primary			Secondary			Tertiary			Total		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
District	70076 (21.82)	50498 (15.38)	98700 (23.70)	35618 (11.09)	40920 (12.47)	50329 (12.08)	215408 (67.08)	236843 (72.15)	267334 (64.20)	321102	328261	416363
State	2956803 (9.33)	3170454 (8.81)	3872767 (8.93)	8739518 (27.59)	10255049 (28.49)	13039248 (30.09)	19979665 (63.08)	22570547 (62.70)	26411788 (60.96)	31675986	35996050	43323803

Source: *DOES, TN, DD* Statistics, Thiruvarur.

Though the agricultural and its allied activities are predominant in this district, there are significant developments in the manufacturing and service sector too. Table 1.2 provides the detailed picture of the sectoral contribution to Gross Domestic Product (GDP) in this district in the year 2009-10 to 2011-12. As far as the primary sector is concerned, the share of the sector in the district GDP was 21.82 percent in 2009-10 and it went down to 15.38 percent in the year 2010-11, but it rose to 23.70 percent in 2011-12. The share of secondary sector in the district GDP has gone up marginally during between 11.09 percent in 2009-10 to12.47 percent in 2010-2011 but it slightly decreased 12.08 percent in the next year of 2011-12 when compared with the State share it contunisely increased to 27.59, 28.49 and 30.09 percent in the respective years. In the case of tertiaory sectors of the district is 67.08, 72.15 Percent in 2009-10 to 2010-11 but it was 64.20 percent in 2011-12 against the State share of 63.08, 62.70 and 60.96 percent in the corresponding period. In the sector wise share, the district is placed in a better position in both primary and tertiary sectors.

Growth Rate of Per capita Income

Table1.3

Per Capita Income (In ₹ - At Constant Prices)

Sl.No.	District , State and National	Year			
		2008-09	**2009-10**	**2010-11**	**2011-12**
1	District	24888	26845	27408	34727
2	State	43193	47394	53507	63996

Source: Department of Economics and Statistics, Govt. of Tamil Nadu, 2014.

From Table 1.3, it is clear that the per capita income of the district was Rs. 24,888 in 2008-09, which rose to Rs.26,845 in 2009-10 and further it increased to 27,408 in 2010-11. The income from the Mahatma Gandhi National Rural Employment Guarantee Programme could also be attributed to this trend. But the per capita income of this district is less than half of the national figure of Rs.54,835. A majority of the people depend on agriculture which is highly unstable when the monsoon condition is taken into account. This district is placed in the 29th rank in per capita income among 32 districts in the State. If we look at the other side among the 32 districts the Kanyakumari district has the highest per capita income of Rs.81,094 and the Ariyalur district comes under the lowest Per capita income earner of Rs.16559. The main reason for the low per capita income of Thiruvarur district is that it depends only on agriculture for their livelihood and they have no alternative employment opportunity (during the agricultural off season).

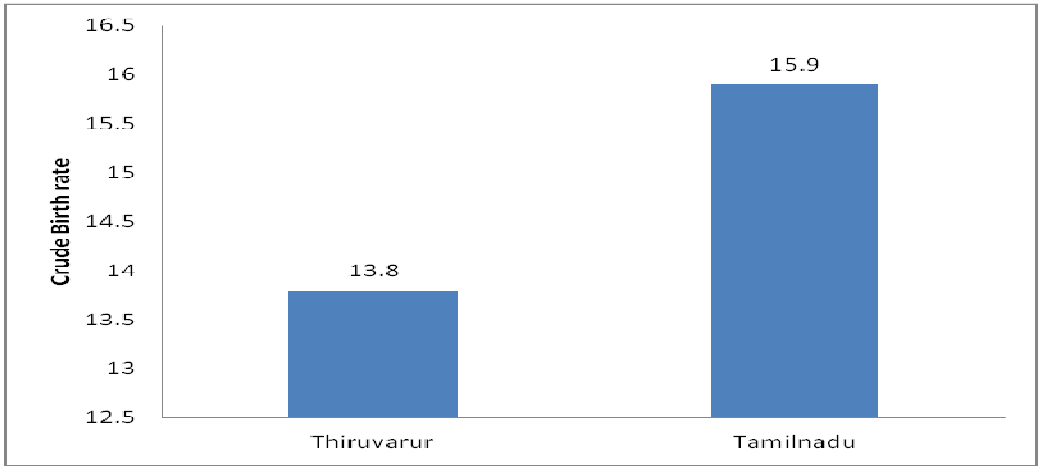
SOCIAL SECTOR

Health Indicators

Life Expectancy, Crude Birth Rate, Crude Death Rate, IMR and MMR Status

Health plays a positive role in determining the life expectancy and it is reflected in the human development index. Higher life expectancy places Human Development Index at a higher level. The life expectancy in India had increased from 63.5 years in 2001 to 65.85 years in 2011. The State life expectancy has also risen from 66.2 years in 2001 to 68.9 years in 2011. The life expectancy of the Thiruvarur district was 64.7 years in 2011.

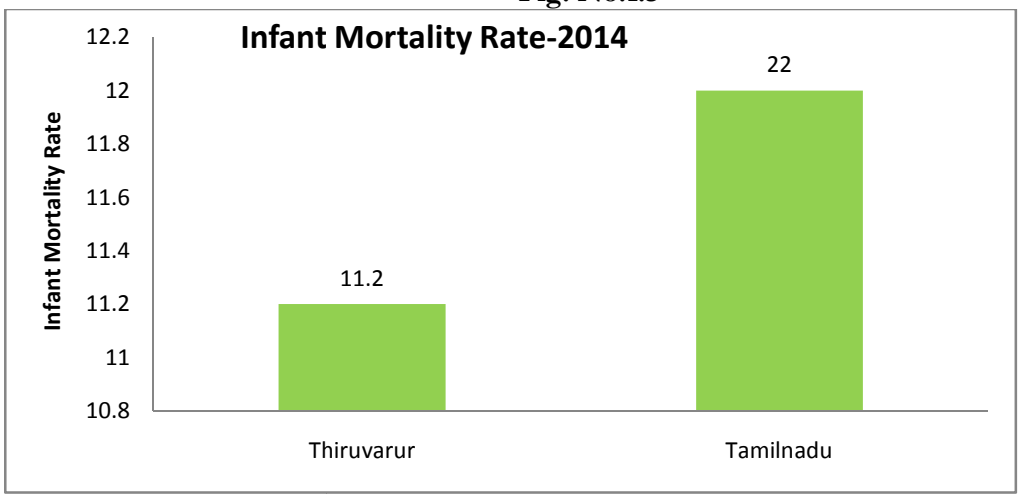
Fig. No.1.2
Crude Birth Rate 2014



Source : DD Health Service, Thiruvarur.

Figure 1.2 shows the status of crude birth rate of Thiruvarur district and Tamil Nadu State as per 2014 data respectively. There is significant variation in between the district and the State figure. The Infant mortality rate was 18.90 in 2009 and it declined to 11.20 in 2014. During the same period, IMR was less than the State infant mortality ratio of 12.00. As far as the MMR average is concerned, it has been observed to be 110 in the District whereas the State MMR of 66.7 in 2014.

Fig. No.1.3



Source : DD Health Service, Thiruvarur, 2014.

This is clearly indicates that the health indicators – crude death rate and IMR are better than the state average.

Literacy and education

Literacy and education are very significant factors along with life expectancy, in constructing the Human Development Index. One Central University, four Government Arts and Science Colleges and Six self financing private colleges cater the educational needs of this district with the overall students' strength of 13,060. This district has two professional engineering colleges in which 3687 students are studying. There are 6 polytechnic colleges with the students strength of 4663 and 13 B.Ed.. In School education 80 Higher Secondary Schools, 81 High Schools, 251 Middle Schools, 645 Primary Schools and 128 Pre-Primary Schools are there in the district with the student strength of 27090 students. Among the students 13275 are boys and 13815 are girls. Thiruvarur district has 5,03,085 male literates and they constitute 89.65 percent of male population whereas it is 77.02 percent in the case of female population number being 4,43,386.

It is important to note that the enrolment of boys and girls, in both primary and upper primary education is highly appreciable. Almost all the blocks have 99 percent of enrolment of children in primary and upper primary education. Of the ten blocks, the girls enrolment in primary education in Needamangalam is found to be 100 percent and boys enrolment is 92.2 percent. On the whole there has been a good number of children enrolled both in primary and upper primary educational institutions in all the blocks.

District Tourism

Thiruvarur district is famous for its evergreen paddy fields and temples with sky-high towers. This town is situated in the southeast of Tamil Nadu. The Arulmighu Shri Thiyagarajar temple located in Thiruvarur town has many distinctions. It has the largest chariot or temple car among the temples in Tamil Nadu. The enormous Kamalalayam and the golden calm water in the temple tank attest to the glory of the town. The Arulmighu Shri Rajagopalaswamy temple in Mannargudi, Shri Subramanyaswamy shrine in Enkan, Arulmighu Shri Saraswathy temple at Koothanur and the Guru temple, one of the important Navagrahas at Alangudi are some of the prominent places of worship in this district.

The mangrove forests in Muthuppettai, one of the tourist spots displays the natural beauty of this district, with the sprawling paddy fields on both sides of rivers, canals and roads. The Birds Sanctuary in Udhayamarthandapuram and Vaduvoor are

wonderful places that attract tourists. Other famous historical Temples are located in Thiruveezhimalai, Thirupamparam, Thirumeichur, Shrivanchiyam, Thillaivilagam and Thirukkannamangai. At Jambavanodai near Muthuppetai, there is an ancient and glorified Dargah. The triumvirate of Carnatic music, Shri Thiyagaraja Brahmam, Shri Muthuswamy Dheekshathar and Shyma Shastri were born here and this adds to glory of the district.

CONCLUSION

This chapter gives the overall profile district of Thiruvarur. The chapter outlines the socio-economic and Demographic details of the district. A brief of the social sector and the economic status are also dealt with in this chapter. This profile helps in the analysis of various Development issues in general and human Developmental issues in particular.

CHAPTER 2

STATUS OF HUMAN DEVELOPMENT

CHAPTER - 2

STATUS OF HUMAN DEVELOPMENT IN TIRUVARUR DISTRICT

Introduction

In ancient days, the concept of Development was equated with income and its growth as a means of Development. But real development is much more. The aim of development is to create an atmosphere to develop people's capabilities and opportunities of the present and future generations.

The United Nations Development Programme (UNDP) describes human Development as the process of widening people's basic choice. The choices, which are needed by the people to lead a long and healthy life, to acquire knowledge and to have access to resources for a decent standard of living. Other choices are political, economic and social freedom with opportunities for being creative and productive by enjoying self-respect and fundamental human rights. The planning authority in India has drawn various plans for the well being of people and also aims at widening peoples choice. In this context, human Development is concerned with the way people could lead a long and healthy life, aquire knowledge, have vertical mobility in life and achieve a decent standard of living.

In order to measure human development, there is an Index called Human Development Index (HDI). It values ranges from 0 to 1. Human Development Index shows the average achievement in three basic dimensions of human development. They are healthy life as measured by life expectancy at birth, knowledge as measured by the adult literacy rate and the combined primary, secondary and tertiary Gross Enrolment Rate (GER) and the decent standard of living as measured by gross domestic product per capita.

Human Development Index of Tamil Nadu

Tamil Nadu has been ranked under the category of medium human Development Index State. Indian Human Development report indicates Tamil Nadu Human Development Index of at Tamil Nadu 0.570 in 2011. The per capita income of the people of Tamil Nadu is medium when compared to that of other States in India. On the basis of income, poverty, health, sanitation, nutrition, employment and industrial Development, the Human Development Index is calculated. In Tamil Nadu top three

districts under HDI are Chennai (0.757), Kancheepuram (0.712) and Kanyakumari (0.711) and the bottom three districts are Dharmapuri (0.584), Villupuram (0.587) and Perambalur (0.596). Under Gender Development Index Value. Chennai in top of the list (0.776) and The Gender Inequality was more in Dharmapuri (0.582) and Villupuram (0.582) (Source: Human Development Report, 2003).

Human Development Index in Thiruvarur – Inter Block Variations

Human Development is a multidimensional feature. HDI is a composite Index measuring average achievement three in basic dimensions and 11 indicators of human Development. The dimensions are standard of living, health and education. These three dimensions are crucial to the human Development of the Block and district. Details of the indicators are furnished below :

Dimensions	Indicators
Standard of living	Access to cooking fuel Access to toilet facilities Access to drinking water Access to electricity Access to Pucca houses
Health	Infant Mortality Rate Maternal Mortality Rate Under 5 Mortality Rate
Education	Literacy rate Gross enrollment in Primary Gross enrollment in secondary

Human Development Index of Thiruvarur district is 0.637 and it is ranked 19th among the 29 districts in the State and it is below the State human Development Index value of 0.657. This district has the medium HDI, with respect to life expectancy at birth Index of 0.683 and in education Index it has high human Development Index at 0.793. But the Income Index of the district is very low of 0.435. Per capita income is the major cause for the backward position in human Development in Thiruvarur district (State Human Development Report, 2003)

Table 2.1.
Top and Bottom three Blocks in Human Development Index, 2013

Top 3	Bottom 3
Thiruvarur (0.836) Mannargudi (0.703) Kottur (0.607)	Thiruthuraipoondi (0.488) Muthupettai (0.455) Needamangalam (0.429)

Source: Thiruvarur District Indices Computation.
Note: Appendix Table No. 1

As for as the standard of living indicator, in the unorganized, and organised sector and allso access to well developed infrastructure are high in Thiruvarur district. The lower range of accessibility to cooking fuel, toilet facilities and electricity indicate backwardness in Needamangalam Block in terms of quality of life. Accessibility to the cooking fuel is lower in Kottur and Needamangalam Blocks. Thiruthuraipoondi and Valangaiman Blocks have higher range of disparity in accessibility to toilet. Drinking water is a major concern in Valangaiman, Thiruthuraipoondi and Needamangalam Blocks. Lower access to electricity and pucca houses pull down the human development of Muthupettai and Needamangalam Blocks.

Health indicators like Infant Mortality Rate (IMR), Maternal Mortality Ratio (MMR) and under 5 Mortality Rate (U5MR) are the crucial factors in analyzing the human development of a particular area. However, the inter-block disparity is high. Urbanized blocks have higher health issue is than the rural blocks. Needamangalam, Kudavasal and Nannilam blocks recorded as higher range of IMR than the other blocks. MMR is higher in Thiruthuraipoondi, Muthupettai and Koradachery. Muthupettai, Koradachery and Needamangalam blocks recorded higher U5MR than other blocks. Reason behind these issues were due to scarce accessibility to the health care services, underweight children, infrastructure facilities of PHC and anemic mothers etc.,

Literacy is a basic human right and the base of lifelong knowledge. It is fully necessary to enable the human development.. Thiruvarur, Nannilam and Kudavasal Blocks report a higher literacy rate than that of other blocks, as per Census 2011. Gross Enrolment Ratio in primary education is higher in Muthupettai, Mannargudi and Nannilam against Valangaiman, Thiruthuraipoondi and Needamangalam blocks. In the case of GER secondary education was higher in Valangaiman, Needamangalam and Mannargudi blocks compared to Koradachery, Kottur and Nannilam blocks.

Accessibility and affordability of education and health services for the people is crucial for these Blocks to improve their level of human development.

A closer examination of the level of achievement in these indicators of human development helps to get some insights into their relationship. The importance of income for achieving higher standard of living is well known. Income gives people the ability to buy goods and services i.e. as income increases, the range of consumption options widens. Nonetheless, higher literacy and health can be achieved even with low per-capita income.

In Thiruvarur district, Thiruvarur (0.836), Mannargudi (0.703), and Kottur (0.607) blocks occupy the first three ranks. Thiruthuraipoondi (0.488), Muthupettai (0.455), and Needamangalam (0.429) come under the last three ranks. The range between the higher value and lower value is 0.407(Thiruvarur (0.836) and Needamangalam (0.429)). It shows that within the district, the inter block disparity among the Blocks is high in terms of human development.

Under the Human Development Index, Thiruvarur block is the topper in the district. The indices of standard of living, health and education in Thiruvarur blocks are 0.961, 0.772 and 0.916 respectively. The overall Index value of Mannargudi Block is 0.703. It has secured the second position in the district, this block has higher than Thiruvarur block in health Index.

Thiruvarur block stands first in the standard of living indicators among all other blocks. A higher education index was also observed in Thiruvarur. But it is lower than that of Thiruthuraipoondi in educational indicators. In health indicator, it is the second block in this district. Kottur (0.607) Block is ranked third in overall human Development Index. It is ranked second, third and fifth in standard of living (0.62), Educational Index (0.86) and Health Index (0.59).

In Human Development Index, bottom three blocks' status is displayed in Table 2.1. Needamangalam Block has recorded lowest rank among the Blocks in Thiruvarur district with the overall Index value of 0.429. Its standard of living Index is 0.429 (8^{th} Rank). Health Index is 0.251 (10^{th} Rank) and, Educational Index is 0.727 (9^{th} Rank). The poor health combined with poor standard of living has placed the block in rank in the district. Muthupettai (0.455) Block has secured 9^{th} rank in the district and it is poor in

standard of living (0.464). With the educational Index value of 0.790 (8th Rank), it secures 9th position in health indicator (0.257).

Thiruthuraipoondi Block with 46.67 percent of the procedure to SC community stands at the eighth position with a HDI score of 0.488. This is due to its rural and agricultural base of the region. Employment opportunities are not available during agricultural off season and this resulted in the backwardness of this block. Its health Index is 0.255 and education Index is 0.790. Determined intervention to improve the standard of living and required to reverse this condition of low HDI in this Block. The overall low HDI of the district could be attributed to the poor health index and standard of living.

Gender inequality Index

The Gender disparity is another indicator of human Development. Along with HDI, UNDP constructed the Gender –related Development Index (GDI) to analyze the Gender disparities across the member countries. Tamil Nadu Human Development Report also made attempts to construct GDIs at the district level. GDI, captures mainly the achievements in basic human Development adjusted for Gender inequality under three basic parameters. The Gender Inequality Index (GII) is a new Index for evaluation of Gender disparity and it was introduced in the 2010 Human Development Report of the UNDP.

Three dimensions are used to measure Gender inequality viz.Health, Empowerment and Labour Market. These three dimensions used fourteen indicators to compute the Gender Inequality Index of the Thiruvarur district. UnderGII a value of zero represents no gender inequality and a value of one represents the highest level of inequality in the society. The indicators are given below.

Gender inequality in Thiruvarur – Inter – Block Variations

Dimensions	Indicators
Health	MMR Share of institutional delivery Share of antenatal coverage
Empowerment	Female literacy rate Male literacy rate Share of female children 0 – 6 years Share of male children 0 – 6 years Share of male elected representatives in RLBs and ULBs Share of female elected representatives in RLBs and ULBs
Labour market	Female work participation rate Male work participation rate Female work participation rate in Non Agri. Sector Male work participation rate in non Agri. sector Female agri. wage rate Male agri. wage rate

Table 2.2.

Top and Bottom three Blocks in Gender inequality Index, 2013

Top Three Blocks with Lower GII value	Bottom Three Blocks with Higher GII value
Mannargudi (0.067)	Koradachery (0.167)
Kottur (0.039)	Nannilam (0.094)
Kodavasal (0.029)	Thiruthuraipoondi (0.092)

Source: Thiruvarur District Indices Computation
Note: Appendix table No. 2

Table 2.2 presents the top and bottom three Blocks in Gender Development Index in Thiruvarur disttrict. In Thiruvarur district, Kodavasal (0.029), Kottur (0.039) and Thiruvarur (0.067) occupy the first three places in Gender Inequality Index. Thiruthuraipoondi (0.092), Nannilam (0.094), and Koradachery (0.167) blocks occupy the last three places in GII. The mean of disparity noticed in Thiruvarur district under

the Gender Inequality Index is 0.138. Here the average is very high when compared to Human Development Index of Thiruvarur Block at 0.769. The overall range of Gender Inequality Index of the district ranges from the maximum of 0.151 and the minimum of 0.027. Top three Blocks, namely Kodavasal, Kottur and Thiruvarur, represent low Gender inequality. Thiruthuraipoondi Block occupy bottom at the 8th rank (0.092) Nannilam at the 9th rank (0.094) and Koradachery (0.167) Block at the 10th rank.

ANALYSIS OF CHILD DEVELOPMENT INDEX (CDI)

The Child Development Index (CDI) is an Index merging performance measures, particularly regarding children's education, health and nutrition. Index value falls between 0 to 1. The higher the Index value, i.e. closer to 1 would be the best in Child Development. The lower the Index value, i.e. closer to the zero, the performance of would be the children faring. The Child Development Index for Thiruvarur district computed the basis of on ten indicators prescribed by MIDS through SPC. Indicators and values used for CDI computation is enclosed in Annexure 3. Indicators used for CDI computation are furnished in the Annexure. The Child Development Index (CDI) was developed by the campaign in UK, called "Save the Children" in 2008 through the contributions of Terry McKinley, Director of the Centre for Development Policy and Research at the School of Oriental and African Studies (SOAS), University of London, with support from Katerina Kyrili.

Dimensions	Indicators
Health	U5MR Child sex ratio Percentage of malnourished children
Education	Gross enrollment ratio in primary Gross enrollment ratio in secondary Children never enrolled in schools Transition rate from primary to upper primary Transition rate from upper primary to secondary

Child health is important for making future generation. In Thiruvarur district, the CDI value is low when compared to HDI. It denotes that the child Development lagged behind the human Development. Thiruvarur block which stands first in the HDI in the District, is pushed down to fourth positions in CDI.

Table 2.3

Top and Bottom three Blocks in Child Development Index, 2013

Top Three Blocks with higher CDI value	Bottom Three Blocks with lower CDI value
Thiruthuraipoondi (0.601)	Nannilam (0.366)
Mannargudi (0.578)	Koradachery (0.352)
Kottur (0.540)	Valangaiman (0.334)

Source: Thiruvarur District Indices Computation
Note: Appendix table No.4. A 1.4

Table 2.3 portrays the Child Development Index of Thiruvarur district. Under the health dimension, U5MR, child sex ratio and percentage of malnourished children were taken into account. Muthupettai, Needamangalam, Nannilam and Koradachery record a of U5MR when compared to other Blocks in Thiruvarur district. These Blocks recorded a high malnourishment rates children's of Valangaiman (27.20 %), Mannargudi (21.80%) and Thiruvarur (20.30 %) Blocks also experienced malnourishment. The district should focus on how to reduce child mortality by way of treating malnourished children, by giving vaccination, by providing sanitation and safe drinking water. Child sex ratio is poor Valangaiman (910), Needamangalam (935), Kottur (937) and Nannilam (946) Blocks which recorded lower than the district average of 958. It illustrates the situation of the girl child. The district administration should implemnt the determination and scan to avoid sex selective abortion.

While assessing the child development in terms of education, it was seen that children never enrolled in school was zero in the entire district. Because of less accessibility, Nannilam block faced the issue of low secondary enrollment than other blocks. Transition Rate from primary to upper primary was low in Nannilam and Koradachery, in in the case of upper primary to secondary was low in Valangaiman and Koradachery. These Blocks need to be observed in focus on upper primary and secondary education. Valangaiman block (27.20 percent) recorded the highest rate and Kottur at (12.30 percent) recorded that is lowest in malnourishment children it indicate this block has better position in Thiruvarur district.

The enrolment in primary and secondary school level was found in all the blocks to be better was in this district, The highest level of enrolment both primary and secondary education was found in Valangaiman Block. It was noticed that a few blocks

namely Needamangalam (99.73 %), Thiruthuraipoondi (99.86 %), and Valangaiman (99.88 %) blocks registered lower level of enrolment in primary education in this district.

MULTIDIMENSIONAL POVERTY INDEX

In the computation of health dimension, Infant Mortality Rate, Maternal Mortality Ratio Percentage of Malnourished Children, are included whereas in the dimension of education it is included that the dropout rate in Primary and Secondary school level is very high. In Living Standards Dimension Percentage of household having access to cooking fuel, toilet facilities, safe drinking water, Electricity and to pucca house. The indicators have been broadly categorised under the three parameters such as Health, Education and Standard of Living. The data collected for the above indicators are used for calculating the Index values. This would help in making the values free of units and would allow the summation of the Index values of all the indicators. The Index values have to be calculated for each of the indicators after identifying whether the indicators are positive or negative. This is done to make the Index values unidirectional.

Dimensions	Indicators
Health	*IMR* *Higher order birth rate* *Malnourished meat among children*
Education	*Drop out of the primary* *Drop out in secondary*
Standard of living	*Access to cooking fuel* *Access to toilet facilities* *Access to drinking water* *Access to Pucca houses* *Access to electricity*

The Index values for each of the indicators would range between 0 and 1 where 0 indicate the lowest ranking for a block and 1 indicate the highest ranking of a block and the consolidated Index for each of the parameters/sectors/dimensions will be the average index value of all the indicates. The composite Index is the average of the indicators of all the three parameters of Health, Education and Standard of Living. This will be used to assign the ranks for the blocks within the district. MPI in Thiruvarur district exhibits the of disparity among the blocks. While comparing the other indices like HDI, that. The range starts from top of Thiruvarur (0.142) to bottom of Valangaiman (0.805).

Table 2.4

Top and Bottom three Blocks in Multidimensional Poverty Index, 2013

Top Three Blocks with Lower MPI value	Bottom Three Blocks with Higher MPI value
Thiruvarur (0.142)	Thiruthuraipoondi (0.580)
Nannilam (0.408)	Muthipettai (0.603)
Mannargudi (0.426)	Valangaiman (0.805)

Source: Thiruvarur District Indices Computation

Note: Appendix table No.4

Table 2.4 explains Multidimensional Poverty Index (MPI) in Thiruvarur district. Health dimension has correlation with poverty. Due to poverty the health condition is disturbing in terms of malnourishment, anaemic condition and aggravation of diseases because of improper treatment. On the other hand, the mounting trend of health expenditure, environmental condition and the outbreak of new diseases cause poverty. High incidence of infant mortality in Needamanagalam Block has positive correlation with child malnourishment. Inadequate breastfeeding and lack of knowledge in child health was noted as the causal factor in this issue. Valangaiman, Thiruthuraipoondi, Mannargudi and Nannilam blocks with higher order of birth rate and recorded links with malnourishment.

Family under poverty could not provide education to their children. Government started universal education scheme, i.e. Sarva Shiksha Abhiyan to improve access to children Through this scheme most on the blocks reached hundred percent enrollment at the primary and upper primary levels. however, the enrolled children could not continue their education due to poverty, low accessibility, etc., Needamangalam, Thiruthuraipoondi, Koradachery and kodavasal blocks recorded with higher range of dropout rate in the secondary education.

Standard of living gives dignity to the community. Valangaiman lock recordedvery low level of standard of living compared to other Blocks. Industrialization, expansion of urban areas, scattered villages, undulated hilly areas and government scheme of penetration to the are of concern and importnce in terms of standard of living in Thiruvarur district.

It is found that among top three Blocks attained the Thiruvarur tops (0.142), followed by Nannilam Block 2nd (0.408) and Mannargudi 3rd rank (0.426) in MP Index. On the other hand of bottom three Blocks of educational Index are the Mannargudi Block 8th rank (0.416), Kodavasal had 9th rank (0.221) and Valangaiman the 10th rank (0.057) in Thiruvarur district.

It is significant to note that the standard living Index consists of access to cooking fuel, access to toilet facility, access to drinking water, access to electricity and access to Pucca house this was registered highest in Thiruvarur Block (0.954) and the lowest level in Mannargudi Block (0.189). Among the top three Blocks, Nannilam Block secured the 2nd rank (0.623). Among the bottom three blocks Thiruthuraipoondi secured the 8th rank (0.580), Muthupettai the 9th rank (0.603) and Valangaiman the10th rank (0.805).

Improvement in Health, Education and Standard of Living can bring down the MDPI. There is a negative relationship between HDI and MDPI. Thiruvarur Block recorded more positive health indicators. The position of Mannargudi was also showing higher indices in Health. Still this Block has to go a long way under in these indices for Development. This indicates that there is a still widespread poverty. This need to be checked by t policy intervention by the Government by creating awareness, generating employment opportunities and training the youth to start small scale units industries.

Table 2.5
Consolidation of HDI, GII, CDI and MPI Indices, 2013

Sl..No	Block	HDI		GII		CDI		MDPI	
		Value	Rank	Value	Rank	Value	Rank	Value	Rank
1	Thiruvarur	0.836	1	0.205	10	0.532	4	0.142	1
2	Nannilam	0.566	5	0.094	7	0.366	8	0.408	2
3	Koradachery	0.511	7	0.167	8	0.352	9	0.480	5
4	Kodavasal	0.587	4	0.202	9	0.511	5	0.520	6
5	Valangaiman	0.549	6	0.070	3	0.334	10	0.805	10
6	Needamangalam	0.429	10	0.082	4	0.375	7	0.554	7
7	Mannargudi	0.703	2	0.067	2	0.578	2	0.426	3
8	Kottur	0.607	3	0.039	1	0.540	3	0.434	4
9	Thiruthuraipoon	0.488	8	0.092	6	0.601	1	0.580	8
10	Muthupettai	0.455	9	0.086	5	0.505	6	0.603	9

Source: Thiruvarur District Indices Computation

The Table 2.5.clearly illustrates the disparity among the Blocks. Intra Block disparity is high in Thiruvarur district. Thiruvarur and Mannargudi Blocks are performing well in terms of human Development because these two Blocks have a considerable

urban population. Except under Gender inequality Index, Thiruvarur Block is also performing well. Connectivity, industrialization and access to basic services contribute to better performance of human Development in these Blocks.

Except women empowerment, i.e. Gender equity, human and child Development as well as the prevalence of poverty is very high in Needamangalam Block. The reason behind this backwardness is low access to cooking fuel, toilet facilities and electricity, the high occurrence of infant and under five child mortality and lower literacy rate. Valangaiman block in the district is the most backward block with almost all the indices being low.

CONCLUSION

The status of Human Development in Thiruvarur district is presented in the second chapter. After briefly stating the HDI Tamil Nadu, the HDI of Thiruvarur district has been analysed in depth. The inter Block variations in HDI, GII, CDI and MDPI, are analysed and facts have been presented. In HDI the top three performing Blocks are Thiruvarur and Thiruthuraipoondi. Were as it is the lowest in Valangaiman and Needamangalam. It shows higher economic Development of these two Blocks. In the case of Gender Inequality Index the top two Blocks with higher GII are Koradachery followed by Kodavasal and Thiruvarur. This Index with lower values is found in Kottur Block followed by Mannargudi and Valangaiman. In Child Development Index the Block with higher CDI value of Thiruthuraipoondi followed by Mannargudi and Kottur. The bottom three Block with lowest CDI value are Nannilam followed Koradachery and Valangaiman. In Multidimensional Poverty Index Thiruvarur Block is at the top with the lower MDPI (0.142) were as Valangaiman is at the Bottom with MPI value of 0.805. Special attention need to be given to the poorly performing Blocks with regard to HDI, CDI, GII and MDPI.

CHAPTER 3

EMPLOYMENT, INCOME AND POVERTY

CHAPTER – 3

EMPLOYMENT, INCOME AND POVERTY

Introduction

This chapter proposes to discuss the status of employment, income and poverty in Thiruvarur district. Employment is often described as the most important link between economic growth and poverty eradication. Providing income earning opportunities through wage employment or self employment for poor women and men are crucial for raising income and overcoming poverty. United Nations Department of Economic and Social Affairs (UNDESA) have reported that India is the biggest casualty of economic crisis induced by poverty. According to UNDESA, the increase in poverty is a blend of reduced family income, poor public services and increasing unemployment. Considering the size of Indian Union it is quite natural that the impact of global economic crisis has contributed to the States and district level variations. Thiruvarur district in Tamil Nadu also reflects the above National phenomenon.

Table No.3.1
Size of the Workforce and Work Participation Rate (In Numbers)

Block wise/ District	**Total workers**		**Main Workers**		**Marginal Workers**		**Non-Workers**		**Total Population**	
	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
Thiruvarur	53536	57948	46132	48815	7404	9133	83666	93748	137202	151696
Nannilam	44402	49499	33905	36763	10497	12736	63658	70267	108060	119766
Koradachery	41504	46839	33058	35312	8446	11527	60147	61410	101651	108249
Kodavasal	42538	48737	31304	37849	11234	10888	62106	64369	104644	113106
Valangaiman	41332	45371	29301	38633	12032	6738	53142	55274	94474	100645
Needamangalam	47523	55196	37638	45542	9885	9654	69557	69513	117080	124709
Mannargudi	87762	88652	67015	73599	20747	15053	119788	134934	203340	223586
Kottur	46991	52107	36836	34672	10155	17435	56696	55418	103687	107525
Thiruthuraipoondi	46970	52161	36604	32919	10366	19242	59082	63521	106052	115682
Muthupettai	40202	43658	31836	28317	8366	15341	52902	55655	93104	99313
District	492760	540226	377566	412462	107925	127763	683803	724051	1169294	1264277

Source : Source: Census of India, 2001 and 2011.

Table 3.1 briefly portrays the total work participation rate in Thiruvarur district. The total workers could be classified in to main workers, marginal workers and non-workers. The total workers participation has slightly changed in 2011 when compared to 2001. Thiruthuraipoondi block recorded higher total workers participation rate. The workers participation has not witnessed significant changes in 2011 except in Kottur and Mannargudi .But the percentage of main workers increased from 76.36% in 2001 to 83.02% in 2011. Being the head quarter of this district, Thiruvarur block tops in workers participation rate. It has more employment opportunities in the service oriented sectors. Thiruthuraipoondi has more marginal workers due to non-existence of industries and employment opportunities. Intervening measures taken to address this issue concentrating on development service sector.

Work Participation Rate

Table .3.2

Work Participation Rate

		2001 (in %)	2011 (in %)
Rural	Male	55.29	59.87
	Female	32.15	29.96
	Persons	43.72	44.82
Urban	Male	54.22	55.65
	Female	13.82	14.15
	Persons	34.02	34.55
Total	Male	54.75	59.02
	Female	24.98	26.71
	Persons	41.52	42.73

Source: Census of India, 2001 and 2011.

Work participation rate clearly presented in the above table. Gender differentiation is witnessed between the rural and urban population under various sub-categories of work. The cause the migration of male to other industries, and areas in search of job. This leads to more number of women working in agriculture related field and other work.

Sectoral Composition of Workers

Table No. 3.3

Composition of Work in Major Sector

Sl. N	Block wise/District	Cultivator		Agri.Labourers		Household Industries		Other Workers	
		2001	2011	2001	2011	2001	2011	2001	2011
1	Thiruvarur	3748	3960	22003	21498	1049	928	26736	31555
2	Nannilam	5781	5369	27991	27762	604	891	10026	15479
3	Koradachery	5234	4654	26118	25786	863	1606	9289	14791
4	Kodavasal	5079	6577	26591	29057	1080	929	9788	12179
5	Valangaiman	6344	6478	26717	27984	1029	699	7241	10213
6	Needamangalam	5826	10139	29764	32145	775	1288	11158	11628
7	Mannargudi	17272	12709	47418	38307	1773	1641	21300	35990
8	Kottur	6668	5943	32814	37548	912	916	6598	7700
9	Thiruthuraipoon	6618	6081	28088	30995	742	837	11522	14246
10	Muthupettai	5073	7973	23570	24106	868	705	10690	10876
	District	67643	69883	29107	295188	9696	10440	12434	164657

Source: Census of India, 2001 and 2011.

Table 3.3 displays the increase in rural work participation rate in a phased manner under various employment opportunities in unorganized sector. This is represented in the variations in the percentages of workers out of the total workers. That is why the percentage of cultivators and agricultural labourers has come down in Thiruvarur block (6.83 in 2011)due to the availability of more employment opportunities in non agriculture sctor . Kottur block shows more agricultural labourers (72.06 percent)and lowest rate of other workers(14.78 percent) indicating its leaning towards agricultural activities. More scheduled caste population live in this block but they do not own any land. As Needamangalam is the place of an Agricultural Research Centre(KVK), the cultivators have more opportunities for interaction with agricultural scientists, field visit and adopt new methods of cultivation. In-fact the percentage of cultivators has increased from 12.26 percent in 2001 to 18.37 in 2011.

Table.3.4

Registration and Placement

Sl. No	Year	Registration	Placement
1	2007	1,11,186	679
2	2008	124,572	548
3	2009	137,930	396
4	2010	147,355	511
5	2011	162,667	432
6	2012	187691	576
7	2013	204182	433
8	2014	152828	472
	Total	1228411	4050

Source: District Employment Officer. Tiruvarur-2014.

Table 3.4 presents the year wise analysis of growth rate of employment. The highest number of persons registered was 187691 in 2013. But the highest level of placement was in 2007 and it was 679 (0.61 percent). In the next year the placement slightly fell by 0.17 per cent. Since 2008, the placement there is ups and downs in placement ratio. The overall district placement rate is only 0.38 percent out of total number of 1228411 registered candidates.

INCOME

Per-capita Income

TABLE .3.5

Per capita Income (In Rs.)

Sl.No	Year	District	Tamil Nadu
1	2008-09	24888	43193
2	2009-10	26845	47394
3	2010-11	27408	53507
4	2011-12	34727	63996

Source : States Planning Commission, 2011-112

Table 3.5 illustrates the per capita income in the district of Thiruvarur according to the Table, it increased from Rs.24888 to 34727 in the period 2008-09 to 2011-12. The State's per capita income which was Rs.43193 in 2008-09 rose to Rs.63996 in 2011-12. The comparative analysis shows the district is almost half way behind the state in this important economic phenomenon.

Human Development Index is not only determined by literacy rate alone but also by per capita income, physical and mental health. In this district most of the people are depending upon agriculture and Cauvery water for irrigation. People are not at all getting employment opportunities during off season because there is no cottage and small scale industries in this district. These leads to low per capita income, which directly affect their standard of living and health conditions. So this district is far behind in Human development index. By the way of creating more employment opportunities in non agricultural sector and health facility we can able to increase the personal and per capita Income.

Poverty and Inequality

Poverty prevents the individuals from the attainment of certain basic needs. The term poverty is not an economic abstraction, but a human condition of despair, grief and

pain. Instead of consumption based expenditure which revealed a lower poverty ratio in Thiruvarur district, the household survey conducted by the Rural Development Department when lists out 13 parameters for arriving identifying the number of families living in poverty. These parameters range from possession of land, household consumer goods, educational level, and access to drinking water, sanitation, job and credit needs. The findings of the analysis are presented below.

The National Sample Survey Organization conducts a quinquennial sample survey of consumption expenditure from which monthly per capita consumption expenditure is calculated. The data are analyzed and the poverty line derived from the minimum calorie intake needed for subsistence is determined by the Union Planning Commission. Based on the poverty line, the proportion of people living in poverty is estimated.

In Thiruvarur district 67.89 percent of people are engaged in agriculture sector as compared with Tamil Nadu it is 42.13 percent. Due to inadequate infrastructure for industrial development, lack of Cottage, small scale and other industries. People are not getting alternative employment opportunities during lean season. This cause for low level of per capita income and low standard of living.

TABLE 3.6
TRENDS OF POVERTY LEVEL

Sl. No	Block wise	Total No. of HHs	Total No. of BPL HHs	% of BPL HHs
1	Thiruvarur	23453	8320	35.48
2	Nannilam	32869	9419	28.66
3	Koradachery	14564	5630	38.66
4	Kodavasal	30173	9144	30.31
5	Valangaiman	26624	8193	30.77
6	Needamangalam	32961	9944	30.17
7	Mannargudi	59617	17718	29.72
8	Kottur	10695	3003	28.08
9	Thiruthuraipoondi	14911	5772	38.71
10	Muthupettai	26826	8096	30.18
	Thiruvarur District	272693	85239	31.26

Source: TNSRLM and PVP, Thiruvarur.

The BPL survey conducted by the Department of Rural Development has put the absolute figure of 85239 BPL household which is 31.26 percent of the total number of households in the district. Among the Blocks, Thiruthuraipoondi has the highest number of BPL families with 38.71 percent followed by Koradachery with 38.66 percent. Nannilam Block has 28.66 percent and Thiruvarur Block has 35.48 Percent of the BPL families. In Kodavasal, Valangaiman, and Muthupettai less than 30 percent live below poverty line. The lowest proportion of BPL families was found in Kottur (28.08 %) Block. Other than various general factors causing wider spread poverty in the country, industrial backwardness attributed to the phenomenon of more poverty in this district.

In Thiruvarur District agriculture is fully depending upon Cauvery water's cannel irrigation Tamil Nadu State Government and district administration efforts should be upscaled through the systematic maintenance of cannels and rivers. More over the steps should be taken to ensure the financial assistance extended to the small and marginal framers through the commercial banks and co-operative banks in time.

In Thiruvarur district percentage of people depending on agriculture is high as compared to other districts because lack of employment opportunities in non agriculture sector. Though the transisition rate in thiruvarur district is higher than the state average the employment opportunity for the educated youth are lesser owing to the industrial backwardness of the district

Public Distribution System

The Public distribution system is an Indian food security system established by the Government of India under the Ministry of Consumer Affairs, Food and Public Distribution. Major commodities distributed included stable food grains, such as wheat, rice, sugar and kerosene through a number of public distribution outlets which are also known as Ration Shops.

TABLE –3.7
Family Card Holders

Sl. No	Block wise/District	Total No. of HH	HH provided with Family cards	% of HH provided with family cards
1	Thiruvarur	42516	39269	92.36
2	Nannilam	33524	31549	94.11
3	Koradachery	27586	29568	107.18
4	Kodavasal	28691	28899	100.72
5	Valangaiman	22939	26053	113.58
6	Needamangalam	24158	30813	127.55
7	Mannargudi	63848	62334	97.63
8	Kottur	25159	29957	119.07
9	Thiruthuraipoondi	30555	34162	111.80
10	Muthupettai	28243	22479	79.59
	District	327219	335083	102.40

Source: District Supply Officer, Thiruvarur (2013)

Table 3.7 explains the public distribution system in Thiruvarur. There are 3,27,219 shops and 3, 35,083 family cards have been provided by the Government of Tamil Nadu. Large number of ration cards have which been provided in Mannargudi Block and lower level of family card have been issued in Valangaiman Block.

Conclusion

Core Economic issues such as Employment, income level and poverty Status of the people of Thiruvarur have been discussed in this chapter. The inter Block variations have also been analysed, which will help the policy makers to frame suitable policies. Total number of workers are highest in Kottur Block. The Growth Rate Employment has come down in this district from 0.70 per cent in 2007 to 0.03 percent in 2014 as per the records of the district Employment Office. Another important finding is that the percentage of BPL families is almost 31.26 percent in this district. And this percentage is maximum for Koradachery Blocks and minimum in Kottur Blocks. Per-capita income of the district was Rs.24888 in 2008-09 and this has improved 34727 in 2011-12. There is need for very specific poverty addressing programme to be implemented in various Blocks of the district. The MGNREGP is providing work in almost all the Blocks in the District. During agricultural off season the labourers are benefited and get employment through this scheme. In Thiruvarur district literacy rate is higher but the employment opportunities are less so the Government has to take efforts to create alternative job opportunities and conduct awareness programme to promote self employment

programme for skill development, entrepreneurial development programme and find out the source to start cottage and small scale industries. The district administration should take efforts to provide coaching classes for competitive examination and various programme on human development. So this is the way in which the district can perform well and provide better result in future.

CHAPTER 4

DEMOGRAPHY, HEALTH AND NUTRITION

CHAPTER - 4

DEMOGRAPHY, HEALTH AND NUTRITION

Introduction

Demography can be generally defined as a statistical study of human population, especially with reference to size and density, distribution, and vital statistics. Contemporary demographic concerns include the global birth rates, the interplay between population and economic development, and the effects of birth control, urban congestion, illegal immigration statistics of the and statistics of the labour force. The basis for most demographic research lies in population Census and the registration of vital statistics.

It is a critical time for the Rural India to prioritize nutrition in its health and Development agenda. While dismal nutrition indicators persist, and the country's level of hunger are considerable, India is expected to miss the Millennium Development Goals targeting hunger and under nutrition. Without a targeted, multi-sectoral approach to nutrition, India is still struggling to deliver evidence-based interventions during the most important windows of opportunity.

At the same time, the National Rural Health Mission (NRHM) and its Accredited Social Health Activists (ASHA) are gaining ground in delivering critical, community-based health services for women, children, and families. The current period of service delivery innovation and quality improvement present an important opportunity to better integrate nutrition into health, and to push nutrition programming reform in the country. This chapter will examine the following research question: How can a nutrition strategy are better integrated into health programming? In pursuing this question, the study intends to explore mechanisms for better integration in health planning of State, and district levels, and strengthened operational integration between frontline health workers and their supervisory structures. This chapter also analyses the demographic changes, vital events such as Life expectancy at Birth, Crude Birth Rate (CBR) Crude Death Rate (CDR) Maternal Mortality Ratio (MMR), Infant Mortality Rate (IMR), under Mortality Rate and nutritional status of 0-5 years children. It probes into the effective source of Government programmes and it also assesses the impact of such programmes.

Demographic Trends

Demography is the study of human population dynamics. It encompasses the study of the size, structure, and distribution of population, and how population changes over time due to birth, death, migration, and ageing. Demographic analysis can be related to whole society or to smaller groups defined by criteria such as education, religion, or ethnicity.

Population and Demographic Transition

Table 4.1 presents the demographic profile of the district. The district has 12,64,277 persons as per the 2011 Census, which comprises of 6,26,693 males and 637584 females. It is 1.75 percent of the State's population. Between 2001- 2011, the population growth rate was 7.51 percent against 15.60 percent for the entire state. Mannargudi block has the highest population in the district, followed by Thiruvarur Block and Muthupettai block (93,104) has the lowest population. The density of population for the district as a whole is 556. The distribution of Scheduled Castes and Scheduled Tribes in the population, in terms of proportion, is quite different from that of the State as a whole. The proportion of the Scheduled Castes is higher at 34.08 percent and that of the Scheduled Tribes is strikingly lower at 0.24 percent compared to the Tamil Nadu State figure of 1.10 percent.

Table. 4.1
Demographic Profile of Thiruvarur District

Sl. No	Block wise/District	Population		Sex ratio		Density		SC pop %		ST pop %	
		2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
1	Thiruvarur	137202	151696	994	1028	531	588	29.87	32.23	0.06	0.28
2	Nannilam	108060	119766	997	990	509	530	34.31	34.46	0.03	0.07
3	Koradachery	101651	108249	991	1015	523	563	42.99	42.86	0.02	0.07
4	Kodavasal	104644	113106	1006	984	502	526	31.68	25.30	0.07	0.08
5	Valangaiman	94474	100645	1012	1005	316	464	40.25	42.27	0.03	0.06
6	Needamangalam	117080	124709	1028	1025	433	478	38.6	26.30	0.04	0.28
7	Mannargudi	203340	223586	1014	1021	391	439	24.87	25.72	0.03	0.41
8	Kottur	103687	107525	1023	1020	438	454	39.37	46.61	0.21	0.12
9	Thiruthuraipoondi	106052	115682	1036	1024	507	554	36.19	47.04	0.11	0.61
10	Muthupettai	93104	99313	1132	1061	523	451	21.38	28.58	0.11	0.13
	District	**1169474**	**1264277**	**1014**	**1017**	**492**	**556**	**32.35**	**34.08**	**0.23**	**0.24**

Source: Census of India 2001-2011.

The sex ratio in Thiruvarur is at 1017and is a way ahead of the Tamil Nadu ratio of 995. The improvement in the 2011 Census to 1017 compared to 1014 in 2001 is also a more significant one than at the State level from 987 to 995. Sex ratio in the district is also higher in many of the Blocks. The comparative improvement of the sex ratio for the district has reflected the improvement in the ratio in many of the Blocks and only two Blocks Nannilam and Kodavasal have sex ratio which is lower than that of the State ratio.

The population of Thiruvarur district has increased from 11, 69,474 in 2001 to 12, 64,277 in 2011. Poverty and lack of awareness of family planning measures due to illiteracy are the major causes for significant increases in population during the decade of 2001-2011. The growth rate of population is 0.81 percentage in this district which is lower than the Tamil Nadu State annual average growth rate of 1.5 percentage. In the Block wise classification of population growth rate Nannilam Block has an annual average growth rate is the highest at 1.08 percentage which is the highest during the 2001-2011 Census period. Thiruvarur and Mannargudi Blocks stand second and then to Nannilam annual growth rate are 1.06 and 1.00 percentage respectively. Kottur Block has the population growth rate of 0.37 percent per annum which is the lowest population growth Block in this district. The Thiruthuraipoondi, Kodavasal and Koradachery bocks register the population annual average growth rate of 0.91, 0.81 and 0.65 percentage. Kottur Block population growth rate is 0.37 percentages, but the Nannilam Block has the fastest population growth in the same decade.

Density of population in Thiruvarur district increased from 492 to 556 during the 2001 to 2011 Census period. The State density was 480 in 2001 and it rose to 555 persons per Sq.km in 2011 against the 325 to 382 of Indian density in the same decade. In Block wise density analysis, Thiruvarur Block (588 persons) and Koradachery Blocks (563) have recorded more than the district figure of 556.

India Rural population was 68.84 per cent against the urban population of 31.16 percentage. In Tamil Nadu, rural population constitutes 51.55 percent, and urban population constitute 48.45 percent. Tamil Nadu has more urban population as compared with all Indian figure. In the study district 79.61 percentage of population live in rural area and the rest of the 20.39 percentage live in urban area. This district is also one of the most rural populated districts in Tamil Nadu. Among the blocks, Mannargudi is the most urban populated block, and its share was 41.34 to its total population.

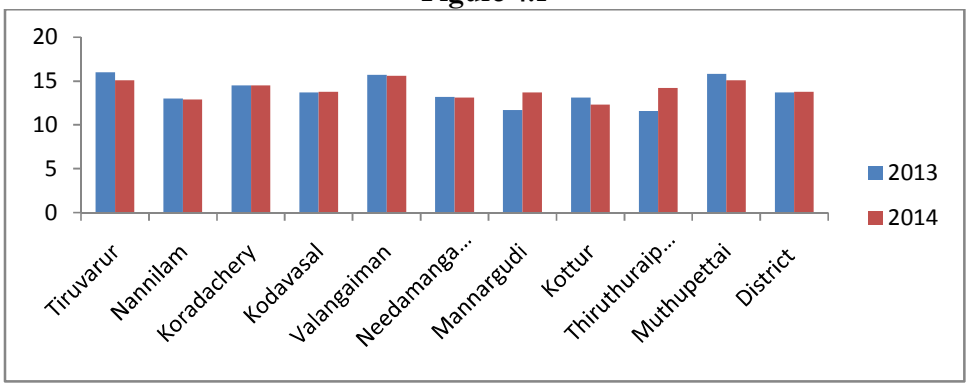
Thiruvarur block comes next to Mannargudi and its urban population (38.43 percent). Muthupettai (21.87 percent) Block gets third rank in this figure which is almost equal to the district urban population (20.39). Kottur block has zero urban population followed by Koradachery block (5.96 percent). Needamangalam also has the third lowest urban population in this district. As far as the rural population is concerned, the highest rural populated blocks are Kottur (100 percent), Koradachery (94.04) and Needamangalam (92.51).

Thiruvarur district is one of the most SC populated districts in Tamil Nadu. The SC population in Tamil Nadu constitutes 9.98 percentage. But Thiruvarur district recorded an average of 34.08 percentages of SC population and 0.24 percentage ST population as compared to the State ST population of 1.10 percent. It is lower than the State ST population.

The overall SC population of the district varies from 25.30 percentages to 47.04 percentage in various Blocks. Thiruthuraipoondi Block has 47.04 percentage SC population it is the most SC populated Block in this district. Kottur comes next to Thiruthuraipoondi and its contribution was 46.61. The SC population percentages of Koradachery Valangaiman, Nannilam and Thiruvarur were 42.86, 42.27, 34.46 and 32.23 respectively. All other Blocks also have considerable share of SC population. Thiruvarur, Muthupettai, Needamangalam, Mannargudi and Kodavasal Blocks recorded less than the district average of 34.08 percent while rest of the Blocks registered more than the district average. The total number of ST population in this district was 2673 in 2001 and it rose to 3034 in 2011 Census. Its share in the district total population was 0.24 percentage against the State average of 1.10 percentage. The share of ST in the total population of Thiruthuraipoondi Block was the highest at 0.61 percentage In short Thiruvarur district is one of the most ST populated districts in this State but its ST population was low compared to the State average.

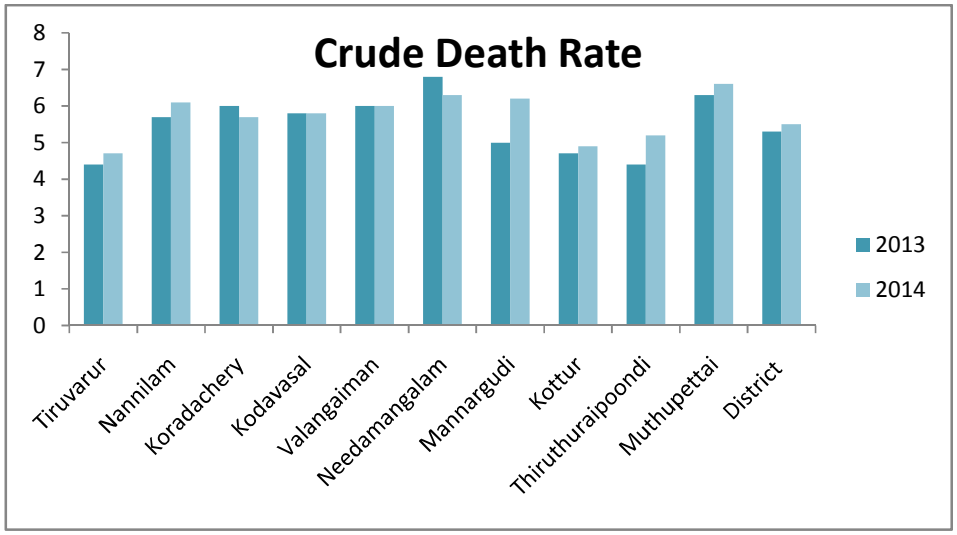
Crude Birth Rate and Crude Death Rate

Figure 4.1



Source: DD Health Service, Thiruvarur District.

The district Crude Birth Rate (CBR) increased from 15.6 to 15.9 by the year 2013 -2014. Kottur recorded the lowest CBR of 12.3 while Valangaiman Block registered the highest CBR of 15.6 in this same period Muthupettai, Thiruvarur and Thiruthuraipoondi Blocks also had a higher CBR. The above data also indicate low Crude Birth Rate in Nannilam (12.9), Needamangalam (13.1) and Mannargudi (13.7). The Crude Death Rate (CDR) for the district was of 5.3 to 5.5 over the year 2013-14. Among the Blocks, Thiruvarur recorded the lowest CDR of 4.7 in 2014 while Muthupettai Blocks registered the highest at 6.6 in 2014. This was due to the fact that Muthupettai Block suffered high incidence of Tuberculosis (TB) and other health problems.



Source: DD Health Service, Thiruvarur District.

Sex Ratio

Table.4.2
Sex-Ratio

Sl. No	Block wise/District /State	General			SC Population		
		2001	**2011**	**Increase or Decrease**	**2001**	**2011**	**Increase or Decrease**
1	Thiruvarur	994	1028	34	1002	1001	-1
2	Nannilam	997	990	-7	983	985	2
3	Koradachery	991	1015	24	946	1005	59
4	Kodavasal	1006	984	-22	1000	979	-21
5	Valangaiman	1012	1005	-7	1007	995	12
6	Needamangalam	1024	1025	1	1003	1007	4
7	Mannargudi	1014	1021	7	1017	1014	-3
8	Kottur	1023	1020	-3	1017	1012	-5
9	Thiruthuraipoondi	1036	1024	-12	1012	1022	10
10	Muthupettai	1132	1061	-71	1159	1034	-125
	District	**1014**	**1017**	**3**	**1014**	**1006**	-8

Source: Census Provisional data, Tamil Nadu 2011

The Sex Ratio is a widely used indicator of gender discrimination as it captures various facts of discrimination against women like their bargaining power, education and health investment and asset ownership. Many studies have provided evidence that it is excessive female foetal mortality before birth, which accounts for the imbalance in the sex-ratio.

The decadal growth of sex ratio was noticed as positive as it rose from 1014 in 2001 rose to 1017 in 2011 Census in Thiruvarur district. It is very positive compared to the State sex ratio of 995 during the same Census period. In Tamil Nadu, the Nilgiris district has the highest sex ratio of 1041 females per 1000 males and the lowest sex ratio district was Dharmapuri (946).

Sex-ratio of the district had improved from 1014 to 1017 between 2001 and 2011 indicating that there was further narrowing down the difference between male and female. Regarding the Sex Ratio of SC and ST population among the 10 Blocks of the district, Muthupettai Block witnessed higher level of SC sex ratio at 1034 and it was the lowest in Kodavasal Block at 979 against the district average sex ratio of 1006 in 2011 Census.

Child Sex Ratio

The size of population in the age group 0-6 in this district was 1,21,973 out of the total population of 12,64,277 and its share in total population is 9.66% However child sex-ratio of the district is similar to the overall sex-ratio of the state, because of full utilization of health facilities and nutritional programmes of the Government.

Table 4.3
Child Sex Ratio (0-6 Age Group)

(Figures in Numbers)

Sl. No	Block wise/District	Population in the age group of (0-6)		Sex Ratio
		Male	Female	
1	Thiruvarur	7715	7583	983
2	Nannilam	6079	5751	946
3	Koradachery	5373	5203	968
4	Kodavasal	5472	5284	966
5	Valangaiman	5365	4884	910
6	Needamangalam	5966	5578	935
7	Mannargudi	10771	10331	959
8	Kottur	5046	4730	937
9	Thiruthuraipoondi	5592	5620	1005
10	Muthupettai	4901	4729	965
	Thiruvarur Dist.	**62280**	**59693**	**958**

Source: Census Tamil Nadu 2011

TABLE 4.3 exhibits the block wise population in the age group of 0-6 in Thiruvarur district. The higher proportion in the age group of 0-6 is observed in Valangaiman and Thiruvarur blocks with 10.18 and 10.08 respectively against the district average of 9.65 percent. Kottur, Mannargudi, Needamangalam and Kodavasal Blocks recorded less than proportion of chidrenthe district average of 9.65 percentage. Rest of the Blocks witnessed slightly higher percentage than the district figure. Child Sex-ratio in Thiruvarur district is 1000 male for 946 female against the Tamil Nadu State child sex ratio of 943. The district child sex ratio (958) was higher than the State sex ratio. The Block wise classification of the age group of 0-6 population are Thiruvarur, Nannilam, Koradachery, Needamangalam, Mannargudi, Kottur, Kodavasal, Valangaiman and Muthupettai. Child sex-ratio was dominant and the remaining was only in Thiruthuraipoondi Block the female child domination was at 1005 females for 1000 males. Adverse sex ratio and male child preference is noticeable in Valangaiman block.

Table 4.4
Life Expectancy at Birth

Sl. No	District	2011			2014		
		Male	Female	Combined	Male	Female	Combined
1	District	62	64	63	68.60	71.00	69.80
2	State	70.1	70.9	68.9	71.80	75.20	73.40

Source : DD Health, Thiruvarur. 2014.

Life Expectancy at Birth (LEB) is a long-term measure of Social Development. It is a sum total of impact of socio-economic intervention. The LEB of Tamil Nadu for 2014 was 71.80 years for male and 75.20 for female. In this regard, the district LEB in 2011 and 2014 were 63 and 69.80 years respectively. The male LEB in 2014 was 68.60 years and female LEB was 71.00. LEB of the district indicates that there is provisions for improvement in the overall economic and health conditions.

HEALTH

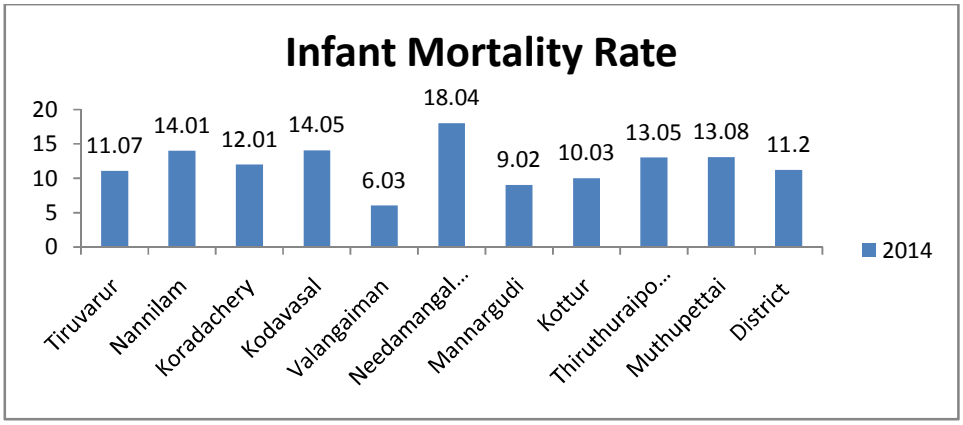
The concept of health is a broader one. For a person to be considered healthy his physiological conditions have to be normal. Apart from fitness, many other factors determine human health. This includes environmental, social and psychological factors. Emotional, spiritual and intellectual well being is also included in the concept of health. The right to live is the most basic human right. Within the limitations of existing technology and resources, efforts must be made to ensure that every one can lead a healthy life. Good health means freedom from illness and disease. To acquire skills, human beings need sound health. Therefore health care becomes a prime criteria for attendants in a district. Skilled attention is needed during their delivery. Recognizing women's health rights means ensuring better health and educational rights of their children, but deeply rooted gender inequality makes it difficult for women to access health facilities.

Infant Mortality Rate **(IMR)**

The Infant Mortality Ratio (IMR) measures the number of infant (< 1 year) deaths per 1000 live births. The World Summit for Children in 1990, constructed that there is a strong correlation between the health of the mother and that of the child. The summit also resolved to reduce the infant mortality deaths by half by the year 2000. The Millennium Development declaration has also included the goal of reducing maternal

mortality to half. But in India, it is still a long way to achieve this target. The access to immunization and the skilled birth attendants during deliveries substantially lowered the maternal mortality rate.

Fig.No.4.2
Trend in Infant Mortality Rate **(2014)**



Source: DD Health, Thiruvarur. 2014.

Figure 4.2 shows the infant mortality rate of the district, It is also an important indicator of health status of the population. Among the ten blocks Needamangalam registered the highest (18.04) against the district average of 11.20. Except Valangaiman, Mannargudi and Kottur blocks. All other blocks were poor against the district average. Still there is scope to improve the health status of the district. It is also the main reason for these blocks has low in child development Index.

Maternal Mortality Ratio

The MMR measures the number of women who die due to maternal causes per 1, 00,000 live births. Table 4.5 shows that Maternal Mortality Ratio (MMR) of Thiruvarur district. Overall MMR in Tamil Nadu was 85.0 in 2014 and for Thiruvarur it was 110.00 during the same period.

Table 4.5
Maternal Mortality Rate

Sl.No	Block wise/District /State	2014
1	Thiruvarur	0.00
2	Nannilam	128.40
3	Koradachery	181.40
4	Kodavasal	0.00
5	Valangaiman	126.80
6	Needamangalam	118.40
7	Mannargudi	161.60
8	Kottur	68.60
9	Thiruthuraipoondi	224.90
10	Muthupettai	188.70
	District	110.00

Source: DD Health Department, Thiruvarur. (2014)

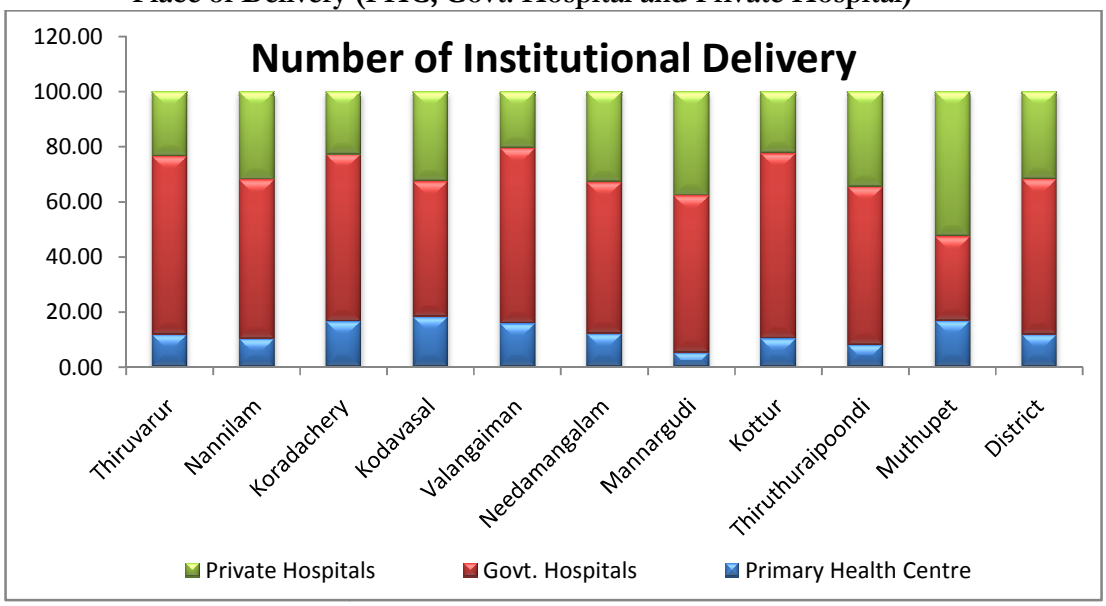
The Maternal Mortality Ratio was high in Thiruthuraipoondi (224.90) Muthupettai (188.90) and Koradachery (181.40). The lowest Maternal Mortality rate is registered in Thiruvarur (0.00), Kodavasal (0.00) and Kottur (68.60). It is interesting to note that there was no maternal mortality rate in Thiruvarur and Kodavasal block as far as 2014 data was concerned. The study suggests that Government should concentrate on maternal health care in the above mentioned seven blocks. High MMR in Thirthuraipoondi is 224.90 and hence is need for the detailed study regarding the seven block.

Number of Institutional Delivery

Institutional delivery includes all deliveries that place deliveries attended by trained personnel. In this district all deliveries are institutional, except Kodavasal and Valangaiman Blocks which witnessed one delivery at home. In Thiruvarur (1), Nannilam (1), Valangaiman (1) and Needamangalam (4) delivery took place in health sub centers (Refer Table 4.3 in annexure) There are substantial number of primary health centers which are equipped to conduct normal deliveries in this district. In Thiruvarur district there were 16347 total institutional deliveries in 2014 and there were only 9 deliveries (0.01 percent) in non –institutional settings. In the case of institutional delivery there were seven deliveries at health sub centers and 2325 (11.65 percent) deliveries in Primary Health Centres. Government hospitals took care 8747 deliveries (56.34 percent) in this district. Private hospitals also recorded a considerable share in the institutional delivery that is 5268 (31.80 percent). In the case of PHC deliveries, Kodavasal (16.37 %),

Koradachery (16.48 %), Valangaiman (15.73 %), Needamangalam (11.98 %) and Thiruvarur (11.67%) recorded more number against the district average of 11.65 percentage. In the case of Government hospitals except Muthupettai (30.56%), Kodavasal (49.15 %) and Needamangalam (55.08 %), other blocks availed more institutional delivery facilities than the district average of 56.54 percent. Regarding in a hospital under treained medical care private hospital deliveries, Except Thiruvarur, Koradachery, Valangaiman and Kottur blocks, other blocks have a share greater than the district average of 31.80 percent.

Fig.4.3
Place of Delivery (PHC, Govt. Hospital and Private Hospital)



Source: DD Health Service, Thiruvarur District 2014.

The general objectives of the Tamil Nadu Rural Health Mission(TNRHM) include empowering the community to have better health services and improving the performance of the health care delivery system. The project supplies delivery kits to village health nurses, medicines and hospital equipments to PHCs and also undertakes minor civil works in PHCs/HSCs/ district Hospitals.

Table 4.6
Still Birth Rate

Sl.No	Blocks	2011	2014
1	Thiruvarur	12.8	8.70
2	Nannilam	9	12.00
3	Koradachery	7.6	11.40
4	Kodavasal	13.5	11.00
5	Valangaiman	13.9	10.00
6	Needamangalam	12.1	11.10
7	Mannargudi	7.2	8.50
8	Kottur	8.5	14.90
9	Thiruthuraipoondi	9.3	9.70
10	Muthupettai	10.3	7.50

Source: DD Health Service Thiruvarur District.-2014.

Still Birth Rate is also one of the important indicators of human development. This occurs principally due to malnutrition of the expectant mothers and their poor health status. The SBR of the Thiruvarur block was 8.70 in 2014 and this was the lowest rate of the district but in Kottur Block it was 14.90. Due to the periodically observation made by the health department the SBR is considerably reduced.

Immunization

Table.4.7
Immunization

Sl. No	Block wise	Total Number of children below 5 year 2001	Total number of children immunized 2011 (Including Puls Polio)	% of Children Immunised
1	Thiruvarur	13922	14914	107.13
2	Nannilam	7288	8025	110.11
3	Koradachery	27081	28819	106.42
4	Kodavasal	16323	17508	107.26
5	Valangaiman	38017	40539	106.16
6	Needamangalam	8247	9800	107.92
7	Mannargudi	16370	16400	100.18
8	Kottur	27945	28154	100.75
9	Thiruthuraipoondi	10746	9976	92.83
10	Muthupettai	17990	18949	105.33
	District	183929	192239	104.62

Source: DD Health Department, Thiruvarur.

Table 4.7 shows the immunization below 5 years of age children in all the Blocks of the district. Pulse Polio Immunization was done for 102096 children as against the total of 96,928 children residing in Thiruvarur district. Except Mannargudi Block

(80.4%), all other Blocks showed exceptional performance with regard to the administration of pulse polio. It clearly reveals that the people have understood the real meaning, and the need for pulse polio programme.

NUTRITIONAL STATUS

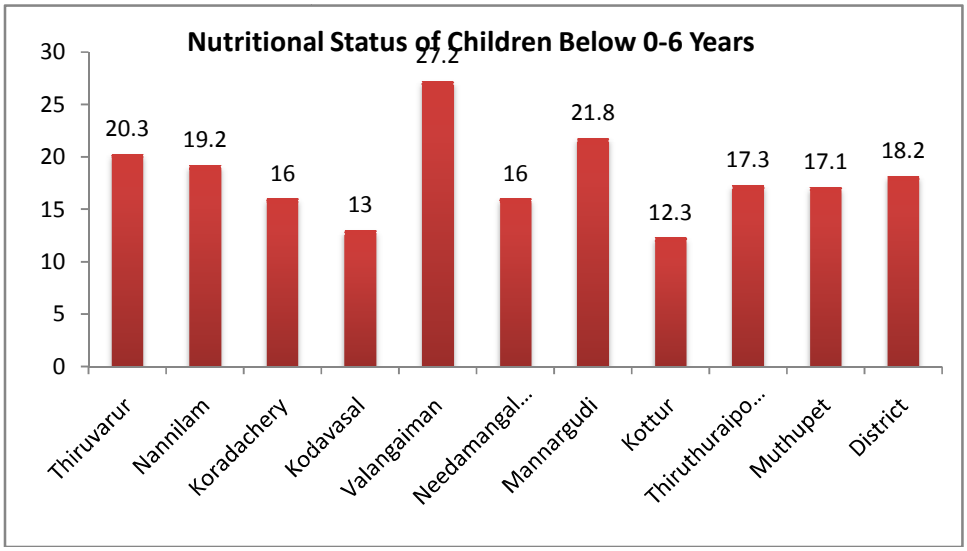
Nutritious Level and Trend

Figure 4.4 clearly portrays the actual and percentage figures of underweight children in this district during the year 2014. Valangaiman block recorded 29.59% of underweight children to its normal children. This pathetic condition due to non-intake of quality foods, diseases affecting the young children and the vitamin deficiencies. This needs to be addressed. People have to make use of the services provided through public distribution system of Tamil Nadu Government and the services offered by Primary Health Centers effectively.

Trend in Nutritional Status of Children

Child Malnutrition is a widespread public health problem having distinct consequences because good nutrition is an essential determinant of their well-being. The most neglected form of human deprivation is malnutrition particularly among pre-school children.

Fig.4.4
Trend in Nutritional Status of Children below 0-6 Years



Source: PO.ICDS

The figure explains the Nutritional Status of Children in the age group of 0-6. The district recorded 18.2 percent malnourished children. Among the block Valangaiman recorded the highest (27.2 percent) while it was lower in Kottur block (12.3 Percent). It is observed from the table that in Valangaiman, Mannargudi, and Thiruvarur blocks is more than district average of 18.2 percent. Hence the Government may concentrate on improving the Nutritional Status of Children in the above blocks.

Provision of IFA Tablets

The intake of iron and folic acid tablets assumes great significance in thwarting the anaemia and the spreading of communicable diseases. Table 4.8 portrays that the adolescent girls need to consume more IFA tablets as it is the period of rapid growth for them. Physical changes require proportion of malnourished children of more IFA. Children and women are the vulnerable groups who require more IFA tablets.

Table 4.8
Provision of IFA Tablets

Sl.No	Block wise/District	% of Women who Took IFA Tablets	% of Children Who Took IFA Tablets	% of Adosolent Girls Who Took IFA Tablets
1	Thiruvarur	25.23	14.08	60.70
2	Nannilam	21.20	12.20	66.61
3	Koradachery	20.33	21.90	57.77
4	Kodavasal	19.34	17.75	62.91
5	Valangaiman	23.81	15.37	60.83
6	Needamangalam	20.89	31.41	47.70
7	Mannargudi	25.29	27.14	47.57
8	Kottur	31.38	9.45	59.17
9	Thiruthuraipoondi	21.95	20.51	57.53
10	Muthupettai	22.00	19.30	58.70
	District	22.84	20.04	57.12

Source: DD Health Service Thiruvarur District 2014.

According to NFHS-3, the proportion of women (15-49 years) who are anemic was 53.3 percent in Tamil Nadu and 56.2 percent in India in 2005-06. Another important indicator of maternal care is the number of deliveries conducted by skilled personnel. In 2005-06, skilled attendants conducted only 48 percent of deliveries in India. This not only increases the mortality rates of infants and children but also contributes to high maternal mortality in India. The corresponding figure for Tamil Nadu was 93 percent. The projection shows that 100 percent of women in the State will give birth under the

care of a skilled birth attendants by 2010. Children in the age of 6-24 months are most vulnerable to anemic and it can result in impaired cognitive performance, behavioral and mental development co-ordination, language development and scholastic achievement besides increasing morbidity from infectious diseases.

DDHS Thiruvarur in 2011 found that, out of the total number of pregnant women 1614 were suffering from anemia i.e., 7.21 percent of women reported with anemia. In Nannilam, the total numbers of pregnant women was 2249 in 77 (4.00%) suffered with anemia Koradachery, with a total number of 2121 pregnant women 182 anemia reported i.e. 8.58 percentage. Kodavasal recorded 13.87 percent, Thiruthuraipoondi, 11.30 percent, Valangaiman, 4.97 percent, Needamangalam, 7.95 percent, Mannargudi, 4.88 percent, Muthupettai, 8.90 percent during the same period. Out of the ten blocks, Kodavasal recorded the highest share and Kottur registered the lowest share of percentage of women with anemia, at 11.30 and 1.48 percent respectively. It is found that Thiruvarur Koradachery, Kodavasal, Needamangalam, Thiruthuraipoondi, Muthupettai recorded higher average than the district average rate of pregnant women with anemia. Among the pregnant women of 22385, 1618 suffered from anemia in the year 2011. In Kottur, some preventive measures were taken by the district Welfare Department in Thiruvarur. .

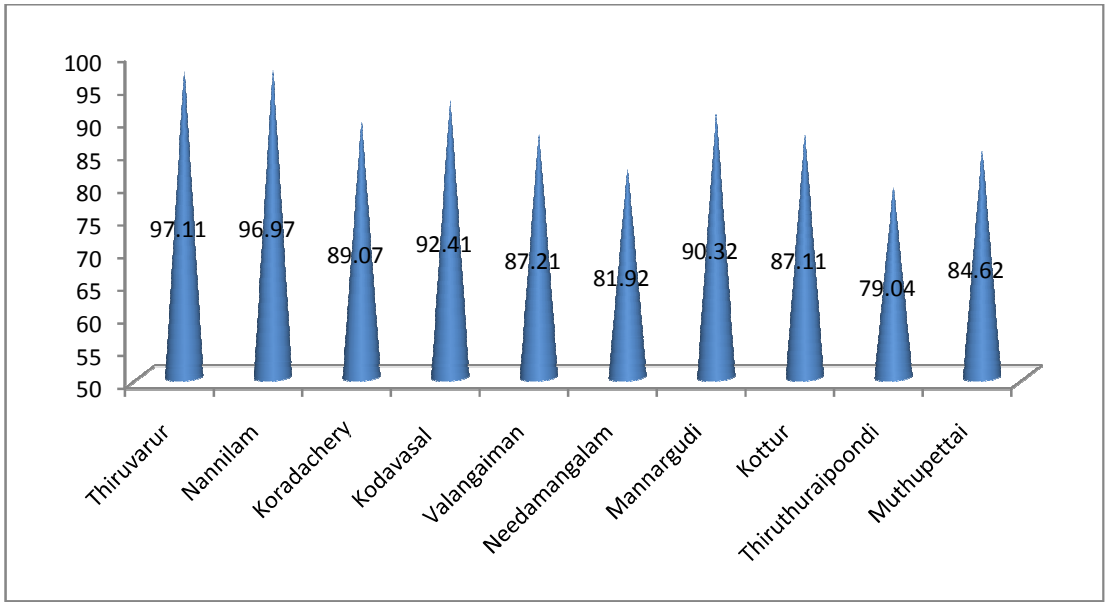
NON-NUTRITIONAL FACTORS AND THEIR IMPACT ON NUTRITION

Habitations provided with safe Drinking water.

Water and sanitation have direct impact on nutrition and the health of people. Provision of these basic facilities is also crucial for achieving the like water supply and sanitation goal of "Health for All". The goal is set at supplying 40 Liters Per Capita (LPC) in the rural areas. It is noticed that water is a major source of infection for most of the communicable disease. In this context provision of safe drinking water and maintenance, drainage facilities and latrine facilities assumes much significance. The World Bank has assessed that 30 million life years are lost per annum due to water borne diseases. Acute Diarrheal Disease (ADD) is a major cause for adult mortality in India.

Fig.No.4.5

Access to Drinking Water (2014)



Source: MDWS, Site for Blocks, EO (TP) and Municipal Commissionar,2014.

Under the total sanitation campaign in the Thiruvarur district 88.76 percentage of habitations have been provided with safe drinking water, which are 2630 habitations out of 2963 habitations in this district. Water and sanitation have sufficient impact on nutrition and provision of these basic ancillaries is also crucial for achieving the goal of health for all. In Thiruvarur Block 97.11 percentage of habitations are provided with safe drinking water and this is the highest rate in this district. In Thiruthuraipoondi block was 79.04 percent.

Nannilam block (96.97 %) followed by Thiruvarur block Provided second highest safe drinking water provided block in this district. It is found that except Mannargudi, Nannilam and Thiruvarur all other blocks have less than the district average of provision of safe drinking water in this district. In urban area, all urban habitations availed 100 percentage of drinking water facility in this district.

Percentage of Population Access to Toilet Facilities

Table No. 4.9

Percentage of Population Access to Toilet Facilities

Sl. No	Block wise/District	Total Number of HHs	Number of HHs are with Toilet facilities	% of Household with Toilet
1	Thiruvarur	39243	26301	67.02
2	Nannilam	30394	19961	65.67
3	Koradachery	28014	18651	66.58
4	Kodavasal	29064	18676	64.26
5	Valangaiman	25114	11469	45.67
6	Needamangalam	31914	21986	68.89
7	Mannargudi	57150	33003	57.75
8	Kottur	28932	19836	68.56
9	Thiruthuraipoondi	30764	22164	72.04
10	Muthupettai	26630	18702	70.23
	District	327219	210747	64.41

Source: MDWS site for Blocks and EO (TP) and Municipal commissioner Thiruvarur,2014.

Under the total sanitation campaign, household toilets have been constructed keeping a target every year. In 2011 Census, 64.41 percent of households in the district have been provided with toilet facilities Thiruthuraipoondi block has recorded 72.04 percent of households to get toilet facility in this district. In Muthupettai block it was 70.23 percentage and in Valangaiman block it was 45.67 percentage, followed by Mannargudi block at 57.75 percent. The highest percentage of toilet facilities was available in Thiruthuraipoondi block with a share of 22164 households (72.04 %) The hygienic aspect of possessing more toilets should be accorded importance. Valangaiman block has to concentrate in this matter as it had only 45.67 percent of households with toilet facilities.

SPECIAL PROGRAMMES

Table.4.10

HIV Positive Persons

Sl.No	Age-Group wise	Positive Persons in 2007		Positive Persons in 2011	
		Male	Female	Male	Female
1	**0-14**	11	9	5	4
2	**15-19**	0	3	1	0
3	**20-24**	1	10	4	6
4	**25-29**	19	29	9	8
6	**30-39**	50	22	31	16
7	**40-49**	23	8	20	10
8	**50 above**	7	0	6	6
9	**Total**	**111**	**81**	**76**	**50**

In Thiruvarur district, 111 male and 81 female tested HIV positive, as per 2007 data. The persons affected by HIV/AIDS came down to 76 males and 50 females and this fall was due to increased awareness. The VCTC (Voluntary Counseling and Training Centre) should take some preventive measure under the HIV programme in Thiruvarur district. Age wise classification of HIV positive cases in Thiruvarur district, is significant According to Table 4.10. 11 male and 9 female under the 0-14 age group were noted as positive cases of HIV in 2007 and it declined 5 male and 4 female in 2011. In the age group of 15-3, 3 female and 1 male are noted as positive cases. At the district level in 2011, 76 male and 50 female were tested HIV positive. It can be been that in the district, there has been a decline in HIV cases. Large declines in the age group 0-14 suggest that the district could have been successful in the prevention of mother to child transmission.

Table.4.11
TB and Leprosy Incidence

Sl.No	Block wise/District /State	Positive TB persons		Leprosy persons	
		2007	2011	2007	2011
1	Thiruvarur	263	251	4	4
2	Nannilam	22	37	6	7
3	Koradachery	12	25	4	5
4	Kodavasal	16	2	3	2
5	Valangaiman	22	16	3	4
6	Needamangalam	36	37	11	13
7	Mannargudi	133	154	6	8
8	Kottur	8	12	10	11
9	Thiruthuraipoondi	109	155	4	5
10	Muthupettai	21	6	3	2
	District	**642**	**695**	**54**	**65**

Source : DD Health Service, Thiruvarur , 2011.

Leprosy

The National Leprosy Eradication Programme (NLEP) was launched in 1955 in Tamil Nadu. At the time of introduction, the Dap zone medicine was used for treatment, but from September 1990 onwards Multi Drug Treatment (MDT) was introduced. There has been remarkable improvement in the treatment and recovery of leprosy patients. Leprosy showed increasing trend in 2007 and 2011 with 54 and 65 cases respectively. The higher positive leprosy cases were reported in Needamangalam and

Kottur blocks viz., 13, and 11 respectively while lesser number was reported in Kodavasal and Muthupettai.

Tuberculosis

There has been an increase in the overall positive TB patientss for the district. Thiruvarur Block had more number of TB persons (251) in 2011. There was more than 50% increase in TB patients in Koradachery, Kodavasal, Valangaiman and Muthupettai Blocks and the witnessed the declining trend in 2007 and 2011 i.e., 16 to 2 and 22 to 16 and 21 to 6 respectively. Similarly Needamangalam, Mannargudi and Thiruthuraipoondi showed increasing number of positive TB causes in 2007 and 2011.

CONCLUSION

The district is one of the few district in the State which has a favorable sex Ratio. It is noted that the CBRs (13.07 in 2011) and CDRs (5.99 in 2011) have come down in the year 2011. IMR has come down from 18.51 in 2009 to 13.07 in 2011. But the maternal mortality rate has increased to 1.12 against 22 of Tamil Nadu State. An overwhelming response is found in immunization in Thiruvarur district. The demographic profile of the district highlights population, sex ratio, density, SC and ST population, juvenile sex ratio between 2001 and 2011. The population growth rate of Thiruvarur district was 8.43 percent in the decade 2001to 2011. There was 8.11 percent increase in the population from 1991 to 2001. This has been reflected in the density of population. There is a little change in sex ratio, SC and ST population. In fact, the sex ratio of SC population is high compared to other classes. This segment of population does not make much gender discrimination and they treat every child as their income bearing assets. The child sex ratio of the district is low compared to overall sex ratio. The life expectancy of the female in the district is low compared to State average. The district's health administration have provided all types of health care services and tracking each and every case through VHNs/CHNs and controlled IMR, MMR, and SBR in the district. The district has achieved 100 per cent institutional deliveries, which is a remarkable achievement. The child Development index highlights that the performance differs only on health rather than on education in the district. The poor health performance is noticed in certain Blocks and these Blocks have to be provided adequate attention in enhancing overall child health in the district. The Government has scaled up their activities in providing potable drinking water, good sanitation and controlling communicable and non communicable diseases in the district. These factors are related to the levels of literacy of the population, which will be analysed in the next chapter.

CHAPTER 5

LITERACY AND EDUCATION

CHAPTER – 5

LITERACY AND EDUCATION

Introduction

Education is one of the most powerful instruments for reducing poverty and inequality and lays the foundation for sustained economic growth. The World Bank compiles data on education inputs, participation, efficiency, and outcomes. Data on education are compiled by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics from official responses to surveys and from reports provided by education authorities in each country.

Education is a core sector for achieving the objective of employment, human resource development and bringing about the much needed change in social environment, leading to overall progress through efficient use of resources. An appropriate education system cultivates knowledge, skill, positive attitude, awareness and sense of responsibility towards rights and duties and imparts inner strength to face oppression, humiliation and inequality (Ninth Five Year Plan, 1997-2002).

Tamil Nadu is the eleventh largest State by area and the seventh in Population State in India. It is the second largest State economy in India as of 2012. The State was ranked sixth among States in India according to the India Human Development. The State has the highest number (10.56 percent) of business enterprises and stands second in total employment (9.97 per cent) in India, compared to the population share of about 6 per cent. In the 2013 Raghuram_Rajan Panel Report indicated Tamil Nadu as the third most developed State in India based on a "Multidimensional Development Index".

Education

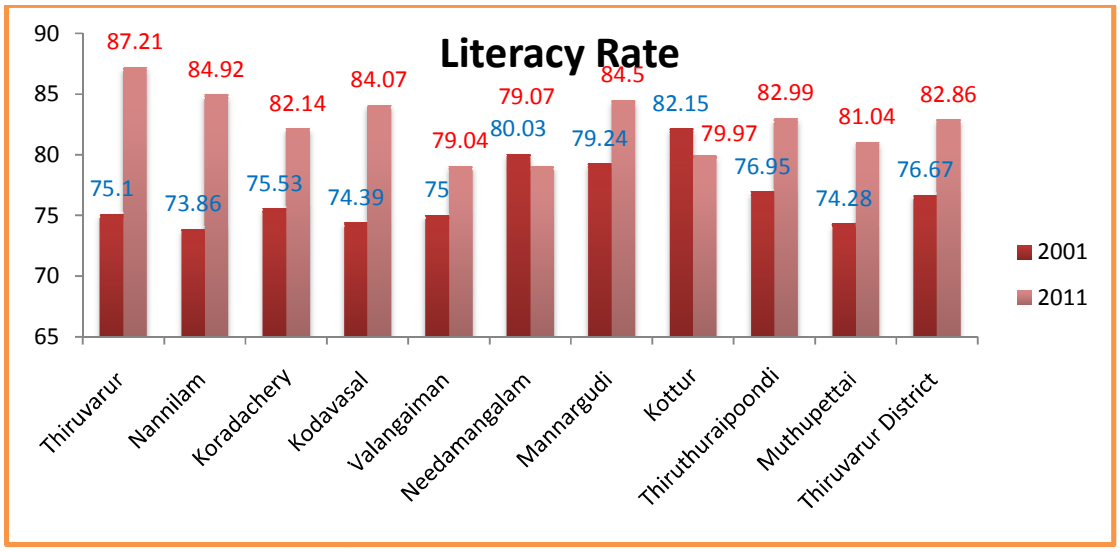
Tamil Nadu fares relatively well in terms of key education indicators. It ranks first in terms of gross enrolment ratio at middle schools, third in terms of education development index for primary and overall and female literacy, fifth in terms of composite index for elementary education, and sixth in terms of gross enrolment at primary level.

In earlier census up to 1981, it was customary to work out the Literacy Rate taking into account the total population. Since Literacy Rate was more meaningful if the sub-population in the age group 0-6 was excluded from the total population, it was decided in 1991 to calculate Literacy Rate for the population of seven years and above. The same concept has been retained in all Censuses since 1991. The Literacy Rate, taking into account the total population as the denominator has now been termed as 'Crude Literacy Rate', while the Literacy Rate calculated by taking into account the 7 and above population in the denominator is called the Effective Literacy Rate.

Literacy Performance of Thiruvarur

Thiruvarur district has been divided into ten Blocks namely, 1. Thiruvarur 2. Nannilam 3. Koradachery 4. Kodavasal 5. Valangaiman 6. Needamangalam 7. Mannargudi 8. Kottur 9. Thiruthuraipoondi and 10. Muthupettai for administrative purposes.

Fig.5.1, Literacy Rate



Source: Census in India, 2011

LITERACY LEVEL

The percentage of population aged seven years and over who can both read and write with understanding of a short simple Statement in his/her everyday life, is deemed literate Generally, 'literacy' also encompasses 'numeracy', the ability to make simple arithmetic calculations. Adult illiteracy is defined as the percentage of the population,

aged 15 years and over who cannot both read and write with understanding a short simple Statement in his/her everyday life. In 2001, the total percentage of literates in Thiruvarur was 76.67 percentage in which 67.90 percent were females and 85.43 percent are males. In 2011, Literacy Rate of Thiruvarur was 82.86 per cent against the state average of 80.09, in which 76.72 percent were females and 89.13 percent were males as compared to the state average of 86.77 percent males and 73.44 percent females in overall Literacy Rate. Among the blocks, Thiruvarur have 87.21 percentage of Literacy Rate, included 92.26 percentage of males and 82.33 percentage of females. In Valangaiman witnessed rise to 79.04 percent from 75.00 percent in the respective census of 2001 to 2011.

ELEMENTARY EDUCATION

Primary Education

Primary Education is the first stage of compulsory_education. It is preceded by pre-school _or nursery school followed by the secondary_education. In most countries, it is compulsory for children to receive primary education. The major goals of primary education are to achieve basic literacy and numeracy amongst all pupils, the foundations of science, mathematics, geography, history and other social sciences in the minds of young children. This would create a knowledgeable society, with an analytical bent of mind.

Table No.5.1

Enrolment Primary Education

Sl. No	Block wise/District	Enrolment in Primary					
		Boys		Girls		Total	
		2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
1	Thiruvarur	99.4	100.26	99.5	100.30	99.45	100.28
2	Nannilam	99.1	100.31	99	100.35	99.05	100.33
3	Koradachery	99.5	99.96	99.4	100.00	99.45	99.88
4	Kodavasal	99.6	100.21	99.3	100.25	97.35	100.23
5	Valangaiman	99.6	99.86	99.55	99.90	97.55	99.88
6	Needamangalam	92.2	99.71	100	99.75	96.1	99.73
7	Mannargudi	99.9	100.31	99.5	100.35	99.7	100.33
8	Kottur	99.5	100.26	99.3	100.30	99.4	100.28
9	Thiruthuraipoondi	99.3	99.84	99.4	99.88	99.35	99.86
10	Muthupettai	99.4	100.41	99.3	100.45	99.35	100.43
	District	98.75	100.11	99.42	100.15	98.67	100.13

Source: CEO, SSA, Thiruvarur.

Table 5.1 represents the growth in school enrolment, in different stages of school education, from 2012-13 to 2013-14. The total enrollment at the primary stage has increased in Thiruvarur district, from the total enrolment of 98.67% in 2011-12 to 100.13 in 2013-14.

The total enrolment at primary level was100.13 of which 100.11 are boys enrolled and 100.15 % are girls enrolled in primary education during the period of 2013-2014. Total numbers of primary level schools in terms of girls enrolment increased by 98.67 per cent to 100.15 per cent. The education to girls should be improved and this would in turn create a far more vibrant society in future.

In total enrolment six blocks had achieved 100 per cent of girls at primary level. The other blocks had more or less the same level of enrolment ratio in the year of 2013-14.

The study found that there were more enrolment especially enrolment of boys which increased in 2013-14 as compared to 2012-13 where RTE (Right to education) has been notified.

Completion Rate and Dropout Rate in Primary Education

Table.5.2

Completion and Dropout Rate

Sl. No	Block wise	Completion						Drop out					
		Boys		Girls		Total		Boys		Girls		Total	
		2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
1	Thiruvarur	97.51	97.61	98.22	98.39	97.95	98.10	0.46	0.45	0.34	0.33	0.40	0.38
2	Nannilam	97.56	97.86	98.12	98.44	97.51	98.15	0.46	0.45	0.34	0.33	0.40	0.39
3	Koradachery	97.44	97.51	98.24	98.09	97.92	97.80	0.56	0.55	0.44	0.43	0.50	0.46
4	Kodavasal	97.52	97.76	98.22	98.34	97.94	98.05	0.66	0.65	0.54	0.53	0.60	0.59
5	Valangaiman	97.63	97.41	98.19	97.99	97.41	97.70	0.76	0.75	0.64	0.63	0.70	0.68
6	Needamangalam	97.41	97.26	98.12	97.84	97.42	97.55	0.43	0.42	0.31	0.30	0.37	0.36
7	Mannargudi	9.22	97.86	98.25	98.44	97.95	98.15	0.56	0.55	0.44	0.43	0.50	0.49
8	Kottur	97.55	97.81	98.20	98.39	97.55	98.10	0.56	0.55	0.44	0.43	0.5	0.48
9	Thiruthuraipoondi	97.42	97.39	98.23	97.97	97.95	97.68	0.66	0.65	0.54	0.53	0.60	0.56
10	Muthupettai	97.21	97.96	98.18	98.54	97.91	98.25	0.56	0.55	0.44	0.43	0.50	0.49
	District	**97.66**	**97.66**	**98.24**	**98.24**	**97.95**	**97.95**	**0.56**	**0.56**	**0.44**	**0.44**	**0.5**	**0.50**

Source: CEO, SSA, Thiruvarur.

Table 5.2 shows the Dropout rate in Primary Education. The Completion rate of primary education remained high. Sarva Shiksha Abiyan (Education for all) was responsible for the completion rate. In the year 2013-14, the completion rate was 97.95 and it was the same percentage of completion rate in the previous year also. The total number of completion rate of boys was 97.66 and of girls were 98.24 in that given period 2013-14. The dropout rate is a indicator of poverty and inequality. Drop out ratio of boys was greater than the girls which could indicate that their children could income engaged in same.

UPPER PRIMARY / MIDDLE SCHOOL EDUCATION

Universalization of Elementary Education (UEE) is a constitutional provision and a national commitment in India. Universalization implies educating all children up to the age of 14 which is equal to completion of upper primary level of education. Over the years, efforts by the Government towards achieving the goal of UEE were focused more on the primary stage than on the upper primary level of education. With the expansion of enrollment at the primary level of education, the pressure for expansion of the upper primary level of education also increased. The creation of easy geographical access conditions to enroll all the eligible children in upper primary schools, provision of reasonable levels of physical and infrastructural facilities in upper primary schools and teaching learning materials in the classrooms to facilitate meaningful curriculum transaction. This would help all eligible children to join school and receive the quality education. Universalization of upper primary education in India is normally discussed in terms of enrolling and retaining all children in the age group of 11 to 14. The was seems more to be a desirable goal to be achieved in the long run. Enrollment is function of the relevant age group at the primary level of education. However, enrolment in upper primary schools is more a function of primary education completion rates than a function of the relevant age group. It is logical to argue that all children in the relevant age group (11 to 14) cannot be enrolled in upper primary classes unless they complete primary level of education. Once universalization of primary education is attained, then there cannot be any difference between providing upper primary level of education to all age group children and those who complete primary stage of education. At present committed efforts are needed to improve the inter-stage transition ratios from primary to upper primary levels of education.

Table No.5.3

Enrollment in Upper Primary Education

Sl.No	Block wise/District	Boys		Girls		Total	
		2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
1	Thiruvarur	98.5	101.90	99	101.34	98.75	101.62
2	Nannilam	99.6	101.95	99.5	101.39	99.55	101.67
3	Koradachery	99.2	101.60	98.8	101.04	99	101.32
4	Kodavasal	97.35	101.58	99.7	101.29	98.53	101.57
5	Valangaiman	97.5	101.50	98.8	100.94	98.15	101.22
6	Needamangalam	98.6	101.35	97.9	100.79	98.25	101.07
7	Mannargudi	99.75	101.95	98.7	101.39	99.23	101.67
8	Kottur	99	101.90	98.87	101.34	98.94	101.62
9	Thiruthuraipoondi	99.45	101.48	99.8	100.92	99.63	101.20
10	Muthupettai	98.65	102.05	99.1	101.49	98.88	101.77
	District	**98.76**	**101.75**	**99.01**	**101.19**	**98.89**	**101.47**

Source : CEO, SSA, Thiruvarur.

The present study shows the Gender wise enrolment, in upper primary education and the growth of gender wise school enrolment, in different stages of school education from 2012-13 to 2013-14. The total enrollment at the upper primary stage had increased among 10 Blocks of Thiruvarur district, The total enrolment of upper primary of the district was 98.91 percent in 2012-13 and it was increased to 101.47 percent in 2013-14.

The total enrolment at Upper primary level was 101.47 of which 101.75 were boy's enrolment whereas 101.19 girls enrolled. The district total number of students enrolled at Upper primary level was101.47. The enrollment of girls was on the rise (i.e.) from 99.01 to 101.19 (2013-2014) per cent Parents showed greater interest to enrolled the girls children in school. This is many herald the real gender equality and the empowerment of women.

The total enrolment among the all blocks have achieved close to same per cent of enrolment for Girls and Boys at Upper primary level. In short, the enrollment had increased in 2013-14 when compared to 2012-13 with more enrollments of girls.

The total number of Gender wise enrolment ratio have recorded at more than 100 in all the ten Blocks of the district in the same period of 2013-14. More number of boys is enrolled in upper primary level in Muthupettai block in 2013-2014 (102.05). Girls are enrolled at Needamangalam block was 100.79 in the year of 2013-14.

Completion Rate and Dropout Rate Upper Primary and Middle School Education

Table No.5.4

Completion and Dropout Rate in Upper Primary Education

Sl. No	Block wise	Completion						Dropout					
		Boys		Girls		Total		Boys		Girls		Total	
		2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
1	Thiruvarur	93.52	93.78	93.79	94.50	93.10	93.92	1.72	1.72	1.58	1.58	1.65	1.65
2	Nannilam	93.51	94.53	93.52	94.80	93.12	94.67	1.82	1.82	1.68	1.68	1.75	1.75
3	Koradachery	93.45	93.03	97.23	93.30	93.12	93.17	1.57	1.57	1.43	1.43	1.5	1.50
4	Kodavasal	93.23	93.53	97.25	93.80	93.14	93.67	1.72	1.72	1.58	1.58	1.65	1.65
5	Valangaiman	93.23	94.03	97.36	94.30	93.20	94.17	1.96	1.96	1.82	1.82	1.89	1.89
6	Needamangalam	93.51	93.49	97.42	93.76	93.10	93.63	1.92	1.92	1.78	1.78	1.85	1.85
7	Mannargudi	93.10	94.28	97.52	94.55	93.50	94.42	1.57	1.57	1.43	1.43	1.5	1.50
8	Kottur	93.52	93.13	97.45	93.40	93.01	93.27	1.67	1.66	1.53	1.53	1.6	1.60
9	Thiruthuraipoondi	93.40	93.03	97.12	93.30	93.02	93.17	1.47	1.48	1.3	1.33	1.4	1.40
10	Muthupettai	93.25	92.37	97.25	92.64	98.01	92.51	1.72	1.71	1.58	1.58	1.65	1.65
	District	**93.52**	**93.52**	**93.79**	**93.79**	**93.70**	**93.66**	**1.71**	**1.71**	**1.57**	**1.57**	**1.64**	**1.64**

Source: CEO, SSA, Thiruvarur.

Primary Completion Rate is the total number of new enrollment in the last grade of primary education, regardless of age, expressed as percentage of the total population of the theoretical entrance age to the last grade of primary. This indicator was also known as "gross intake rate to the last grade of primary." The ratio can exceed 100% due to over-aged and under-aged children who enter primary school late/early and/or repeat grades.

Table 5.4 provides information concerning the completion and Dropout rate of Upper primary level of education. The boy's completion rate was poor as against the rate of girls. Due to family circumstance few boys were not able to complete school. In the year of 2013-14, the completion rate of boys was 93.52 and Girls was 93.79. The total completion rate of 2013-14 was 93.66. Compared with 2012-13 it was decreasing one (93.79). Another important parameter of Dropout rate in upper primary level there was no change the both year of 2012-13 to 2014. The total drop rate of Boys in 2013-14 was1.71 and the Girls drop rate was1.57. The total number of dropout rate in 2013-14 was1.64.

Primary Completion Rate was the percentage of students completing the last year of primary school. It was calculated by taking the total number of students in the last

grade of primary school, minus the number of in that grade, divided by the total number of children of official graduation age. Primary completion rate, (% of relevant age group) in Thiruvarur was total completion was 93.70 in 2012-13, and 91.49 in 2011-12. The Block wise analyse was of the completion rate in Thiruvarur, shows the highest performance in Muthupettai Block (98.01), followed by Thiruvarur, Nannilam, and Koradachery.

Transition Rate from Primary to Upper Primary and Upper Primary to Secondary

Table. No 5.5
Transition Rate from Primary to Upper Primary and Upper Primary to Secondary

Sl.No	Block / District	Primary To Upper Primary			Upper Primary To Secondary		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Thiruvarur	99.00	98.75	98.43	99.00	97.56	99.38
2	Nannilam	98.00	97.33	97.43	98.00	97.49	100.00
3	Koradachery	98.50	97.77	97.93	98.50	97.8	97.24
4	Kodavasal	98.75	98.20	98.18	98.75	97.68	99.49
5	Valangaiman	98.78	98.25	98.21	98.78	98.55	95.86
6	Needamangalam	99.00	99.13	98.43	99.00	96.30	98.99
7	Mannargudi	99.70	99.30	99.13	99.70	95.44	97.99
8	Kottur	99.55	99.25	98.98	99.55	97.76	97.81
9	Thiruthuraipoondi	99.85	98.54	99.28	99.85	96.95	99.74
10	Muthupettai	98.68	98.25	98.11	99.68	98.13	99.59
	District	**98.68**	**98.98**	**98.41**	**89.18**	**97.37**	**98.60**

Source: CEO, SSA, Thiruvarur

Transition is the intra-school or inter school movement of the students from one class to another. This indicates movement of students between primary and upper primary level in Thiruvarur district. After completion of study in primary level i.e. up to class four levels the students are admitted in upper primary level secondary schools.

The transition mentioned above is important to understand the education system, which can answer a variety of typical questions, such as, at which grade in the cycle was the dropout ratio the highest, who tends to drop-out and repeat more frequently, boys or girls? And what is the total accumulated loss of students through drop-out etc.

The study has been divided into two important periods, that is, 2012-13 to 2013-14, 98.41 per cent of students had successfully completed transition from primary to upper primary level. Especially Mannargudi Block (99.13) and Thiruthuraipoondi

performed well among the 10 blocks in This district. Out of these students, 98.77 were boys and 99.18 girls. It was found that more number of Transition rates of primary to upper primary was recorded against girl. All the students who were enrolled and appeared in Class IV final examination got promoted to Class V and continued study at the upper primary level. This is a laudable achievement by the district of Thiruvarur.

Gender Wise Transition Rate from Upper Primary to Secondary

Table 5.5 shows that the Gender wise transition rate from upper primary to secondary. Two important study periods taken for study were 2012 – 2013 and 2013-2014. The transition rate for females was very low as compared to males. The Boys and Girls enrollment were 98.53 and 88.33 in 2012-13. By the year of 2011-12 transition rate was 98.29 percent and 98.43 for Boys and girls. 89.18 students successfully completed upper primary and moved into secondary education level. The transition rate for Girls had increased by 0.25 per cent in 2012-13 (98.68%).

Availability of Schools

Table No.5.6
Availability of School in Thiruvarur District

Sl. No	Block wise /District	Number of habitations		Primary School		Upper primary school		Secondary school		Higher Secondary school	
		2011	2014	**2011**	2014	**2011**	2014	**2011**	2014	**2011**	2014
1	Thiruvarur	184	184	56	86	42	25	8	5	6	19
2	Nannilam	227	227	74	89	38	24	8	2	6	17
3	Koradachery	184	184	50	70	39	28	3	1	5	11
4	Kodavasal	199	199	74	85	30	16	5	1	5	15
5	Valangaiman	205	205	58	66	31	21	2	4	5	10
6	Needamangalam	177	177	65	79	43	26	5	6	6	18
7	Mannargudi	265	265	89	119	54	31	3	15	12	25
8	Kottur	187	187	72	86	47	28	10	0	7	20
9	Thiruthuraipoondi	166	166	41	54	38	23	4	2	7	15
10	Muthupettai	133	133	54	59	42	27	8	6	5	15
	District	1927	1927	633	793	404	249	**56**	42	**64**	165

Source: CEO, SSA, Thiruvarur.

The Gross Enrollment Ratio (GER) or Gross Enrollment Index (GEI) was a statistical_measure used in the education sector. The United Nations (UN) uses a UN Education_Index to determine the number of students enrolled in school at different grade levels (like elementary, middle school and high school), and examine it to analyze

the ratio of the number of students who live in that country to those who qualify for the particular grade level. The United Nations Educational, Scientific and Cultural Organization (UNESCO), describes 'Gross Enrollment Ratio' as the total enrollment within a country "in a specific level of education, regardless of age, expressed as a percentage of the population in the official age group corresponding to this level of education.

Pupil – Teacher Ratio in Primary and Upper Primary

Table No.5.7

Pupil Teacher Ratio during 2013-2014 in Thiruvarur District

Sl. No	Block wise/District	Primary School		Upper Primary School	
		Pupil Teacher Raito	Pupil School Ratio	Pupil Teacher Raito	Pupil School Ratio
1	Thiruvarur	27.40	230	27.79	307
2	Nannilam	26.80	131	23.61	165
3	Koradachery	25.66	158	22.69	160
4	Kodavasal	23.78	114	26.08	154
5	Valangaiman	22.52	136	27.06	111
6	Needamangalam	23.13	151	17.23	137
7	Mannargudi	24.54	206	24.53	252
8	Kottur	23.55	119	27.85	119
9	Thiruthuraipoondi	28.31	255	22.65	210
10	Muthupettai	28.31	165	22.77	127
	District	24.75	**163**	24.20	**172**

Source: CEO, SSA, Thiruvarur.

Student -Teacher Ratio is used to measure the level of human resources input in terms of the number of teachers in relation to the size of the student enrolled. This Indicator does not take into account the factors which could affect the quality of teaching, such as differences in teachers qualifications, educational training, experiences and status, teaching methods, teaching materials and variations in classroom conditions. The calculation was done by dividing the total number of students enrolled at the specified level of education by the number of teachers at the same level.

A high student -teacher ratio suggests that each teacher has to be responsible for a large number of students. In other words, the higher the student/teacher ratio, the lower the relative access of student to teachers. It is generally assumed that a low

student–teacher ratio signifies a smaller class which enables the teacher to pay more attention to individual students, motivating them in an effective manner for the greater cause of nation building.

Student-teacher ratio is the number of students who attend a school or university divided by the number of teachers in the institution. Smaller classes benefit all pupils because of individual attention from teachers, but low-attaining pupils benefits more at the secondary school level. students in large classes drift off task because of too much instruction from the teacher to the whole class instead of Individual attention, and low attaining students are most affected.

The student school ratio is also used to measure the level of capital resources input in terms of the number of classrooms in relation to the size of the student enrollment. The calculation to ascertain student class ratio was done by dividing the total number of students enrolled at the specified level of education by the number of classrooms at the same level.

The pupil teacher ratio range was24.75 and also public school ratio was163 in primary school. On the other hand, if we look at upper primary school pupil teacher ratio it comes to 24.20 and also 172 Pupil school ratio. This ratio indicated poor ratio in pupil-teacher ratios all those Blocks in Thiruvarur district. It may also result from delays in matching the teaching force to demographic changes, or from differences in teaching hours for teachers at different levels, which tends to decrease with the level of education, as teacher specialization increases.

The above table shows the student class ratio in primary and upper primary level. The student and class ratio was very low that 24.75 i.e. 163 pupil teacher- ratio.

Secondary Education

High School is an institution which provides all or part of secondary_education. Other terms such as "secondary school" or "secondary college" are used in different nations or regions. The phrase "high school" often forms part of the name of the secondary institution. The school enrollment in secondary education in India was last reported at 63.21 in 2010, according to a World Bank Report published in 2012. Gross enrollment ratio was the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.

Table No. 5.8
ENROLMENT IN SECONDARY EDUCATION

Sl. No	Block wise/ District	BOYS		GIRLS		TOTAL	
		2012-13	2013-14	**2012-13**	2013-14	**2012-13**	2013-14
1	Thiruvarur	102.24	104.28	96.63	98.72	99.43	101.50
2	Nannilam	95.64	97.55	97.22	99.17	96.43	98.36
3	Koradachery	96.32	98.25	101.23	103.19	98.78	100.72
4	Kodavasal	101.46	103.49	95.65	97.72	98.56	100.60
5	Valangaiman	103.01	105.07	102.80	104.90	102.91	104.99
6	Needamangalam	101.37	103.40	99.08	101.15	100.22	102.27
7	Mannargudi	103.60	105.67	96.24	98.55	99.92	102.01
8	Kottur	99.81	101.81	95.45	97.49	97.63	99.65
9	Thiruthuraipoondi	103.31	105.28	99.27	101.18	101.29	103.38
10	Muthupettai	103.69	105.76	95.65	97.27	99.67	101.76
	District	**104.28**	103.02	**97.80**	99.98	**101.04**	101.52

Source: CEO, SSA, Thiruvarur.

Gender difference in enrolment is noted in High School and Higher secondary School as presented in the table 5.8. It is inferred from the table that the proportions of boys and Girls in total enrollment in secondary of the district at 103.02 and 99.98 respectively. On the contrary, higher proportion of boys was recorded at 105.67 in Mannargudi Block and the lowest in Nannilam Block at 97.55 in the same period. In the case of Girls 104.90 in Valangaiman Block was enrolled in High School of Education and it was lowest in Muthupettai Block (97.27). It is the observed that both boys and girls enrollment in secondary school gradually increased in the period 2012-13 to 2013-14. The district enrollment was 101.14 in 2012-13 and it slightly increased to 101.52 in 2013-14 enrolled in high school education. Nannilam Block recorded the lowest among the district Blocks at 96.32 to 98.36 in the same period. The enrollment ratio highest registered the highest at 104.99 in Valangaiman Block. The enrolment ratio at high school was more Thiruthuraipoondi Block with a total of 103.38 and it come second in the district. More boys were enrolled in high school then the girls' enrollment.

The demand for secondary education will expand significantly as SSA reaches its goal of universal and complete elementary education. The needed expansion of secondary education will require not only public but also private participation.

Table No.5.9
DROPOUT RATE IN SECONDARY EDUCATION

Sl. No	Block wise /District	BOYS		GIRLS		TOTAL	
		2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
1	Thiruvarur	12.84	3.29	16.69	3.84	7.38	3.45
2	Nannilam	8.47	5.97	11.01	2.00	5.34	3.82
3	Koradachery	8.71	11.82	11.32	2.62	3.81	7.42
4	Kodavasal	9.34	8.08	12.15	6.07	7.65	7.08
5	Valangaiman	12.74	15.36	16.56	5.37	4.09	9.14
6	Needamangalam	5.98	11.51	7.78	3.41	2.09	8.40
7	Mannargudi	9.98	4.20	12.97	2.28	4.68	3.06
8	Kottur	0.56	6.87	0.72	2.39	0.42	4.63
9	Thiruthuraipoondi	1.08	5.19	1.40	2.62	1.07	3.86
10	Muthupettai	9.89	8.06	12.86	5.44	2.06	6.65
	District	8.99	7.11	11.68	3.41	4.03	5.23

Source: CEO, RMSA, Thiruvarur.

Table 5.9 highlights the dropout in secondary education in Thiruvarur district. The boys dropout in the district had decreased from 8.99 to 7.11 from 2012-13 to 2013-14. It was the highest at Valangaiman (15.36%) Block. The dropout in secondary education was the lowest in Thiruvarur block and it came down to 3.29 percent in 2013-14 from 12.84 in the period 2012-13. Girl's dropout in secondary education of the district was 11.86 percent in 2012-13 and it declined to 3.41 percent in 2013-14. Among the blocks, Kodavasal Block recorded 6.07 percent in 2013-14 against 12.15 percent in 2012-13. The lowest dropout block was Nannilam at 2.00 percent in 2013-14 compared to 2012-13 at 11.01 percent. The overall secondary dropout of the district slightly increased from 4.03 to 5.23 in the 2012-13 to 2013-14. Except Thiruthuraipoondi (3.86), Kottur (4.63), Mannargudi (3.06), Nannilam (3.82) and Thiruvarur (3.45) all other blocks were in perform better thanthe district level in 2013-14. It is observed that all the blocks experienced slight increase in secondary education dropout in the district except Thiruvarur, Mannargudi and Nannilam blocks.

Access to Higher Secondary Schools

Access to Higher Secondary Schools is one of the major challenges before the Nation. There is no change in ratio of habitations v/s Higher Secondary Schools by the year 2011 and 2014. The low level of access to higher secondary education was in Muthupettai Block i.e., (133). Thiruvarur and Koradachery Blocks were in the same level of access to higher secondary education (184) The more number of higher education school was upgraded to the Higher Secondary Schools during the period from

2001 to 2014. In Thiruvarur Block 13 high schools were upgraded as higher secondary schools in 2014. In Nannilam it was from 6 to 17, Kodavasal, 5 to 15, Needamangalam 6 to 18, Mannargudi 12 to 25, and Kottur Block, 7 to 20.

School Infrastructure

Educational infrastructure at gross root level was responsible for growth in Education. A total of 1037 schools were surveyed across the district. Thus linking of infrastructure availability with the educational system provides a simple way to understand achievement of the SSA mission for the development process across the district of Thiruvarur. Going to a school which lacking proper basic facilities, like toilets, could be one of the most frustrating situations for girls children in the rural as well as urban.

Table No.5.10

School Infrastructure (2013-14)

Sl. No	Block wise/ District	Total No. Of Schools	With 3 Class Rooms	More Than 3 Class Rooms	Without Boys Toilet	Without Girls Toilet	Without Electricity	Without Compound Wall	Without Drinking Water	Without Desks and Chairs
1	Thiruvarur	99	41	42	6	13	4	20	0	14
2	Nannilam	113	47	48	7	3	4	18	0	8
3	Koradachery	90	24	57	0	0	0	10	0	11
4	Kodavasal	106	50	36	0	0	3	8	0	15
5	Valangaiman	93	44	37	1	9	1	26	0	7
6	Needamangalam	109	58	43	12	8	2	14	0	3
7	Mannargudi	145	73	47	2	11	2	22	0	8
8	Kottur	123	72	43	7	33	2	16	0	5
9	Thiruthuraipoondi	81	21	41	9	14	2	7	0	4
10	Muthupettai	97	36	55	7	8	0	9	0	3
	District	1056	466	499	51	99	20	150	0	78

Source: CEO, SSA, Thiruvarur 2014.

Table 5.10 clearly reveals that the availability of school infrastructure in 2010-2011. 965 schools have 3 and more class rooms. 150 schools did not have toilet facilities. 150 schools do not have compound walls. Intervention is needed to provide more rooms in schools. Separate toilet facilities must be created for the girl students. This would

further enhance the hygiene of the nation. The Number of schools, without separate toilets for girls, was found in the Kottur Block at 33.

Drinking water (DW) is an important amenity for the school infrastructure. At the primary level and the upper primary level, percent of schools provided with portable water remains almost the same across the district. The overall percentage of the schools without Drinking water was 13.59 respectively. Percentage of schools having electricity considered an indicator of vital role of infrastructure. At primary levels, secondary and upper secondary levels, majority of the schools in Thiruvarur district do not have electricity. The overall percentage of non-available electricity without availability across the district was 8.19 per cent. Highest per cent of non-availability of electricity was recorded in Mannargudi Block (22.35 per cent), while lowest percent have been documented in Kottur Block. The percentage of electricity availability at the primary level varied enormously in the district. The overall non- availability of electricity in the district was 8.19.

Availability of compound wall is yet another important issue for school education. The lowest percentage of schools without compound wall was 6.61 per cent. 43.68 per cent of school (453) was endowed with more than three class rooms and Koradachery Block tops the list with, 57 schools. School infrastructure was the basic infrastructure to attract students to study with focus on a conducive environment.

HOSTEL FACILITIES

Table No.5.11

Hostel Facilities

Sl. No	Block wise/ District	No. schools	Total Number of Students	No of Hostels	No. of Students in Hostels
1	Thiruvarur	98	20906	8	456
2	Nannilam	112	14543	9	358
3	Koradachery	88	11934	3	84
4	Kodavasal	105	12618	3	147
5	Valangaiman	89	11918	4	180
6	Needamangalam	108	14194	5	190
7	Mannargudi	143	29305	12	651
8	Kottur	119	12101	5	271
9	Thiruthuraipoondi	79	16269	6	247
10	Muthupettai	96	13193	2	184
	District	**1037**	**156981**	**57**	**2768**

Source: DAWA, DPCW and, CEO, SSA, Thiruvarur (2014)

The above table 5.11 illustrated the hostels facility availableto the schools students. A hostel is a shelter for the students who come from far off places. Students live there with each other and interacting learning the value of discipline and co-operation. Hostel accommodation is available for students enrolled for full time course. All attempts are made to provide hostel accommodation to as many students as possible. It is observed that from the table out of 57 Hostels in Thiruvarur district, a majority of 12 are in Mannargudi Block, followed by 9 hostels (2.462) in Nannilam, 8 hostels (2.246) in Thiruvarur, 6 hostels in Thiruthuraipoondi Block.

STUDENTS ENROLLED IN NOON MEAL PROGRAMME

The Mid Day Meal Scheme is a multi-faceted programme by The Government of India which seeks to address the issues of food security, lack of nutrition and access to education on a pan nation scale. It involves provision for free lunch on working days for children in Primary and Upper Primary Classes in Government, Government Aided, Local Body, Education Guarantee Scheme (EGS) and Alternate Innovative Education (AIE) Centers, Schools supported under Sarva Shiksha Abhiyan and National Child Labour Project (NCLP) Schools run by the Ministry of Labour. The primary objective of

the scheme is to provide cooked meal to children of primary and upper primary classes. The Scheme is designed to improve the nutritional status of children, encourage poor children, belonging to disadvantaged sections, to attend schools more regularly and help them to concentrate on classroom activities, thereby increasing the enrollment, retention and attendance rates

Table No.5.12
Students Enrolled in Noon Meal Programme in blocks

Sl. No	Block wise/District/State	No. schools	Total Number of students	No. of students enrolled in NM Programme	% of students enrolled in NM Programme
1	Thiruvarur	98	20906	10585	50.63
2	Nannilam	112	14543	12030	82.72
3	Koradachery	88	11934	9556	80.07
4	Kodavasal	105	12618	9973	79.04
5	Valangaiman	89	11918	7859	65.94
6	Needamangalam	108	14194	8980	63.27
7	Mannargudi	143	29305	15338	52.34
8	Kottur	119	12101	10425	86.15
9	Thiruthuraipoondi	79	16269	10746	66.05
10	Muthupettai	96	13193	9464	71.74
	District	**1037**	**156981**	104956	66.86

Source: CEO, SSA, Thiruvarur (2014)

The table 5.12 displays the students enrolled in Noon Meal Programme in Thiruvarur district. Total number of schools in Thiruvarur district among the 10 Blocks was1037. The total number of beneficiaries in this district was 61.36 percent by the year 2011. The Mannargudi Block recorded the highest percentage of beneficiaries (63.99 percent) followed by 62.03 percent in Needamangalam. The lowest number of beneficiaries from Noon Meal programme 59.99 percent were in Koradachery and 60.01 percent both Kodavasal and Muthupettai Blocks. The table also revealed that all the primary and middle schools were covered under the Mid Day Meal Scheme.

HIGHER EDUCATION (2013-14)

Higher Education (18-23 years) is crucial for developing a modern economy. It equips young people with skills relevant for the labour market and can help to reap the benefits of demographic dividend. With greater reliance on technology-intensive inputs in manufacturing and production, the need for highly specialized skill and knowledge is indispensable for spurring economic growth. A sound liberal and professional education is on Endeavour in this direction. In this context, higher education play an important role

to respond continuously to the new demand which is taking place during the rapid transformation of societies with regard to economic, cultural, social and other aspects.

India's higher education system is the third largest in the world, next to the United States and China. The main governing body at the tertiary level is the University Grants Commission, which enforces its standards, advises the Government, and helps coordinate between the centre and the State. Accreditation for higher learning is over seen by 12 autonomous institutions established by the University Grants Commission. The higher education sector in India has witnessed a tremendous growth in its institutional capacity since Independence.

The predominantly agriculture based Thiruvarur district could realise overall socio-economic development provided the required higher education is geared to the standard level. The district has one Medial College and one Central University of Tamil Nadu catering to the educational needs of the students of Thiruvarur and the nearby districts.

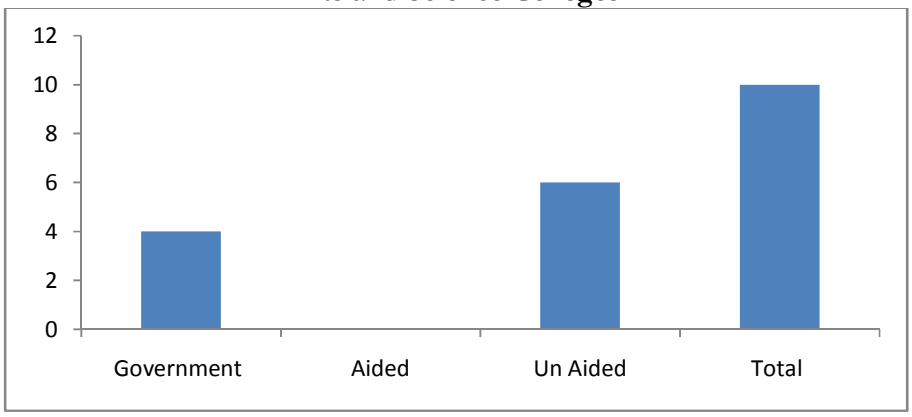
Arts and Science Colleges

In the case of higher education of the district Arts and Science colleges have a crucial role in providing a quality human resource for the economy of the district as a whole. Higher Educational Institutions not only act as centers of innovation and excellence but also provide the basis for a high quality of life. The Government had taken many steps to increase student enrollment and quality improvement in higher education. The vision of the Government of Tamil Nadu with regard to Higher Education is to make institutions of higher education emerge as centers of innovation, excellence, and development.

According to the Annual Status of Higher Education in States, and Union Territories, the total number of colleges / institutions in the State as of 2012, was 3445, of which colleges alone accounted for 58 percent and the remaining being stand-alone institutions (42%). Tamil Nadu has an average of 27 colleges per lakh population as compared to all-India access indicating an average of 23 colleges. Of the total colleges in the State, 93 percent are affiliated to Universities and the remaining are constituent / university colleges, PG/off campus or recognized centers by the universities. In terms of management, Tamil Nadu colleges are dominated by the private self finance colleges,

forming 88.5 percent of all colleges in the State, followed by 5.8 percent owned by Government and 5.6 percent that are private but aided by the state Government.

Fig.5.2
Arts and Science Colleges



The Figure 5.2 illustrates arts and science college status of the district. In Thiruvarur district are 10 Arts and Science Colleges of which four are government Colleges and six are unaided self financing colleges and No aided arts and science colleges located in this district. The total number of students in arts and science colleges are 16150. Thiruvarur Block has 4 Arts and Science Colleges, Mannargudi Block has 3 arts and science colleges and Nannilam, Kodavasal and Thiruthuraipoondi Block one each arts and science colleges and rest of the blocks do not have any Arts and Science Colleges which indicate a Thiruvarur district has also two engineering colleges. There are 13 B.Ed, D.TEd. and ITI institutions which indicate that students of joining mostly teaching related course.

Technical Education

The economic growth of a country largely depends on technological improvements and on its scientific and technical manpower. Technical education, therefore, has a crucial role in speeding up the country's economic development. It provides one of the most potent means for development of skilled manpower as required by various sectors in the country's economy. India possesses Asia's oldest, largest and most diverse infrastructure for scientific and technical training that has made important contributions to the country's scientific and industrial development. A better educated labour force is essential if we are to meet the labour supply requirements of faster growth. Education is not only an instrument of enhancing efficiency but is also an

effective tool for widening and augmenting democratic participation and upgrading the overall quality of individual and societal life.

Figure No.5.3

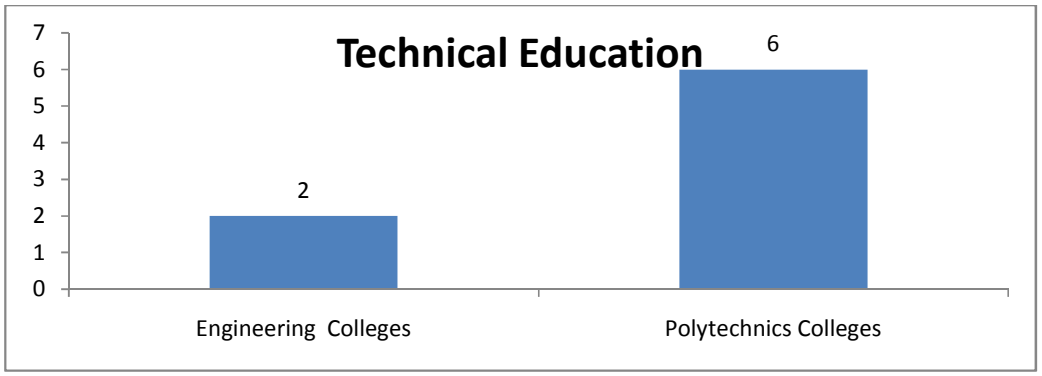


Figure 5.3 portrays the number of engineering colleges and polytechnic colleges functioning in Thiruvarur district. As on 2014, totally two engineering Colleges and 6 Polytechnic colleges are functioning in the district. These institutions are producing significant number of skilled man power in the society. Still there is scope in strengthening the physical infrastructure as well as the number of highly qualified teachers for delivering educational services on par with advanced institutions functioning in the country.

SCHOLAR SHIP

Table No.5.13
Scholarship Availed by Students of Thiruvarur District

Sl. No	Block wise/ District	No. Schools	Total Number of Students	No. of Students Availed Scholarship
1	Thiruvarur	98	20906	2339
2	Nannilam	112	14543	559
3	Koradachery	88	11934	1857
4	Kodavasal	105	12618	554
5	Valangaiman	89	11918	312
6	Needamangalam	108	14194	774
7	Mannargudi	143	29305	4966
8	Kottur	119	12101	1016
9	Thiruthuraipoondi	79	16269	2174
10	Muthupettai	96	13193	226
	District	**1037**	**156981**	**10238**

Source : DPCW and , CEO,SSA, Thiruvarur (2014)

Financial support is given to students belonging to the weaker sections of the society, namely SC, ST, MBC. Government s, schools and educational institutions need to offer scholarships to the poor to help ease this disparity. Often children born in wealthy families win coveted educational positions simply because of their ability to pay their fees in full. If our education institutions cater only to wealthy students, we would see a decrease in the intelligence of society as it encourages students not to work hard. By offering scholarships schools, universities and institutions can encourage students to work much harder and produce better graduates. This in turn creates a better society. The district administration provided scholarships to students from Backward, Most Backward and Denotified communities in the district for the year 2011-12 to pursue their higher studies. In a total of 156981 students in 1037 schools in these 10238 students have availed the scholarship facility in Thiruvarur district.

CONCLUSION

High literacy level of a National will reduce poverty and inequality**.** Positive Education indicators and GNP of a country are positively correlated. The present chapter deals with the literacy and education status of Thiruvarur district. According 2011 census the Literacy Rate of the district was 82.86 percent. It is the highest in Thiruvarur Block (82.86) and the lowest in Nannilam Block. The performance is good in the district as for as primary school enrolment as concerned. The SSA programme also helps to improve enrollment of students in Schools at primary level. Some gaps continue to exist in higher and research level education. Technology initiative in Education has also been undertaken in Thiruvarur district. All our efforts should be taken by the education authority to make the district a 100 per cent literate district.

CHAPTER 6

GENDER

CHAPTER – 6

GENDER

Introduction

Majority of the countries in the world recognize that equal rights should be provided for both men and women. Many countries have enacted regulations to fight discrimination and introduced programs granting women access to health, education, and economic rights such as land ownership. However, the fact remains that women have fewer opportunities than men to benefit from economic development, with lower participation in the labor force. Even in the most advanced countries, their average wage is 73 percent of those of men. International programs such as the Millennium Development Goals point out the benefits of addressing gender inequality and the positive impact this can have on poverty reduction.

Gender Studies provide critical thinking skills and an understanding of women's diverse contributions to society, which are valuable for a wide variety of careers. Gender Studies Programs are committed to realizing the equality of women and men in all areas of life so that our relationships, both personal and social, are characterized by the freedom and mutuality which can only occur among equals. Increasingly, specialists in Gender Studies are being used as consultants in industry, higher education, insurance companies and personnel Even State and Central Government agencies require people who have special training in understanding gender relations.

The importance of gender consideration is endorsed by government organizations at the highest level in the policy documentation but there is limited evidence of application of the same at the planning and implementation level. In recent years, there has been a major conceptual shift in how people seek to cope with disasters from natural hazards. While humanitarian response capacities are vital and need to be continued, human intervention designed to reduce the vulnerability of communities and assets can reduce the impact of disasters. Gradually, environmental and developmental stakeholders are becoming more involved in the management of risk and vulnerability reductions due to their close interaction with natural resources management.

Table No.6.1
Comparative Status of Women In Literacy, Employment

Sl.No	Status	District
1	Female Population	637584
2	Percentage in Total Population	50.43
3	Sex-Ratio	1017
4	Female Literacy Rate	76.72
5	MMR	110
6	Percentage of Women Worker in Agriculture Sector	20.9
7	Percentage of Women in Non-agri. Sector	6.27

Source: Census of Tamil Nadu, 2011.

Table 6.1 explains the comparative status of women population. It is found that size of female population was the highest in Mannargudi block with125836 females (19.73%). Thiruvarur comes next for its share of 13.18 parentage of district population of females and it was the lowest in Valangaiman bock with 7.23 percent in the total female population of this district. The highest level of share of women population in the total population strength found in Muthupettai Block (51.34) , and it was closely followed by Thiruvarur (50.77%), Nannilam (49.78%) Koradachery (50.42%), Kodavasal (49.50%), Valangaiman (50.14%), Needamangalam (50.29%), Mannargudi (50.63%), Kottur (50.46%) and Thiruthuraipoondi (50.56%).

With regard to the sex ratio Nannilam recorded 991 females for 1000 males) and Kodavasal at 984 recorded the least level of sex ratio. This was followed by Thiruvarur (1031), Koradachery (1017), Valangaiman (1005), Needamangalam (1011), Mannargudi (1025), Kottur (1013), Thiruthuraipoondi (1022) and Muthupettai (1055) respectively. It is found that the regarding the sex ratio among the Blocks Thiruvarur, Mannargudi, Kottur, Thiruthuraipoondi and Muthupettai recorded more than the district sex ratio of 1017 in the 2011 Census.

The female literacy rate was the highest in Thiruvarur Block at 82.33 followed by Nannilam (78.87 percent), Koradachery (76.08 Percent), Kodavasal (78.26 Percent), Valangaiman (72.39 Percent), Needamangalam (71.92 Percent), Mannargudi (78.96 Percent), Kottur (72.93 Percent), Thiruthuraipoondi (76.93 Percent) and Muthupettai (73.96 Percent). It could be noticed that the Valangaiman Block, Needamangalam Block, Kottur Block and Muthupettai Block were registered lowest female literacy rate. It is significant to note that the Thiruvarur Block recorded the highest and Needamangalam, the lowest rate of female literacy rate in this district.

100% school enrolment was found in Needamangalam Block and it was closely followed by Koradachery (99.4%), Nannilam (99.0%), Kodavasal (99.3%), Valangaiman (99.5%), Mannargudi (99.5%), Kottur (99.3%), Thiruthuraipoondi (99.4%), and Muthupettai (99.3%). It is significant to note that the school enrolment more or less was at a considerable level in all the Blocks of this district. Regarding MMR is highest level found Valangaiman (231.0) while Nannilam (0.00) Needamangalam (0.00) recorded the lowest maternal mortality rate these Blocks, Thiruthuraipoondi (0.6), Muthupettai (177.80) and Mannargudi (147.20) were found in MMR respectively. It could be noticed that the Valangaiman (231.30) and Muthupettai (177.8) were found highest level in MMR out of 10 Blocks.

Regarding the working women strength in agricultural sector 33.63 percentage of agricultural women workers were found in Kottur Block, followed by Thiruthuraipoondi Block at 25.94 percentage, Muthupettai recorded 25.40 percentage and Needamangalam recorded 25.56 percentage which were moderate. It could be noticed that the least level of agricultural women workers was found in Thiruvarur (12.23%) followed by Mannargudi (18.73%) Blocks which were urban segment Blocks. In respect of non-agricultural sector workers it was high Thiruvarur Block (9.2%) closely followed by Mannargudi (8.1%), Koradachery (7.05%) Blocks in this district. On the contrary Valangaiman Block (4.68%), Kodavasal (4.88%), Kottur (4.15%), Muthupettai (4.33%) and Thiruthuraipoondi (5.77%) were recorded poor number in non agricultural sector. It is observed that Thiruvarur and Mannargudi Blocks enjoyed a considerable share of urban population.

Employment

Trend in Female Employment in Different Sector

The analysis of female work participation rate in the district Blocks reveals that the women cultivators, in all the blocks less than 10 percent of females except Muthupettai block where it was 12.22 per cent. A vast majority of female population were engaged in agriculture activities as agricultural labourers. Except Thiruthuraipoondi block, all other blocks engaged more than 70 percent of female agricultural labourers. But the percentage of household industrial workers in all the blocks was very poor and they were below three percent except Thiruvarur, Koradachery, and Mannargudi Blocks. Out of total female population, Thiruvarur Block contained 16.16 percent of total female workers. Since this district is the heart of delta, agriculture is predominant and therefore,

most of the female population are engaged in agriculture. At the same time this is an industrially backward district and therefore the percentage of non agricultural women was low.

Access and Control Over Resources

Self-Help Groups are emerging as one of the important local institutions in villages in every State. A group of 12-20 persons of similar economic class, generally poor, mostly women, get together to organize themselves into cohesive groups to improve their social and economic position through collective action. The formation of this group was started on an experimental basis in 1984 under the International Fund for Agricultural Development (IFAD) assisted by the Women's development Project. These Self-Help Groups are developing into strong local institutions providing a legitimate avenue for members to participate in public life outside their homes giving tremendous physical mobility among women, increasing their bargaining capacities, self-confidence, awareness about health, nutrition, immunization, education empowering women to cope with important social problems like alcoholism, domestic violence, abandonment, dowries, female infanticide and in life skills areas such as accounts keeping, money management, savings and credit among the rural poor, especially among women.

Table No.6.2
Access to Resource and Credit of SHGs in Thiruvarur District

S.NO	Blocks	Number of Self Help	Number of members	Credit availed (Rs .000)
1	Thiruvarur	1372	16464	578.89
2	Nannilam	846	15372	1258.48
3	Koradachery	1319	15828	1394.60
4	Kodavasal	1306	20960	1008.62
5	Valangaiman	1598	19326	1066.94
6	Needamangalam	934	26326	1598.62
7	Mannargudi	944	23420	1700.28
8	Kottur	1175	14100	439.03
9	Thiruthuraipoondi	1234	14808	587.50
10	Muthupettai	1450	13530	923.60
	District	12178	180134	10556.56

Source: TNSRLM and Puthu Vazhvu Project, Thiruvarur.

Table 6.5 portrays the self help groups activities and availability of credit details. A total number of 12178 self help groups are in this district as on 2011, of them more than 1000 self help groups were found in Koradachery, Kodavasal, Valangaiman, Kottur, Thiruthuraipoondi and Muthupettai Blocks. These groups have a total of 180134 members. The SHGs play an important role in earning livelihood of the female

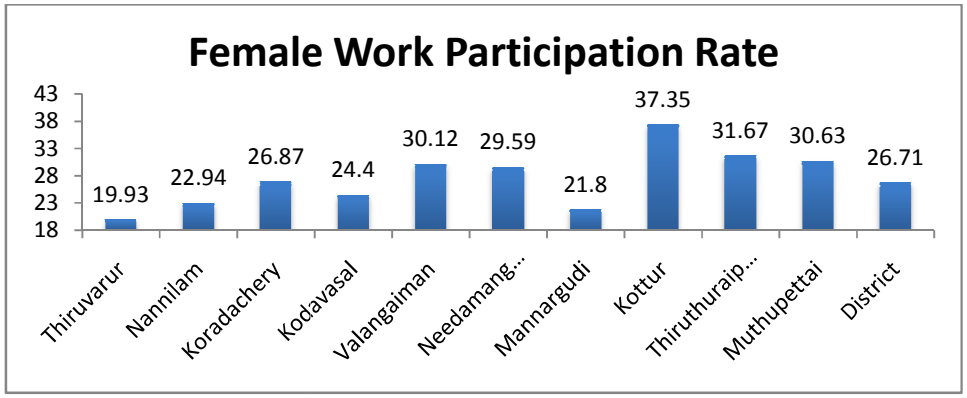
population of this district. All the blocks availed credit from the SHGs and it is high in Kodavasal, Valangaiman, Needamangalam and Mannargudi blocks. The overall availed credit of the district was 10556.56 thousand rupees. Mannargudi block availed Rs. 1700.28 thousand it is the maximum amount of availed credit in this district, followed by the Needamangalam block availiling 1598.62 thousand rupees in the period of 2011-12. During the same period Koradachery block availed 1394.60 thousand rupees, followed by Nannilam Block which availed Rs. 1258.48 thousand. In Valangaiman block availed a credit amount was 1066.94 thousand rupees, and Kodavasal block availed Rs. 1008.62 thousand. Muthupettai, Thiruthuraipoondi, Thiruvarur and Kottur blocks availed below the 1000 thousand rupees of the SHGs credit a in this district.

Female Literacy

Female Literacy Rate of the district was 67.90 in 2001 and it had gone up to 76.72 percent in 2011 against the State female literacy rate of 64.55 percent to 73.40 percent in the same period. Block wise female literacy rate was the lowest in Needamangalam (71.92 percent) block and highest recorded in Thiruvarur (82.33 percent) Block in 2011. Both male and female literacy rate is low in Needamangalam block and hence this was one of the most backward blocks in this district. This block also has considerable SC population. Adequate attention provided specifically to the SC women folk in providing education to the adults. The efforts taken by the Government is witnessed in all the blocks of the district and can be seen in the form of literacy rate of excluded 0-6 year population. However there is a gender gap in the literacy rate of 0-6 year population. Equity to be achieved by way of encouraging girl children and effectively implementing ongoing educational development programmes.

Employment

Figure 6.1
Female Work Participation



Source: Census of India 2011.

Work Participation Rate as per the Census 2011, for females it was 25.51% gainst 53.26% for males. Rural sector recorded a better female workforce participation rate of 30.02% compared with 53.03% for males whereas for urban sector, the participation rate of females trailed at 15.44% against 53.76% for males. 41.1% of female main and marginal workers were agricultural labourers, 24.0% were cultivators, and 5.7% were household sector. In Thiruvarur district female work participation rate was 26.71 percent in 2011. Blocks Kottur (37.35 percent) recorded the highest female work participation rate and it is lowest in Thiruvarur (19.93 percent) Block due to considerable urban population. Kottur block registered highest because it was the only zero percentage of urban population. Except Koradachery, Kodavasal, Nannilam, Mannargudi and Thiruvarur Blocks have recorded below the district average of 26.71 percent in female work participation rate. In Thiruvarur district female work force participation was lower in urban than in rural areas. Both the extent of urbanization and the educational attainments of the population affected the urban work force participation.

Female Workers in Non-Agricultural Sector

In the case of female worker participation in non-agricultural sector in Thiruvarur district, the 2011 Census indicates the proportion of total number of workers in this sector is reported as 5.32 percent. The participation of women in non-agricultural sector would give additional income to the household and enhance the status of the women both in society as well as at home. Across the Blocks, the minimum and maximum values varied by more than four times. It reveals that the participation rate has to be improved by means of Block specific interventions. Among the Blocks the female work participation in non agriculture sector was higher in Thiruvarur Block at 7.15 percent because this Block is the head quarters of the district and also because of considerable population of working women in non agriculture sector. The rural Block of Muthupettai recorded the lowest female work participation in non agriculture sector

TREND IN POLITICAL PARTICIPATION

Decision-Making or Representation at Block Level Panchayat Union

The basic objective of human development is expanding choices for all sections of the people to take part in administrative and economic decision-making. Experience from most of the countries in the world shows a broad based participation in decision-making influences in a positive way. Gender differences continue to exist across the

world, but India has taken the lead as far as the Constitution and statutory initiatives are concerned. The recent increase in the participation of woman in grassroots democracy has paved the way for women's increased mobility outside their home, creating space to voice their concerns. But still there is a long way to go before full participation. The 73th Constitutional Amendments in 1992, which went a long way in re-activating decentralized democracy in India, made it mandatory to reserve one third of seats in local bodies for women. This has facilitated women's participation in the political process not as passive voters or party workers alone, but as candidates.

Table No.6.3
Membership in Local Bodies

Sl.No	Name of Block	Total Member ship of local Body	Number of Female	% of female participation
1	Thiruvarur	565	188	33.27
2	Nannilam	441	177	40.14
3	Koradachery	409	136	33.25
4	Kodavasal	436	166	38.07
5	Valangaiman	424	173	40.80
6	Needamangalam	422	178	42.18
7	Mannargudi	436	198	45.41
8	Kottur	382	129	33.77
9	Thiruthuraipoondi	326	111	34.05
10	Muthupettai	286	107	37.41
	District	**4127**	**1457**	**35.30**

Source: All BDO and EO Town Panchayat, Thiruvarur District.

Table 6.2 depicts the participation of male and female, in the State assembly and local bodies. In block wise analysis, all the blocks witnessed more than 50 per cent of male participation in the assembly and local bodies. In Thiruvarur Block it was 85.49 percent. The female participation in this block registered 14.51 percent. Mannargudi, Needamangalam, Valangaiman showed more than 40 percent of female participation in these bodies. But Thiruvarur block registered only 14.51 percent of female participation which is the least participation by women among all the Blocks.

There are four Municipalities in this district. The male participation in these municipalities showed that it was more than 60 percent and Thiruvarur municipality registered 72.20 percent. It was found that female participation was less than 35 percent Mannargudi municipality registered 36.36 percent and Thiruthuraipoondi Municipality registered 33.33 percent Koothanallur Municipality female participation at 32.00 percent, but Thiruvarur municipality registered only 27.80percent of female participation in

assembly and local bodies. It is found that Thiruvarur municipality recorded lowest representation and Mannargudi municipality recorded the highest representation of female participation in urban bodies administration.

Among the town panchayats in this district, except Peralam all other town panchayats recorded more than 60 percentage of male participation and less than 40 percentage of female participation except Nannilam and Peralam. Regarding the district the total male participation was found to be 58.14 percent and the female participation was 41.86 percent. Among the town panchayat Peralam (41.67%) registered the most female participation in this district and Muthupet and Koradachery was registered 33.33 percent of female participation in town panchayat. This was the lowest female participation in this district. In all blocks of this district was registered female representative were lesser than the district average of 41.86 percent.

CONCLUSION

Women workers were engaged in agricultural activities in large numbers. They have become the members of Self Help Groups to develop themselves socially and economically. Needamangalam Block registered lower Gender Inequality Index (0.027) and the highest was in Koradachery block with 0.151. SHG model to be extended all Blocks to empower women. The MGNREG has reduced the wage differences in the other unorganized sectors also. The political participation of women in the district was 35.30 percent. It is observed that the women political participation was achieved by the legislative reservation of 33 percent.

CHAPTER 7

SOCIAL SECURITY

CHAPTER - 7

SOCIAL SECURITY

Introduction

This chapter proposes to assess the Social Security Status of Thiruvarur district. This is an important dimension of human development. There are various dimensions of social security. The major forms are security against gender and caste discrimination. The other forms of social security are demographic profile of aged, financial security of aged and social and financial security to differently abled and destitute widows. Some of the emerging social security areas are HIV/AIDS patients and women headed households. Social security is largely a result of social norms and taboos like patriarchal attitude and casteism. It is also a result of poor economic development characterized by feudalism and migration. Economic development by itself will not solve this issue and in fact, old age problems increase with economic development as it is accompanied by demographic transition. Preventive measures are those that seek more directly to avert deprivation in specific ways. Examples are measures towards asset redistribution, employment creation and food security. Protective measures include all those specific measures that provide relief from or protection against deprivation to the extent that they are not met by promotional or protective measures.

Proactive public action is needed to create a congenial environment to address these issues. This Chapter deals with the demographic profile of aged, financial security of aged and social and financial security to differently abled and, destitute widows in the district. Data from census and relevant departments were mostly relied upon. Persons of 60 years of age and above are considered as aged for the purpose of providing social welfare measures. In rural Thiruvarur district with vast sections of population surviving at subsistence levels, social security and social safety nets are very crucial and the issues pertaining to social security assume overwhelming importance.

Demographic Profile of Aged

Elderly or old age consists of ages nearing or surpassing the average life span of human beings. The boundary of old age cannot be defined exactly because it does not have the same meaning in all societies. People can be considered old because of certain changes in their activities or social roles. Also old people have limited regenerative abilities and are more prone to disease, syndromes, and sickness as compared to other adults. The medical study of the aging process is called gerontology and the study of diseases that afflict the elderly is called Geriatrics.

Table 7.1

Demographic Profile of Aged

SI.No	Block wise/District/State	Total Population	Population aged above 60		Total aged above 60	%
			Male	Female		
1	Thiruvarur District	1264277	5058	5375	14433	11.14

Source: Census of Tamil Nadu, 2011

The Table 7.1 shows the demographic profile of aged in Thiruvarur district. The total population of the district is 12,64,277. The proportion of persons aged 60 years in the total population increased from 11.14 percent during the period. The proportion of aged population is expected to increase in the coming years due to demographic transition which is a consequence of social development. Hence the investment and attention to address the needs of aged population should also increase.

Of the total population of the district, female population aged above 60 years outnumbered the male population which shows that the life expectancy of the female population aged above 60 years is higher than the male population. Both male and female population, aged above 60 years, contribute 11.14 per cent to the total population of the district.

Financial Security

The Government of Tamil Nadu is implementing the following Pension Schemes for the Elderly;

i) **Old Age Pension Scheme:** Under this scheme, pension is granted to all old aged persons who neither have any means of subsistence nor any relative to support them and are 60 to 79 years and above To become eligible for the grant of Old Age Pension under this Scheme sum of Rs.1000/- per month is paid to the Old Age Pensioners covered under this scheme, which is part of the National Social Assistance Programme.

ii) **Indira Gandhi National Old Age Pension Scheme:** The National Old Age Pension granted to persons who are 60 to 79 years of age or above belonging to households Below Poverty Line. Rs.1000/- per month per beneficiary is granted under the National Old Age Pension Scheme.

iii) **Destitute Physically Handicapped Pension Scheme** :Physically handicapped destitute persons aged 18 to 79 years and above whose permanent disability is 50 percent or more are eligible for this pension. district Level Committees, constituted by the Government in all the districts functioning under the Chairmanship of the district Collectors in which the District Medical Officers and district Social Welfare Officers are members, examine applications received from physically handicapped persons and sanction pension to them considering the individual hardship without reference to age limits prescribed by the scheme. An amount of Rs.1000/- is paid as pension under this scheme.

iv) **Destitute Widows Pension Scheme**: Destitute widows of any age who have not remarried are benefitted under this scheme even if they have legal heirs aged 18 years and above. Other conditions applicable to Old Age Pension (Normal) scheme are applicable to this scheme also. An amount of Rs.1000/- is paid as pension under this scheme. Entire expenditure under this scheme is borne by the State Government.

v) **Destitute Agricultural Labourers Pension Scheme**: This scheme covers Destitute Agricultural Labourers aged 60 years and above. Conditions applicable to Old Age Pension (Normal) scheme are applicable to this scheme also. An amount of Rs.1000/- per month is paid as pension under this scheme. Entire expenditure under this scheme is borne by the State Government.

vi) **Destitute / Deserted Wives Pension Scheme** (since 25.4.1986) has been extended to benefit deserted wives / destitute women who are not less than 30 years of age and who are deserted by their husbands for a period of not less than five years / obtained legal separation certificate from competent court of law. Deserted wives having legal heirs who have completed 18 years of age are also eligible for pension under this scheme. An amount of Rs.1000/- is paid as pension under this scheme. Entire expenditure under this scheme is borne by the State Government.

Disability is both a health and social problem. Many studies indicate that there is evidence of the impact of disability on multiple dimensions of poverty. Disability affects the indicators of material well being (such as income, employment and consumption), access to and effective use of services (such as education and health) and social and

psychological status (such as marriage prospects and decision-making power). These different aspects are closely interlinked and characteristics such as gender and urban or rural location have an important effect on the disability poverty relationship. The major problem the Persons with Disability (PWD) face throughout their life is being looked down upon by others. Hence any rehabilitation effort should also try to change the attitude of the rest of the society on PWDs.

Table 7.2

Financial Security of Aged

Category	Target Population 60 +		Coverage		Percentage	
	2001	**2011**	**2001**	**2011**	**2001**	**2011**
Old Age Pension	8551	23283	8062	23283	94.28	100.00
Destitute Widows	487	13692	487	13692	100.00	100.00
Disabled Persons	37371	23472	36033	23472	96.41	100.00
Total	46409	60447	46409	40714	100.00	100.00

Source: District Supply Office, Thiruvarur

The Table 7.2 reveals the financial security of the aged population. There are three categories of population which are social vulnerable group's namely old aged persons, destitute widows and disabled persons. Regarding the financial security of the old aged persons, it was 94.28 percent in the year 2001 and it was 100.00 percent in 2011. The destitute widow under the financial security coverage remains 100.00 percent during the study period. In the case of disabled persons, it increased from .96.41 percent in 2001 to 100.00 percent in 2011. More coverage was found for destitute widow and disabled persons. Financial security in the old age periods is very important and steps should be taken for reaching all the categories of socially valnuranle sections of people in the district.

Differently Abled

Poverty is both a cause and consequence of disability. Majority of people with disabilities find their situation affects their chances of going to school, working for a living, enjoying family life, and participating as equals in social life. This in turn leads to

increased economic and social vulnerability and exclusion. This exclusion affects not only the individual, but also the entire family as well. A large proportion of disability is preventable and it is linked to poverty and lack of access to basic health and nutrition. Thus, a strong focus on poverty alleviation and human development could lead to a general improvement in living conditions of the poor, which in turn, could itself prevent prevalence of disability. However, specific steps are still required, not only for prevention, but also to ensure that people with disabilities are able to participate fully in the development process, obtain a fair share of the benefits, and claim their rights as full and equal members of society. An integrated approach is required, linking prevention and rehabilitation with empowerment strategies and changes in attitudes.

Table No 7.3

Differently Abled in Thiruvarur District

Categories	Male	Female	Total
Locomotors Disabled	1012	479	1491
Visually Challenged	155	108	263
Hearing Impaired	253	124	377
MR	1637	2213	3850
Total	**3057**	**2924**	**5981**

Source: District Rehabitations Centre- Thiruvarur

Table 7.3 exhibits the assistance provided for differently abled beneficiaries of Thiruvarur district. In the case of locomotors disabled there are 1491 in this district of which 1012 are males and 479 females. The differently abled males are more in this district as compared female. In visually challenged people there are total of 263 percent which include 153 males and 108 females. In the case of hearing impaired 253 males and 124 females consist the total of 377 in the district. MR population of the district is 3850, 1637 males and 2213 females Disability is both health and social problem. Many studies indicated that there is evidence of the impact of Differently Abled on multiple dimension of poverty. Differently Abled affect indicators of material wellbeing such as income, employment and consumption.

CRIME AGAINST WOMEN

Violence

Incidence of violence against can be seen in different forms throughout the world like female infanticide, rape, wife battering, eve-teasing, molestation, pornography, trafficking, child marriage, forced marriage, child labour, dowry related harassment and witch hunting which are taking place in various institutions, such as family, work place, schools, colleges, hospitals and roads. Some of these incidents of violence are not reported due to the tendency of society to victimize the victim as well as the feeling that violence within the family is a private issue. Therefore, aggregated data are not available on various incidents from the people.

Table 7.4

Crime Against Women

Sl.No	Category	Number of Cases 2014
1	Rape	**4**
2	Molestation & Attempt Rape	**8**
3	Kidnapping & Abduction	**20**
4	Dowry Death	**2**
5	Dowry Harassment	**6**
6	Women Harassment	**100**
7	Dowry Prohibition Act	**2**

Source: District Supernatant of Police, Thiruvarur.

Crime against women has been an area of high priority for Tamil Nadu Police. Several measures have been undertaken to tackle social menace affecting women at large. Special attention is being paid towards prevention of crimes against women by increased police vigil and also by harnessing the resources of the community including women's Organizations, exclusive All Women Police Stations (AWPSs) and Women Help lines functioning in these AWPSs. On the other hand the strength of the women police has also been increased considerably to meet the need and there has been a 2.14% increase in strength in the current year (16,203) over the last year strength of 15,864.

The crime against women needs to be eliminated. The statistics indicated that position of women in Thiruvarur is better when a comparison is made with the State level average. Awareness on gender equality imparting the moral values and respect to women would further bring down the atrocities against women. The Table 7.4 depicts crime against women during 2014. The number of rape cases registered was 4 and 8 cases were framed under molestation and attempt to rape. There were 20 cases kidnapping and abduction and only two cases were found to be cases of dowry death. Besides, six cases were under dowry harassment and 100 cases were under women harassment.

CONCLUSION

This Chapter examined the case for the implementation of social security policies in Thiruvarur district. Despite the fact that high levels of poverty in a backward district like Thiruvarur provide a strong justification for the establishment of programmes of social security, there are strong doubts in the literature over the viability of implementing social security in the district. The expenditure on social services can have important endogenous effects on economic growth in Thiruvarur district. Thus, even if social security is not regarded as the primary means by which developing economies raise their levels of well-being and create the conditions for sustainable development and economic growth, their contribution towards that objective must not be underestimated. Aged people are assets to any society. Even though the earning capacity of them becomes less or zero sometimes, they contribute a lot of Economic development 11.14 percent of total population is aged. All of them are covered by the financial security schemes of Tamil Nadu Government. 1.86 percent of differently abled people live in Thiruvarur district. Crime against women has been noticed in 2011 with 20 kidnapping abduction and two dowry death which was lower than the State average. Imparting moral responsibility would favourably reduce crime against women.

CHAPTER 8

INFRASTRUCTURE

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INFRASTRUCTURE

Introduction

Infrastructural facilities play a crucial role in facilitating attainment of various facets of human development. The impact of investment on different kinds of infrastructure varies widely. It is important for the policy makers to make an informed choice as the resources are limited. The impact of investment on roads on poverty reduction was much higher than conventionally known investment priorities like health, education and irrigation in India. As the infrastructure has such impact on human development it is important to understand the current level of infrastructure in the district. The infrastructure can be either private like house or public in nature. Major public infrastructural facilities are road and telecommunication, electrification, public distribution system and banking services. Social infrastructure like Self Help Groups (SHG) also play a crucial role in achieving human development through building social capital and taking up economic activities. This Chapter focuses on the status of these types of infrastructures and their implication for the human development.

Roads

As indicated above, roads play many roles in actualizing the general development and thus human development. The analysis of Block-wise road infrastructure indicates that there was a wide level of disparity among the Blocks of Thiruvarur district in the presence of road infrastructure for 2011.Road network should be efficient in order to maximize economic and social benefits Roads are often the popular means of transportation for people to travel from place to place, to go to work, to schools and to factories by public. Efficient road will considerably improve velocity of the vehicles. The more modern the motorway, the more easily people can travel.

The comparative study of road length in the year 2001 of 2011 in the Thiruvarur district, that the Thiruvarur Block enjoyed extension of road length by 689.12 km in the year 2001 and it increased to 759.12 km in 2011, under various categories like Mud road, WBM

road BT road and Cement Road. The Mud Road was 340 km in 2001 but in 2011, it reduced to 204 km.

Table 8.1
Distribution of Total Road Length

(in km)

Sl. No	**Blocks/ District**	**Un- Surfaced Roads**	**Water Bound Macadam**	**Bituminous**	**Cement Concrete**	**Total Road Length**
1	Thiruvarur	204	206.51	212.367	136.24	759.12
2	Nannilam	210.84	69.547	222.059	17.382	519.83
3	Koradachery	31.585	48.3	45.825	3.52	119.28
4	Kodavasal	5.428	16.09	138.181	9.466	169.54
5	Valangaiman	49.853	104.577	172.341	19.219	345.99
6	Needamangalam	114.79	91.029	301.19	17.597	524.631
7	Mannargudi	144.19	261.786	389.839	35.774	831.6
8	Kottur	311.59	86.81	367.3	92.7	774.97
9	Thiruthuraipoondi	126.53	135.29	502.311	30.308	739.59
10	Muthupettai	81.55	89.9	398.556	19.05	589.06
	District	1280.356	1109.839	2749.969	381.256	5373.611

Source: All BDOs in Thiruvarur District (2014)

Table 8.1 reveals the distribution of road length between 2001 to 2011 among all the Blocks in Thiruvarur district. It was found that the total length for all the Blocks increased substantially from 2001 to 2011. It was very high for Mannargudi and Thiruthuraipoondi Blocks. Regarding the mud road length, all the Blocks reduced the mud road length except Valangaiman Block and Mannargudi Block. Thiruthuraipoondi Block remained the same in this regard. In the case of WBM, Nannilam Block and Kodavasal Block reduced in WBM from 2001 to 2011 and all other Blocks increased it from 2001 to 2011. As far as BT is concerned, it was increased in length from 2001to 2011 by all the Blocks. But in the case of CC, all Blocks showed increasing length except Thiruthuraipoondi Block. As a whole there had been better performance in the distribution of roads in all the Blocks. It could be found that the Block of Koradachery had the lowest road (119.28) infrastructure among all the Blocks, closely followed by the Block of Kodavasal (169.538). On the contrary, the highest surface road length was found in Mannargudi Block (831.596), followed by the Block of Thiruvarur (759.12).

Electricity

Thiruvarur is industrially backward district. Being an agricultural district, rice mills are predominant, (i.e.,) 50 modern rice mills. In power sector, there are two large scale units generating, 146 MW by using natural gas in one unit, put up by the Southern Energy Development Corporation at Koothanallur, Mannargudi Block and the other by TNEP at Kovil Kalappal, Kottur Block.

Table 8.2
Electrification

SL.No	Block wise/ District	Revenue Village	Hamlets	% of Hamlets have Electricity Facility	Towns	Population Covered	No. of Street Lights
1	Thiruvarur	46	144	100	-	80861	7135
2	Nannilam	58	246	100	2	168060	6414
3	Koradachery	58	114	100	1	100211	6011
4	Kodavasal	59	181	100	1	106084	5038
5	Valangaiman	70	144	100	1	94474	5318
6	Needamangalam	58	177	100	1	108583	7557
7	Mannargudi	83	207	100	2	19888	7910
8	Kottur	56	178	100	-	103867	7781
9	Thiruthuraipoondi	41	161	100	1	106152	6429
10	Muthupettai	35	99	100	1	99800	5645
	Total	**564**	**1651**	100	**10**	**927980**	**65239**

Source: Joint Director of Statistics, Thiruvarur.

Electrification details are given in Table 8.2. The Block wise electrification details show that Nannilam Block covered more number of population under electrification followed by Needamangalam, Thiruthuraipoondi, Kodavasal and Kottur. All the Blocks are electrified but the coverage of population differed from Block to Block depending upon the size of Blocks. About 564 of revenue villages in the district of Thiruvarur had been electrified in 2011. There were 564 revenue villages and 1651 hamlets under electrification and 65239 street lights in Thiruvarur district. Mannargudi Block has 83 revenue villages and 207 hamlets under electrification and 7910 street lights in the Block. Followed by, Needamangalam, with 58 revenue villages and 7557 street lights followed by Nannilam. Koradachery, Thiruthuraipoondi Block. Another 10 towns in this district were also electrified All the revenue villages in the district have been electrified completely. In the case of Sector wise consumption of energy in this district the domestic sector utilizes 56.18 per

cent of the power and 26.09 per cent of the power is consumed by the agricultural sector. The commercial sector uses 10.82 per cent of power. Only 2.52 per cent of power is being used by the industrial units. All other sector uses only meager amount of power and they contribute below 1 per cent to the total power supply. Since agriculture is the main occupation, its uses are higher than the other sectors.

COMMUNICATION SYSTEM

Postal Services

Regarding the postal service of the district, there were 109 post offices from the year 2011 to 2012. The population served per post office was high in the municipalities of Thiruvarur, Mannargudi, Thiruthuraipoondi and Koothanallur. The number of post office in this district was 109. A total of 468 post boxes were put up across the district. The number of post office in various Blocks differ in numbers depending upon the size of population and volume of services.

Telecommunication

Land line telephone was considered a house hold amenity of the affluent a decade earlier. But now it has attained a status of essential amenity even among low income classes, indicating the need for connectivity. This became very visible once low investment mobile telephone services became available. It is one of the fastest penetrating technologies even in the rural areas. Telephones that way do not stop with serving as communicating devices but go beyond that by serving many other purposes like a tool for livelihood. As data were not available for mobile telephone penetration, data pertaining only to the fixed phone services were used for the analysis.

Table 8.3
Telecommunication

Sl.No	Blocks / District	No. Of Tel. Exchange	No. of PCO	No. of land line	No. of HH with connection	No. of Mobile Phone Towers	Population Covered
11	Thiruvarur District	29	938	21933	21933	41	1264277

Source: GM, BSNL, Thanjavur (2013)

The telecommunication facilities and related details are given in Table no.8.3. There are 29 telephone exchanges in this district and number of PCO in this district is 938. There are 21933 landline connection and 21933 households are connected by land line phone connection in this district. 41 mobile phone towers are installed and 1264277 people are brought under the network of various mobile phones service providers.

Financial Institutions

Banking System occupies an important place in a nation's economy. A banking institution is indispensable in a modern society. It plays a pivotal role in the economic development of a country and forms the core of the money market in an advanced country. In India, though the money market is still characterized by the existence of both the organized and the unorganized segments, institutions in the organized money market have grown significantly and they play an increasingly important role. The unorganized sector, comprising the money lenders and indigenous bankers, cater the credit needs of a large number of persons, commercial banks and co-operative banks have been in existence for the past several decades. The Regional Rural Banks came into existence since the middle of seventies. Thus, with the phenomenal geographical expansion of the commercial banks and the setting up of the Regional Rural Banks during the recent past, the organized sector of money market has penetrated into rural areas as well.

Table 8.4
Financial Institutions

(Rs In Crores)

SI.No	Item	No. of Banks	Deposited Rs.	Advances Rs.	Credit Deposit Ratio	Sector Wise Credit Details for Agriculture
1	Govt. Banks	73	1635.33	1377.81	1215.68	882.92
2	Private Banks	38	643.95	632.87	742.87	353.31
3	Regional Banks	4	6.79	30.97	456.11	18.83
4	Co-operative Banks	18	150.34	326.09	494.00	1363.65
5	Others	0	0	0	0	0
	Total	**133**	**2436.41**	**2367.74**	**2908.66**	**2618.71**

Source: Lead Bank, IOB Thiruvarur - 2011

There are 133 banks in this district of them 73 are Public Sector, 38 private sector, 4 regional rural banks and 18 co-operative banks. As far as deposit mobilization is concerned, Government. Banks received more amount as deposit followed by private banks. Regional rural banks are the banks which received the lowest deposit. Similarly, Government banks advances more amount to their customers followed by private banks. The co-operative banks and regional rural banks advanced smaller amount. This is the same trend in the credit deposit ratio. But as far as agricultural loans are concerned, the cooperative banks lend more loans than the Government and private banks.

Insurance

Insurance plays a major role in protecting livelihoods from sudden unexpected losses, thereby giving continuity to livelihoods even after the incidence of accidents and other such situations. It is also an instrument any individual or business can use strategically to protect themselves in a proactive manner. The situation in Thiruvarur typically reflects the situation in rural India. In the district, the penetration had been very poor as depicted by the data given below.

Table 8.5
Insurance 2011

(in Lakhs)

SI.No	Name of the Companies	No. of Branches	Polices Issued	Sum Assured	No.of Beneficiaries	Amount Paid as Compensation
1	LIC of India	4	49771	356.78 (Lakhs)	13521	3185.78
2	PLI & RPLI	213	20409	13.75 (Crore)	30	16.75

Source: District Statistical Handbook, Thiruvarur, 2011-2012

Table No.8.5 shows the number of polices and related details. The number of policies taken does not reflect the reality as many policy holders opted for insurance for income tax reasons. As the demand was low the number of branches was also low. Insurance Literacy is very much essential to improve the penetration of various insurance products. Thiruvarur district has four LIC branches and 213 PLI and RPLI there were branches. India 13,521 beneficiaries and 30 RPLI.

The life insurance corporation of India and postal life insurance play a crucial role in this area though there are private insurance companies. There are four branches for Life Insurance Corporation of India and it issued 49771 policies and the sum insured was Rs.356.78 lakhs. Insurance corporation claim settlement of 13521 policy holders and also provide compensation amount of Rs 3185.78 Lakhs. In the case of Postal life insurance (PLI) and Rural postal Life Insurance service are provided by the postal department in all the 213 post offices and sub-posts offices. The Rural Postal Life Insurance (RPLI) is for all the people living in rural areas. Under PLI and RPLI they issued 20,409 policies in this district and the insured amount was Rs. 13.75 crore. The number of beneficiaries was 13 persons, the overall claim settlement in postal life insurance was Rs. 16.75. The RPLI can be extended to all rural areas and hamlets untouched by major insurance providers. This is a potential area of development, with people trying to have urban facilities in rural areas.

TRANSPORT FACILITY

Public transport facilities available in district for the movement of Men and material

The Thiruvarur district has a total of 159754 vehicles. Of them, 3624 vehicles are commercial vehicles and the remaining 156130 vehicles non commercial are vehicles. The number of commercial vehicles is lower. This is because of the fact that the main occupation of the district is agriculture and the number of manufacturing units is low. Agriculture needs so much amount of transport when compared to the manufacturing and service sector.

Road Transport

Efficient transport is a critical component of economic development, globally and nationally. Transport availability affects global development patterns and can be a boost or a barrier to economic growth within individual nations. Transportation investments link factors of production together in a web of relationships between producers and consumers to create a more efficient division of production, leverage geographical comparative advantage, and provide the means to expand economies of scale and scope. Transport has facilitated economic development from the beginning of human civilization. Early cities grew up on natural bays and ports, and on river banks and lake sides where transport was easily available. Romans built roads to unify and provide access to their far-flung empire.

Geographic characteristics such as proximity to oceans, seas, and waterways, plains, mountains and the location of oases defined early transport systems The industrial revolution generated new transport demands, which required higher volumes of coal, iron ore, and other materials and this led to construction of new roads that extended transport, and to early roadways development. TNSTC (Tamil Nadu Transport Corporation), run by the Government of Tamil Nadu had considered the importance of Transport in the development of State economy. It started TNSTC, Kumbakonam to cater to the transport needs of the delta district in an efficient manner.

Tamil Nadu State Transport Corporation in Thiruvarur district

TNSTC transport corporation covers the road transport in Thiruvarur, Thanjavur and Nagapattinam district. Kumbakonam is the headquarters of the zone and buses are being operated from various depots of this zone. The State owned corporation formally started its operation in the year 1972 and it has 1117 buses as on 31 March 2012. A Total of 5 lakhs kilometers is being covered by these buses per day. More than 10 lakh passengers used the bus services per day. The corporation operates both city and mofussil buses in this district. The corporation increased the number of routes and new villages are being covered. As on date there are seven villages covered with 18 new routes. Though there are a few private bus transport operators in this district, the State owned corporation plays an important role in providing means of conveyance to the people. It is found that the number of commercial vehicles is lower. This is because of the fact that the main occupation of the district is agriculture and the number of manufacturing units is low. Agriculture needs so much amount of transport when compared to the manufacturing and service sector.

Rail Transport

Railways is an efficient transport mode concentrating on people and goods and transporting them over a fixed route using one prime mover and multiple carriages and freight wagons. Rail transport is generally more fuel efficient than road transport. The rail freight in India is on an average 63 percent more fuel efficient than the road transport. Railways use a unique technology that has very low friction based on steel wheels and steel rails. The most significant forces that must be overcome, besides the weight of the goods being transported, are rolling resistance and aerodynamic drag as speeds increase. Next to water transport, rail transport is the most energy efficient means of moving large volumes of

goods and passengers. On an average, inland water transport, using barges and a towing or pushing ship, is about 35 percent more fuel efficient than rail freight, but compared to water transport, rail is often less circuitous and thus, often as energy efficient. Beyond energy efficiency, transport by inland water or rail can also achieve significant economies of scale in that a single vessel or rail train (locomotives + wagons or carriages) can move many tons of freight or passengers at once making it operationally highly efficient when there is enough volume to use available capacity. Railways are ideal to transport high volumes of bulk commodities or passengers.

Table 8.6

Railway Lines and Station

Item	Broad Gauge	Meter Gauge	Total
Route Length (in km.)	105.0	149.0	254.0
Track Length (in km.)	105.0	149.0	254.0
Number of Railway Stations	20	19	39

Source: Concerned Railway Station, Thiruvarur - 2011

Table 8.6 conveys the details of railway lines and railway stations in this district. The district is well connected with nearby railway stations. Like that of bus Transport Corporation, the railway services are availed by substantial portion of people. There are two gauges of tracks such as broad and meter gauges. The total length of routs covered by these gauges is 149 Km. and 105 Km. Respectively but the meter guage track also under guage conversion work is under prograss. A total of 39 railway stations are functioning in this district and of them. The paddy bags are transported from this district to rest of Tamil Nadu by trains. Apart from rails is connected with the Karaikkal port and from there imported coal is transported to the rest of the country. At present meter gauge has been stopped for the of broad gauge.

Irrigation Channel

The river Cauvery and its tributaries are the main rivers of the district. The Cauvery is considered to be the best of the rivers that drain in Southern peninsula of India. Springing from a spot lying on The Western Ghats at a height of 1,320 meter above sea level, it meanders its way across Karnataka and Tamil Nadu. The main sources of irrigation in Thiruvarur district are canals, tanks and wells**.** Major rivers are Odampokki, Vettar, Vennar, Mudikondan, Nandalar, Tirumalairayanar, Koraiyar, Valavaikkal, Kaattar, Pandavaiar, Ayyanar, Arichandranathi, Mulliyar, Pamaniyar, Adappar, Vellaiyar, Marakka Koraiyar, Vadavar Extn. Major lakes are Vaduvur Lake, Thirumeni Lake, Uthayamarthandapuram Lake, Moovanallur Lake. Tanks and wells are not used in some blacks for irrigation in the district . In 2014 period, Thiruvarur Taluk had 79 canals and 465 wells. The Nannilam Taluk had 129 tanks and 820 wells. There are no tanks in Valangaiman, and more wells are found in Needamangalam Taluk. Mannargudi has 3 tanks and 23 tanks are fund under Thiruthuraipoondi Taluk in Thiruvarur district.

Tourist Places

Tourism has become an important sector that has an impact on development of the district. The main benefits of tourism are income creation and generation of jobs. For many places of the district it is the most important source of livelihood for the rural households. The ability of the district economy to benefit from tourism depends on the availability of investment to develop the necessary infrastructure and on its ability to supply the needs of tourists. In Thiruvarur district Sri Thyagarajaswamy Temple at Thiruvarur, dedicated to Lord Siva date backs prrehistoric days. It is the second biggest shrine As Sambandar and Appar have sung the deity, the temple can be presumed to be existence even in the Seventh century AD. The three giants of Karnataka Music, namely Sri. Thiyagaraja, Sri Syama Sastry and Sr. Muthuswamy Deekhsitar, were all born in Thiruvarur. Thiruvarur is a place for the musical Trinity and most of the south Indian musicians are connected with it in one way or the other. The wooden car of Thiruvarur is the biggest of all the temple cars in the State. Historical importance of Thiruvarur lies in the legend of Manu Cholas just judgment to execute his only son for killing a calf by driving his chariot over it. In 2014 in 3.54% of Tourist visit Thiruvarur district. Muthupettai and Udayamarathandapuram are the other main tourist spots in Thiruvarur district. The special significance of area is lagoon and bird

sanctuary. The two tourist spots are visited from August to March. Tourist arrivals of domestic and foreign visitors have been steadily increasing. These two tourist spots are also included in the tourist circuits identified by the Tourism Development authority of the district.

CONCLUSION

In conclusion, the infrastructure is the core of any tangible development. Thiruvarur has road length of 680 Km. Though two NH are available, mostly they are only two lanes roads only in the district. When it is extended to four lanes, the inter connectivity with Karaikkal port Nagapattinam, Thiruvarur, Thanjavur and Trichy with Salem would create tremendous development. A very good connectivity is noticed in railway. But the frequency of operation needs to be increased 100 per cent electrification to be available in all Blocks of Thiruvarur district is good for development. . The district economy partly depends on the tourism sector Tourism has become an important eco friendly sector that has an impact on the development of district economy. In the case of irrigation system of the district is purely depends upon only cannel irrigation from Cauvery river water and there is no possibility for alternative irrigation source except in Valangaiman, Needamangalam and Koradachery Blocks.

CHAPTER 9

SUMMARY AND WAY FORWARD

CHAPTER - 9

SUMMARY AND WAY FORWARD

Introduction

The Human Development gains have been remarkable in many Blocks of the District. At the same time, the identification of the challenges in the coming years has been done. This final Chapter highlights the way forward for Thiruvarur to meet the challenges in future and make use of the opportunities available. A proper development is possible only if we integrate the human development for the benefit of the society and the economy in the long run. The Human Development Report as emphasis that "the real wealth of the country is its people and the purpose of development is to create an enabling environment for them to enjoy long creative and healthy lives" Health, education and standard of living would throw light on the different facets of development of an area. This Chapter presents in nutshell the human development scenario of Thiruvarur district and the way forward.

Human Development Index Key Findings

- Among the district in Tamil Nadu, in Human Development Index Thiruvarur is placed in the19th place under the HDI at 0.657.
- Due to lesser per-capita income, the standard of living is also low in the district and this is reflected in the low income index of 0.435.
- The Health Index is moderate in the district and it is put at 0.772.
- The toilet facility, one of the factors which decide the Health index is not very comfortable in the district.
- The sanitation facilities are very low especially at Valangaiman Block.
- Though all the ten Blocks in this district are comfortable in the access to drinking water, Thiruvarur (97.11) and Nannilam (96.97) occupied the first and second places respectively and the lowest Block was Thiruthuraipoondi (79.04).
- Thiruvarur (94.77) Block stands first in accessing electricity and care should be given to Muthupettai (88.59) Block in this regard.

- In the matter of great concern in having access to pucca house is Valangaiman Block which scored score of 38.05 while the lowest, the highest pucca house Block was Thiruvarur (85.34).

- IMR, MMR and U5MMR are the indicators of better health status. IMR was found to be very low in Thiruvarur (7.49) Block and Muthupettai (7.11) Block against higher IMR of Needamangalam (18.51).

- Very low MMR were found in Nannilam Block and Needamangalam Block while Mutupettai and Thiruvarur Blocks registered very low under five mortality rate.

- All the Blocks performed well in educational development. The Education Index of the district was put at 0.72. There has been improvement in the Gross Enrollment Ratio in Primary and Higher Education.

Gender Inequality Index - Key Findings

- Over all Gender Inequality Index of the district was from 0.151 to 0.027. Needamangalam Block of the district of registered the lowest Index value of 0.027. The highest gender inequality index was found in Koradachery (0.151).

- The overall female work participation rate in agriculture and non- agriculture sectors was found to be low when compared to male work participation rate. The wage differential also created gender inequality.

- Female literacy was the highest in Thiruvarur Block (82.33) and the lowest was found in Needamangalam Block (71.92) as compared to the district rate of 76.72.

Child Development Index Key Findings

- Regarding CDI, which takes into account Education, Health and Nutrition, Muthupettai Block, performed well at 0.751.

- Thiruvarur (0.737) and Thiruthuraipoondi (0.729) Blocks displayed better child development index and they were placed in the second and third rank under CDI.

- Nannilam (0.404) and Needamangalam (0.423) Block experienced a very low CDI value in This district.

- In this district, the percentage of malnourished children was 21.48 percent. Among the blocks the percentage is higher in Valangaiman (29.59) and lower (14.15) in Kodavasal Block.

Multidimensional Poverty Index Key Findings

- Multidimensional Poverty Index is a composite Index taking into account the parameters of Health, Education and Standard of Living. This index was very low (0.210) in Thiruvarur Block.

- Valangaiman (0.861) and Nannilam (0.611) Blocks recorded high MDPI.

- Lack of sufficient balanced diet was the prime cause of poverty.

- Accessibility of various facilities to enhance the standard of living is a matter of great concern.

- Effective implementation of universalisation of primary and secondary education reduces MDPI substantially.

Way Forward:

Accessibility of various facilities will enhance the standard of living of the people. Effective implementation of universalisation of primary and secondary education reduces MDPI substantially. Sanitation can be improved by providing more toilet facilities in the rural areas of the entire Block. Further increase in the enrollment ratio will make the district a cent percent literacy district. Better functioning of Primary Health Centre and opening up of new sub-centers will help to improve Health Indicators in the district. Focused measures on Poverty, Education and Health will improve the HDI status of the district.

EMPLOYMENT, INCOME AND POVERTY

Employment

- Among the total number of workers, more number of employees was found in agriculture sectors in Thiruvarur (56.60 %) Block and less number in Kottur (16.54 %) Block against the district average of 32.41 percentages.
- In the case of agricultural sector more workers were found to be in Kottur (83.20 %) Block and less number in Thiruvarur (43.93 %) Block against the district average of 67.59 percentage.
- Among the total workers, 18.37 per cent of cultivators were found in Needamangalam Block and 6.83 per cent of cultivators were in Thiruvarur Block, against the district average of 12.62 per cent.
- Regarding agricultural labourers 72.06 per cent were in Kottur Block and 37.10 per cent Thiruvarur Block against the district average of 54.65 percent in 2011 Census.
- As far as other workers are concerned, 54.46 per cent of them worked in Thiruvarur Block and 14.78 per cent of workers are in Kottur Block against the district average of 30.48.
- In the case of household industries Koradachery Block has registered the highest with 3.47 per cent of workers and Valangaiman Block the lowest at 1.54 per cent against the district average 1.93 per cent.
- 67.6 per cent of total workers were cultivators and agricultural labourers in this district.
- Of the registered candidates with the employment exchange, less than one percent of them obtained employment opportunity.
- Out of 327219 households in this district, 1,96,226 households availed job cards under the MGNREGP.

Income

- The per capita income of Thiruvarur district was Rs. 27408, lesser than state per capita income of Rs.53,507, and the National average of Rs.54,835.
- The per capita income of Thiruvarur district was three times lower compared with Kanyakumari district.

- The per capita income of Thiruvarur district increased by 18.81 per cent from 2001 to 2011 against the state growth rate of 23.36 per cent and National growth rate of 55.94 percent.

- Regarding the sector wise Net Domestic Product of Thiruvarur district, the primary sector had contributed 15.38 percent in 2010-11 followed by the secondary sector with 12.47 percent. But the tertiary sector contributed 72.15 percent. Compared to the state net domestic product of 8.81percent, 28.41percent, and 62.70 percent respectively.
- The percentage of Below Poverty Line families was found more in Kottur Block (66.90) and less in Needamangalam Block (28.19) against the district average of 46.93 percentages.
- Though Thiruvarur and Mannargudi Blocks are urban areas, there also existed below poverty line families which are closer to district average.

Way Forward

Entrepreneurship Development Programme organized for the young people. More priority should be given to Self-Employment Programmes. Home based small units can be encouraged to supplement the income of the households especially during Agricultural off-season of the landless labourers in this district. This would bring about a change in the lifestyle of the people. MGNREG programme extended to related areas to create physical infrastructure and reduce poverty. An effective and intensive short term crash training course on electronics should be provided to the unemployed youth. This may encourage the economic growth in this area.

DEMOGRAPHY, HEALTH and NUTRITION

Demography

- The district population was 12,64,277 which accounts for 1.75 per cent of the state population.

- Among the Blocks, Nannilam Block had registered an Annual Growth rate of population of 1.08 percent which was the highest growth rate in this district. Kottur

Block registered lowest growth rate of 0.37 percent against the district average of 0.81 percent and the state average of 13.49 percent.

- Thiruvarur Block recorded the highest sex ratio in this district (1028) and Kodavasal Block the lowest sex ratio (984) against the district sex ratio of 1017 females per 1000 male populations.

- The child sex ratio was more in Thiruthuraipoondi Block (1005) and Valangaiman Block recorded the lowest ratio (910).

- Thiruvarur Block recorded the highest density of population (588 per sq.km) whereas Mannargudi Block recorded the lowest density of population (439 per sq.km).

- The highest percentage of SC population was in Thiruthuraipoondi Block and the lowest was Kodavasal Block.

- Regarding ST population Thiruthuraipoondi Block registered the highest percentage and Valangaiman Block the lowest percentage.

- Percentage of 0 - 6 years old population was found to be more in Valangaiman Block and less in Kottur Block.

- Koradachery Block and Thiruthuraipoondi Block registered the highest and lowest percentage of Crude Birth Rate respectively.

- Nannilam and Thiruvarur Blocks registered the highest and the lowest percentage of Crude Death Rate respectively.

Health

- Infant Mortality Rate was found to be more in Needamangalam Block which was the same as the district average (18.51) and the lowest IMR was found in Muthupettai Block.

- In the case of Valangaiman Block, MMR is a matter of great concern. This Block recorded MMR at 231.30 and Needamangalam and Nannilam Blocks did not experience any MMR.

- All the Blocks in this district experienced 100 per cent institutional deliveries except Kodavasal and Valangaiman Block only one non institutional delivery in these two Blocks.

- It is found that 114.3 per cent of children were immunized in Mannargudi Block which was the highest was in the district and the lowest of 80.4 percent of children immunized in Mannargudi Block.

- If we take the nutritional status of children, the highest percentage of underweight children was found in Valangaiman (29.59 %) Block and the least in Kodavasal (14.15 %) Block against the district average of 21.48 percent, and then state average of 20.23
- In the case of Drinking water facilities more number of habitations was found in Nannilam Block (99.18 %) and less numbers in Kottur (92.00 %) against the district average of 93.74 percent and the state average of 85.93 percentage.
- Regarding households with toilet facilities Thiruthuraipoondi Block recorded 72.04 percent and the least was in Valangaiman, at 45.67 percent against the district average of 64.41 percent.
- In order to strengthen the iron content among women and children, the concerned Health Department provides IFA tablets. More number of women was provided with IFA tablets in Kottur Block and less in Kodavasal Block. In the case of children, more number were found to be in Needamangalam Block and less numbers in Kottur Block. Among the adolescent girls, Nannilam Block registered with highest percentage and Mannargudi Block the lowest percentage. If we take the nutritional status of children below five years, the highest percentage of underweight children was found in Valangaiman Block and less in Kodavasal Block.

Way Forward

Periodical inspection carried out to check the outbreak of epidemics in this district. More IFA (Iron and Folic Acid) tablets may have to be provided to avoid anemic among adult women, children and adolescent women. Children have to consume nutritional foods in order to avoid deficiency disorders. Awareness creation about the intake of diet with required fiber contents and vitamins would enhance the immunity of children and people. This would protect them from some of the opportunistic and contagious diseases like TB.

Literacy and Education

- Male Literacy Rate was found to be more in Thiruvarur (92.26 %) Block and less in Valangaiman (85.80 %) Block against the district male literacy rate of 89.13 percent.
- The Female literacy rate was found more in Thiruvarur (82.33 %) Block and less in Needamangalam (71.92%) Block against the district average of 76.72 percentage. It is more than the state average of 73.86 percent.
- Over all literacy rate more in Thiruvarur Block at 87.09 percentage and less in the Block of Valangaiman at 79.66 percent against the district average of 82.86 percentage. It is less than the state average of 80.33 percent.
- The Gross Enrolment ratio in primary and upper primary education was good in this district. More than 98 per cent of Boys and girls have been enrolled. In upper primary to secondary, girls outnumbered the boys in all the Blocks.
- In the case of drop out at primary education it was the highest in Needamangalam (0.37 %) and lowest in Valangaiman (0.70%) for both Boys and Girls against the district average dropout of 0.50 percent.
- In the case of secondary dropout it was more (8.89 %) in Thiruvarur Block and less in Kottur (4.29 %) against the district average of 8.43percentage.
- Both boys and girls drop outs were witnessed in upper primary education. In this regard, all the Blocks recorded more or less equal percentage for both boys and girls.
- In secondary Education, the enrolment ratio for boys and girls was found to be more in Thiruthuraipoondi (101.29 %) Block and less in Nannilam (96.43 %) Block against the district average of 101.04 percentage.

- Very high Pupil–Teacher ratio was found in Thiruthuraipoondi, Nannilam, Valangaiman and Muthupettai Blocks in primary, upper primary, secondary and higher secondary school respectively. Children never enrolled in schools were found to be very few.

- Very low pupil – teacher ratio for primary, upper primary, secondary and higher secondary schools are found in Kottur, Muthupettai, Nannilam and Needamangalam Blocks.

- There was no significant change in gender wise enrolment ratio in secondary education.

- In the case of Higher Education, Mannargudi Block recorded more number of higher educational institutions and no such institution was found in Kottur and Muthupettai Blocks.

- Male literacy rate was found to be more in Thiruvarur Block and less in found Valangaiman Block.

- The Female literacy rate was found more in Thiruvarur Block and less Needamangalam Block.

- Muthupettai Block registered the highest percentage of Primary and upper primary access ratios. The lowest percentage of primary and upper primary access ratios were found in Thiruthuraipoondi and Valangaiman Blocks.

- Kottur and Mannargudi Blocks registered the highest percentage of secondary and higher secondary access ratio and Valangaiman Block registered the lowest percentage of secondary and higher secondary access ratio.

Way Forward

Thiruvalluvar provides the utmost importance to Literacy and numeracy in his couplet,

"En enba Enai Ezhuthenaba Ivvirandum

Kan enba Vazhum vyurku"

A good grasp of knowledge on literacy and numeracy would create awareness among people about their living conditions. The choice making and decision making situation would evolve favouring the entire social development. Effective steps to be taken to solve dropout problems. Geographical spreading of educational institutions is the need of the hour to attract and retain the students.

Gender

- In Thiruvarur district, there was more number of women population in Mannargudi Block and the Lowest percentage of women population was recorded in Valangaiman Block
- More percentage of women was found in agricultural sectors in Kottur Block whileThiruvarur Block registered the lowest in this regard.
- The percentage of Female Employment participation was the highest in local bodies and the lowest in Central Government works. Percentage of female participation as memberships in State Assembly and in local bodies was more in Mannargudi Block and less in Thiruvarur Block.

Way Forward

Women Empowerment would empower the society and the nation. Gender inequality can be reduced if all the girl children could have access to health care and good food products. People have to be encouraged to help their daughters to receive education. The free schooling opportunity to be availed for the better treatment and the human emancipation.

Social Security

- In Thiruvarur district, the Female population aged above 60 years was 5375 in numbers.
- Old age pension holders and destitute widows were mostly covered under financial security.
- More number of differently abled populations was found to be in Kodavasal and Koradachery Blocks and lesser number was found Thiruvarur Blocks.

Way forward

Youngsters have the muscle power with physical fitness as well as will to execute good things. These two are needed for the society as the left and right feet are required for walking. College students sensitized about protecting the aged. The really affected people are provided with OAP (Old Age Pension) and free ration products. The OAP amount can be enhanced keeping in view the cost of living.

Infrastructure

- It was found that the total length of surface road for all the Blocks increased substantially in 2007 compared with 2001.
- The surface road length increased substantially for Mannargudi Block and lower for Koradachery Block.
- There are 1117 buses, in operation in this district.
- The district has railway lines, with 39 stations.
- All the Blocks are fully electrified.
- Highest percentage of power consumption was found to be more in domestic sector followed by agriculture and commercial sectors.
- There are 73 Nationalized Banks, 38 private Banks, 18 co-operative banks and only four Regional Rural Banks in this district.

Way Forward

A vision and mission statement with achievable goals within a time frame to be prepared by the authorities. This has to be informed to all from the top level to the subordinate levels for the collective big push for rapid development. Direct connection with the people would benefit the entire society. This may have to reach the people directly. The Puthu Vazhvu Thittam is a milestone in this regard. As the world is surging fast with knowledge economy, awareness on social development must be created among the public.

- Access to PHC (Primary Health Centre) has to be made easy for the people. Wealth of a nation depends on the health of the people.

- An effective monitoring of institutions can be carried out by all the functional heads of various departments.

- Continuous awareness campaign conducted regularly to change the mindset of the people to give importance to women to avoid gender inequality.

- After a careful analysis and security of the relevant concepts of human development, the resource institution has evolved HE-SHE Model. This is an inclusive of H-Health, E-Education and S- Standard of living. This would lead to H-human development and finally the E-Empowerment of the nation among would be realized the comity of nations.

- 'Education is the manifestation of perfection already in man', said Swami Vivekananda. Educational attainment is the sum total of over all development of the taught. Nowadays the people have understood 'Education has bitter roots, but sweeter fruits'. The Government of Tamil Nadu, in general and the district administration in particular have been evolving strategies for making educational roots sweeter by adopting 'Katralin Inimai Palli' model in primary education.

- The noon-meal scheme, various scholarships and free equipments provided by the Government would enhance the enrolment ratio. People have to be sensitized about the importance of education and supporting public educational institutions by putting their wards.

- The improvement in purchasing power of the people is essential for having better standard of living. People must have access to all available goods and services. This in turn requires the economy with less inflation. Thiruvarur economy is agrarian in nature. A paradigm shift towards industrializing Thiruvarur economy may not be a feasible one as this would amount to disturbing the agriculture base of the delta district.

- An alternate model of developing service sector comprising more IT, ITES (IT enabled services) and tourism and hospitality industries. ITES may not require more space, sustainable development not affecting agriculture and environment and IT related is possible thorough IT enabled services.

- Thiruvarur is noted for its varied and rich culture. Vaduvur Sanctuary in Thiruvarur district is the home for different birds. The mangrove forest at Muthupettai is an assets bestowed on Thiruvarur by nature. Steps have to be taken to develop tourism sector in Thiruvarur district. People from Kerala and other states visit Vailankanni enroute to Thiruvarur. Thiruvarur is famous for magnificent temples. The hospitality needs to be revamped to include the foods of Kerala and other state people. Tourism department set up in Thiruvarur to develop it as the most favored tourist destination. Boating arrangements, parks and other recreational facilities arranged for better tourism.

- Road infrastructure has to be strengthened by converting the National Highway from Karaikal to Trichy enroute Thiruvarur. Four lanes roads arranged. An institutional dialogue carried out between the centre and the state in creating better infrastructure. The existing village - district headquarters connectivity has to be strengthened on modern lines. The existing village roads extended by informing the necessity of road connectivity to the land owners.

The famous economist Ragnar Nurkse's (Balanced Growth Theory Model) favored the adoption of balanced growth for the all areas related to economic development. Valangaiman and Kottur Blocks lag behind other Blocks in catching up with the developmental momentum. In this connection the SBGF Model of Tamil Nadu would be the right strategy to remove the obstacles in backward blocks to attain economic development. This would facilitate our economy to achieve the objectives of the higher levels of economic development.

ANNEXURES

Table 1.1: Blcok Wise Human Development Index Indicators

Sl.No	Blocks	Standard of Living					Health			Education		
		Access to Cooking Fuel	Access to Toilet Facilities	Access to Drinking Water	Access to Electricity	Access to Pucca Houses	IMR	MMR	U5MR	Literacy Rate	GER Primary	GER Secondary
		Cnsus 2011	2013-14	2013-14	Census 2011	DRDA+ Urban	DD Health			Census 2011	Edcn Dept	
			Web site + Urban	Web site + Urban (habitation)		2012-13	2013.14				2013.14	
1	Thiruvarur	52.13	67.02	98.72	94.77	85.34	11.07	10.00	2.10	87.09	100.28	101.5
2	Mannargudi	43.95	57.75	95.11	93.57	52.27	9.02	161.60	1.26	83.54	100.33	102.01
3	Kottur	19.27	68.56	92.00	91.54	61.84	10.03	68.60	1.51	79.74	100.28	99.65
4	Kodavasal	33.75	64.26	95.60	93.00	38.92	14.05	10.00	2.37	84.18	100.23	100.6
5	Nannilam	31.34	65.67	99.18	93.40	47.58	14.01	128.40	2.46	84.41	100.33	98.36
6	Valangaiman	27.30	45.67	87.42	92.84	38.05	6.03	126.80	1.05	79.66	99.88	104.99
7	Koradachery	30.32	66.58	92.45	93.16	42.27	12.01	181.40	2.49	82.26	99.98	100.72
8	Thiruthuraipoondi	27.49	72.04	88.70	88.91	58.8	13.05	224.90	2.29	82.87	99.86	103.38
9	Mithupettai	24.73	70.23	92.25	88.56	48.32	13.08	188.70	2.71	80.89	100.43	101.76
10	Needamangalam	24.81	68.89	91.74	92.86	41.39	18.04	118.40	2.55	78.99	99.73	102.27

Source : Computed from Collected Data.

Table 1.2 Block Wise Human Development Index

Sl. No	**Blocks**	Standard of Living					Health			Education		
		Access to Cooking Fuel	Access to Toilet Facilities	Access to Drinking Water	Access to Electricity	Access to Pucca Houses	IMR	MMR	U5MR	Literacy Rate	GER Primary	GER Secondary
1	Thiruvarur	1.00	0.84	0.98	1.00	1.00	0.64	1.00	0.46	1.00	0.99	0.79
2	Mannargudi	0.76	0.54	0.80	0.92	0.35	0.78	0.36	0.89	0.78	0.99	0.82
3	Kottur	0.06	0.89	0.65	0.79	0.54	0.71	0.75	0.76	0.54	0.99	0.68
4	Kodavasal	0.47	0.75	0.83	0.88	0.09	0.42	1.00	0.32	0.82	0.98	0.73
5	Nannilam	0.40	0.79	1.00	0.91	0.26	0.42	0.50	0.27	0.83	0.99	0.60
6	Valangaiman	0.29	0.15	0.43	0.87	0.07	1.00	0.51	1.00	0.54	0.95	1.00
7	Koradachery	0.37	0.82	0.67	0.89	0.16	0.57	0.28	0.25	0.70	0.96	0.74
8	Thiruthuraipoondi	0.29	1.00	0.49	0.61	0.48	0.49	0.09	0.36	0.74	0.95	0.90
9	Mithupettai	0.21	0.94	0.66	0.59	0.28	0.49	0.25	0.14	0.61	1.00	0.80
10	Needamangalam	0.21	0.90	0.64	0.87	0.14	0.13	0.54	0.22	0.49	0.93	0.83

Source : Computed from Collected Data.

Table 1.3 Block Wise Human Development Index

Sl.No	**Blocks**	Standard of Living Index	Health Index	Education Index	Overall Index	Rank
1	Thiruvarur	0.961	0.662	0.919	0.836	1
2	Mannargudi	0.640	0.632	0.858	0.703	2
3	Kottur	0.423	0.741	0.711	0.607	3
4	Kodavasal	0.472	0.510	0.838	0.587	4
5	Nannilam	0.597	0.385	0.790	0.566	5
6	Valangaiman	0.259	0.798	0.798	0.549	6
7	Koradachery	0.492	0.342	0.791	0.511	7
8	Thiruthuraipoondi	0.530	0.255	0.857	0.488	8
9	Muthupettai	0.464	0.257	0.790	0.455	9
10	Needamangalam	0.432	0.251	0.727	0.429	10

Source : Computed from Collected Data.

Table 1.4 Block Wise Gender Inequality Index Indicators

Sl. No	Blocks	Health			Empowerment						Labour					
		MMR	Share of Institutional Deliveries	Share of Ante Natal Coverage	Female Literacy	Male Literacy	Share of female Children (0-6) years	Share of male Children (0-6) years	Share of Female Elected Representatives in RLBs and ULBs	Share of Male Elected Representatives in RLBs and ULBs	Female Worker Participation Rate	Male Worker Participation Rate	Female Worker Participation Rate in Non-Agri Sector	Male Worker Participation Rate in Non-Agri Sector	Female Agri. Wage rate	Male Agri. Wage rate
		2013-14			2011				2013-14		2011				2013-14	
	Source	Health Department			Census				RD&PR Department		Census				DoES	
	Unit	Rate	**%**													
1	Kodavasal	10.00	99.87	92.73	78.26	89.81	49.13	50.87	38.10	61.93	24.40	61.48	17.74	28.65	125.00	350.00
2	Kottur	68.60	100.00	94.34	72.93	87.20	48.38	51.62	33.77	66.23	37.35	59.80	11.02	19.15	120.00	300.00
3	Thiruvarur	10.00	99.95	88.00	82.33	92.26	49.57	50.43	14.51	85.49	19.93	56.97	35.85	61.07	130.00	350.00
4	Mannargudi	161.60	99.97	95.84	78.96	90.19	48.96	51.04	45.41	54.59	21.80	57.87	29.96	45.08	150.00	350.00
5	Valangaiman	126.80	100.00	91.90	72.39	85.80	47.65	52.35	40.80	59.20	30.12	60.11	14.05	28.09	130.00	350.00
6	Needamangalam	118.40	99.82	91.60	71.92	86.46	48.32	51.68	42.18	57.64	29.59	59.30	16.86	25.82	100.00	300.00
7	Muthupettai	188.70	100.00	96.84	73.96	88.62	49.11	50.89	37.41	62.59	30.63	58.10	12.04	31.45	130.00	350.00
8	Thiruthuraipoondi	224.90	100.00	97.26	76.93	89.21	50.12	49.88	34.05	65.95	31.67	58.83	16.22	33.18	150.00	380.00
9	Nannilam	128.40	99.95	92.82	78.87	90.94	48.61	51.39	40.14	59.86	22.94	59.54	21.59	34.30	130.00	380.00
10	Koradachery	181.40	100.00	99.36	76.08	88.33	49.20	50.80	33.25	66.75	26.87	59.92	22.03	38.59	100.00	350.00

Source : Computed from Collected Data.

Table 1.5 Block Wise Gender Inequality Index

Sl. No	Blocks	Health			Empowerment						Labour					
		MMR	Share of Institutional Deliveries	Share of Ante Natal Coverage	Female Literacy	Male Literacy	Share of female Children (0-6) years	Share of male Children (0-6) years	Share of Female Elected Representatives	Share of Male Elected Representatives	Female Worker Participation Rate	Male Worker Participation Rate	Participation Rate in Non-Agri Sector	Participation Rate in Non-Agri Sector	Female Agri. Wage rate	Male Agri. Wage rate
1	Kodavasal	1.00	1.00	0.93	0.78	0.90	0.49	0.51	0.38	0.62	0.24	0.61	0.18	0.29	0.58	0.73
2	Kottur	0.15	1.00	0.94	0.73	0.87	0.48	0.52	0.34	0.66	0.37	0.60	0.11	0.19	0.50	0.27
3	Thiruvarur	1.00	1.00	0.88	0.82	0.92	0.50	0.50	0.15	0.85	0.20	0.57	0.36	0.61	0.67	0.73
4	Mannargudi	0.06	1.00	0.96	0.79	0.90	0.49	0.51	0.45	0.55	0.22	0.58	0.30	0.45	1.00	0.73
5	Valangaiman	0.08	1.00	0.92	0.72	0.86	0.48	0.52	0.41	0.59	0.30	0.60	0.14	0.28	0.67	0.73
6	Needamangalam	0.08	1.00	0.92	0.72	0.86	0.48	0.52	0.42	0.58	0.30	0.59	0.17	0.26	0.17	0.27
7	Muthupettai	0.05	1.00	0.97	0.74	0.89	0.49	0.51	0.37	0.63	0.31	0.58	0.12	0.31	0.67	0.73
8	Thiruthuraipoondi	0.04	1.00	0.97	0.77	0.89	0.50	0.50	0.34	0.66	0.32	0.59	0.16	0.33	1.00	1.00
9	Nannilam	0.08	1.00	0.93	0.79	0.91	0.49	0.51	0.40	0.60	0.23	0.60	0.22	0.34	0.67	1.00
10	Koradachery	0.06	1.00	0.99	0.76	0.88	0.49	0.51	0.33	0.67	0.27	0.60	0.22	0.39	0.17	0.73

Source : Computed from Collected Data.

Table 1.6 Block Wise Gender Inequality Index

Sl.No	Blocks	Female Health Indices	Male Health Indices	Female Emp Indices	Male Emp Indices	Female LF Indices	Male LF Indices	GF	GM	GFM	Health Bar	Emp Bar	LF Bar	GFM Bar	GII	Rank
1	Kodavasal	0.97	1	0.55	0.75	0.38	0.67	0.59	0.79	0.67	0.987	0.646	0.523	0.693	0.029	1
2	Kottur	0.52	1	0.50	0.76	0.43	0.40	0.48	0.67	0.56	0.758	0.628	0.418	0.584	0.039	2
3	Thiruvarur	0.96	1	0.39	0.89	0.36	0.64	0.51	0.83	0.64	0.979	0.639	0.504	0.681	0.067	3
4	Mannargudi	0.39	1	0.60	0.70	0.47	0.65	0.48	0.77	0.59	0.695	0.650	0.558	0.632	0.067	4
5	Valangaiman	0.42	1	0.54	0.71	0.45	0.66	0.47	0.78	0.58	0.708	0.628	0.555	0.627	0.070	5
6	Needamangalam	0.43	1	0.55	0.71	0.22	0.40	0.37	0.66	0.48	0.713	0.628	0.312	0.519	0.082	6
7	Muthupettai	0.37	1	0.53	0.74	0.45	0.65	0.45	0.79	0.57	0.686	0.635	0.551	0.622	0.086	7
8	Thiruthuraipoondi	0.35	1	0.51	0.77	0.56	0.77	0.47	0.84	0.60	0.676	0.639	0.665	0.660	0.092	8
9	Nannilam	0.42	1	0.56	0.74	0.39	0.77	0.45	0.83	0.58	0.708	0.650	0.581	0.645	0.094	9
10	Koradachery	0.38	1	0.50	0.77	0.21	0.66	0.34	0.80	0.48	0.690	0.635	0.436	0.576	0.167	10

Source : Computed from Collected Data.

Table 1.7 Block Wise Child Development Indicators

Sl. No	Block	Indicators							
		Health			Education				
		U5MR	Juvenile Sex Ratio (0-6)	Percentage of Malnourished Children	Enrollment in Primary	Enrollment in Secondary	Children never enrolled in school	Transition rate from primary to upper primary	Transition rate from upper primary to Secondary
		2013-14	2011	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14
1	Thiruthuraipoondi	2.3	1005	17.30	99.86	103.38	0.00	99.28	99.74
2	Mannargudi	1.3	959	21.80	100.33	102.01	0.00	99.13	97.99
3	Kottur	1.5	937	12.30	100.28	99.65	0.00	98.98	97.81
4	Thiruvarur	2.1	983	20.30	100.28	101.50	0.00	98.43	99.38
5	Kodavasal	2.4	966	13.00	100.23	100.60	0.00	98.18	99.49
6	Muthupettai	2.7	965	17.10	100.43	101.76	0.00	98.11	99.59
7	Needamangalam	2.6	935	16.00	99.73	102.27	0.00	98.43	98.99
8	Nannilam	2.5	946	19.20	100.33	98.36	0.00	97.43	100.00
9	Koradachery	2.5	968	16.00	99.98	100.72	0.00	97.93	97.24
10	Valangaiman	1.1	910	27.20	99.88	104.99	0.00	98.21	95.86

Source : Computed from Collected Data.

Table 1.8 Block Wise Child Development Index

Sl. No	Block	Index								CDI	Rank
		Rank Health			Education						
		U5MR	Juvenile Sex Ratio (0-6)	Percentage of Malnourished Children	Enrollment in Primary	Enrollment in Secondary	Children never enrolled in school	Transition rate from primary to upper primary	Transition rate from upper primary to Secondary		
1	Thiruthuraipoondi	0.261	1.000	0.664	0.186	0.757	0.000	1.000	0.937	0.601	1
2	Mannargudi	0.901	0.517	0.362	0.857	0.551	0.000	0.919	0.514	0.578	2
3	Kottur	0.745	0.288	1.000	0.786	0.195	0.000	0.838	0.471	0.540	3
4	Thiruvarur	0.379	0.767	0.463	0.786	0.474	0.000	0.541	0.850	0.532	4
5	Kodavasal	0.211	0.586	0.953	0.714	0.338	0.000	0.405	0.877	0.511	5
6	Muthupettai	0.000	0.578	0.678	1.000	0.513	0.000	0.368	0.901	0.505	6
7	Needamangalam	0.099	0.263	0.752	0.000	0.590	0.000	0.541	0.756	0.375	7
8	Nannilam	0.155	0.379	0.537	0.857	0.000	0.000	0.000	1.000	0.366	8
9	Koradachery	0.137	0.614	0.752	0.357	0.356	0.000	0.270	0.333	0.352	9
10	Valangaiman	1.031	0.004	0.000	0.214	1.000	0.000	0.422	0.000	0.334	10

Source : Computed from Collected Data.

Table 1.9 Block-Wise Multi-Dimensional Poverty Indicators

Sl.No	Blocks	Health			Education		Living Standards				
		IMR	High order Birth Rate	Malnourished Children	Drop out in primary	Drop out secondary	Access to cooking fuel	Access to toilet facilities	Access to drinking water	Access to Electricity	Pucca house
		2013-14					2011				
1	Thiruvarur	11.07	4.14	20.30	0.38	3.45	52.13	67.02	98.72	94.77	85.34
2	Nannilam	14.01	7.25	19.20	0.39	3.83	31.34	65.67	99.18	93.40	47.58
3	Mannargudi	9.02	7.61	21.80	0.49	3.06	43.95	57.75	95.11	93.57	52.27
4	Kottur	10.03	3.70	12.30	0.48	4.63	19.27	68.56	92.00	91.54	61.84
5	Koradachery	12.01	5.44	16.00	0.46	7.42	30.32	66.58	92.45	93.16	42.27
6	Kodavasal	14.05	6.57	13.00	0.59	7.08	33.75	64.26	95.60	93.00	38.92
7	Needamangalam	18.04	6.22	16.00	0.36	8.40	24.81	68.89	91.74	92.86	41.39
8	Thiruthuraipoondi	13.05	7.80	17.30	0.56	3.86	27.49	72.04	88.70	88.91	58.8
9	Muthupettai	13.08	7.30	17.10	0.49	6.65	24.73	70.23	92.25	88.56	48.32
10	Valangaiman	6.03	7.86	27.20	0.68	9.14	27.30	45.67	87.42	92.84	38.05

Source : Computed from Collected Data.

Table 1.10 Block-Wise Multi-Dimensional Poverty Index

Sl. No	Blocks	Health			Education		Living Standards					Overall Index	Rank
		IMR	High order Birth Rate	Malnourished Children	Drop out in primary	Drop out in secondary	Access to cooking fuel	Access to toilet facilities	Access to drinking water	Access to Electricity	Pucca house		
1	Thiruvarur	0.58	0.89	0.46	0.94	0.94	1.00	0.81	0.96	1.00	1.00	0.142	1
2	Nannilam	0.34	0.15	0.54	0.91	0.87	0.37	0.76	1.00	0.78	0.20	0.409	2
3	Mannargudi	0.75	0.06	0.36	0.59	1.00	0.75	0.46	0.65	0.81	0.30	0.426	3
4	Kottur	0.67	1.00	1.00	0.00	0.74	0.00	0.87	0.39	0.48	0.50	0.435	4
5	Koradachery	0.50	0.58	0.75	0.69	0.28	0.34	0.79	0.43	0.74	0.09	0.481	5
6	Kodavasal	0.33	0.31	0.95	0.28	0.34	0.44	0.70	0.70	0.71	0.02	0.521	6
7	Needamangalam	0.00	0.39	0.75	1.00	0.12	0.17	0.88	0.37	0.69	0.07	0.555	7
8	Thiruthuraipoondi	0.42	0.01	0.66	0.38	0.87	0.25	1.00	0.11	0.06	0.44	0.581	8
9	Muthupettai	0.41	0.13	0.68	0.59	0.41	0.17	0.93	0.41	0.00	0.22	0.605	9
10	Valangaiman	1.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.69	0.00	0.807	10

Source : Computed from Collected Data.

Table:4.1

Crude Birth Rate and Crude Death Rate

Sl. No	Blocks	CBR		CDR	
		2013	2014	2013	2014
1	Thiruvarur	16.0	15.1	4.4	4.7
2	Nannilam	13.0	12.9	5.7	6.1
3	Koradachery	14.5	14.5	6.0	5.7
4	Kodavasal	13.7	13.8	5.8	5.8
5	Valangaiman	15.7	15.6	6.0	6.0
6	Needamangalam	13.2	13.1	6.8	6.3
7	Mannargudi	11.7	13.7	5.0	6.2
8	Kottur	13.1	12.3	4.7	4.9
9	Thiruthuraipoondi	11.6	14.2	4.4	5.2
10	Muthupettai	15.8	15.1	6.3	6.6

Source: DD Health Service, Thiruvarur 2014

Table: 4.2

Infant Mortality Rate

Sl.No	Blocks and District	2009-10	2013-14
1	Thiruvarur	7.49	11.07
2	Nannilam	13.14	14.01
3	Koradachery	16.09	12.01
4	Kodavasal	17.39	14.05
5	Valangaiman	12.72	6.03
6	Needamangalam	18.51	18.04
7	Mannargudi	10.79	9.02
8	Kottur	10.21	10.03
9	Thiruthuraipoondi	10.20	13.05
10	Muthupettai	7.11	13.08
	District	**18.80**	**11.2**

Source DD, Health Service, Thiruvarur 2014.

Table: 4.3

Number of Institutional Delivery

Sl.No	Blocks and District	Home	Sub health centre	Primary Health centre	GH	Private Hospitals	Total Institutional Delivery	% of Institutional Delivery
1	Thiruvarur	0	1	246	798	372	1417	100
2	Nannilam	0	1	190	940	490	1621	100
3	Koradachery	0	0	314	941	382	1637	100
4	Kodavasal	1	0	309	735	523	1567	99.94
5	Valangaiman	1	1	197	1069	315	1582	99.94
6	Needamangalam	0	4	261	905	463	1633	100
7	Mannargudi	0	0	195	1147	836	2178	100
8	Kottur	0	0	192	891	415	1498	100
9	Thiruthuraipoondi	0	0	156	897	620	1673	100
10	Muthupettai	0	0	265	424	852	1541	100
	District	2	7	2325	8747	5268	16347	99.99

Source DD, Health Service, Thiruvarur 2014.

Table: 4.4
Nutritional Status of Children

Sl. No	Blocks and DIstrict	2011				
		Weighted Children	SUW Children	MUW Children	Total (SUW+MUW)	% of Underweight Children
1	Thiruvarur	9520	3	1935	1938	20.30
2	Nannilam	7582	10	1453	1463	19.20
3	Koradachery	7902	4	1263	1267	16.00
4	Kodavasal	7736	3	1008	1011	13.00
5	Valangaiman	7567	1	2064	2065	27.20
6	Needamangalam	9991	2	1606	1608	16.00
7	Mannargudi	11237	21	2435	2456	21.80
8	Kottur	5461	8	1039	1047	12.30
9	Thiruthuraipoondi	6588	6	1136	1142	17.30
10	Muthupettai	6098	1	1042	1043	17.10
	District	82682	59	14981	15040	18.20

Source: Social Welfare Department, Thiruvarur.

Table:4.5
Percentage of Habitations Provided with Safe Drinking Water

Sl. No	Blocks and District	Total Number of Habitations	Number of Habitations Provided with Drinking Water	Percentage of Habitations Provided with Safe Drinking Water
1	Thiruvarur	277	269	97.11
2	Nannilam	297	288	96.97
3	Koradachery	302	269	89.07
4	Kodavasal	290	268	92.41
5	Valangaiman	305	266	87.21
6	Needamangalam	365	299	81.92
7	Mannargudi	403	364	90.32
8	Kottur	287	250	87.11
9	Thiruthuraipoondi	229	181	79.04
10	Muthupettai	208	176	84.62
	District	2963	2630	88.76

Source: MDWS NBA, 2013-2014.

Table: 5.1

Percentage of Literacy

Sl.No	Blocks and District	2001			2011		
		Total Literacy Rate	Male Literacy Rate	Female Literacy Rate	Total Literacy Rate	Male Literacy Rate	Female Literacy Rate
1	Thiruvarur	75.10	87.07	63.12	87.21	92.26	82.33
2	Nannilam	73.86	79.81	67.91	84.92	90.94	78.87
3	Koradachery	75.53	83.88	67.17	82.14	88.33	76.08
4	Kodavasal	74.39	83.77	65.00	84.07	89.81	78.26
5	Valangaiman	75.00	79.88	70.12	79.04	85.80	72.39
6	Needamangalam	80.03	87.88	72.17	79.07	86.46	71.92
7	Mannargudi	79.24	82.10	76.37	84.50	90.19	78.96
8	Kottur	82.15	89.12	75.17	79.97	87.20	72.93
9	Thiruthuraipoondi	76.95	93.63	60.27	82.99	89.21	76.93
10	Muthupettai	74.28	86.86	61.70	81.04	88.62	73.96
	District	76.67	85.43	67.90	82.86	89.13	76.72

Source: Census India 2011

Table: 5.2

Access to Higher Secondary Schools

Sl. No	Block /District	Number of habitations		Higher Secondary School			
		2011	2014	2011		2014	
				No.of Schools	%	No.of Schools	%
1	Thiruvarur	184	184	3	1.63	6	3.26
2	Nannilam	227	227	6	2.64	6	2.64
3	Koradachery	184	184	3	1.63	5	2.72
4	Kodavasal	199	199	2	1.01	5	2.51
5	Valangaiman	205	205	2	0.98	5	2.44
6	Needamangalam	177	177	3	1.69	6	3.39
7	Mannargudi	265	265	9	3.40	12	4.53
8	Kottur	187	187	5	2.67	7	3.74
9	Thiruthuraipoondi	166	166	3	1.81	7	4.22
10	Muthupettai	133	133	3	2.26	5	3.76
	District	1927	1927	**39**	2.02	64	3.32

Source: District Education Officer, Thiruvarur 2014.

Table: 6.1

Trend in Female Work Participation Rate

Sl.No.	Block	Total Female Population	Total Female Works	Female WPR
1	Thiruvarur	76891	15328	19.93
2	Nannilam	59589	13669	22.94
3	Koradachery	54537	14655	26.87
4	Kodavasal	56083	13682	24.40
5	Valangaiman	50436	15192	30.12
6	Needamangalam	63131	18683	29.59
7	Mannargudi	112948	24621	21.80
8	Kottur	54307	20285	37.35
9	Thiruthuraipoondi	58539	18539	31.67
10	Muthupettai	51123	15661	30.63
	District	637584	170315	26.71

Source: Census of India 2011.

Technical Note

Construction of Human Development Index (HDI)

Introduction

The latest UNDP Report-2010 on HDI continues to adopt the same basic three indicators of education, health and standard of living/income for the calculation of HDI. Simultaneously, an effort was also made to arrive at Gender Inequality Index. To compute HDI, 10 indicators were used covering the area of living standard, education and health.

HDI presents information on the human development in three dimensions while GII provides information gender differentials in achievements.

Indicators for HDI

The indicators that used for deriving HDI at the block level are as follows:

Indicators for measuring HDI

Dimensions	Indicators	Nature of indicator
Living standards	Percentage of HHs having access to Cooking fuel	Positive
	Percentage of HHs having access to Toilet	Positive
	Percentage of HHs having access to Water	Positive
	Percentage of HHs having access to Electricity	Positive
	Percentage of HHs having access to Pucca house	Positive
Health	IMR	Negative
	MMR	Negative
	U5MR	
Education	Literacy Rate	Positive
	Gross Enrolment Rate Primary	Positive
	Gross Enrolment Rate Secondary	Positive

There are two indicators for measuring health, three for education and seven for standard of living. All these indicators reflect human development.

Method of Estimating HDI

For the estimation of the HDI, the following steps followed:

1. All computations would be done at two stages. The first computation would help in understanding the relative positions of different blocks within the District. The second set of computation would relate to the position of a block with reference to other blocks

   As a first step, a minimum and maximum value has to be set for each of the above 11 indicators to transform them into indices lying between zero and one. For this purpose, the observed minimum and maximum figures for each of the indicators will be taken. Since the Geometric Mean has to be calculated, in the case of a positive indicator, the minimum value would be taken as 10 per cent less than the observed minimum value in the block similarly, in the case of a negative indicator, the maximum value would be taken as 10 per cent more than the observed maximum value.

2. The index value (in the case of a positive indicator) can be calculated using the formula –

   Index Value = (Actual Value – Min. Value) / (Max.Value – Min.Value)

   Eg.: calculations will be based on highest values being assigned highest ranking

3. The index value (in the case of a negative indicator) can be calculated by using the formula –

   Index Value = (Max. Value – Actual Value) / (Max.Value – Min.Value)

4. For Computing sectoral indices (health, education and standard of living) geometric mean is to be used and the method of calculation is as below. Thus there will be three indices one for Standard of living, another for health and the last for education.

   Sectoral Index = If I_1. I_2….. I_n are the n indices for a particular sector, then the Geometric mean for the sector = $(I_1 \times . I_2 \times \ldots . I_n)^{(1/n)}$.

5. To compute HDI, aggregate the three sectoral indices using geometric mean with the following formula.

   HDI= $(SI_l \times SI_h \times SI_e)^{(1/3)}$; where SI_l is the sectoral index for living standard, SI_h is the sectoral index for health and SI_e is the sectoral index for education.

Illustration for calculating HDI

Indicators	Actual value	Maximum observed value	Minimum observed value	Converting into Index	Sectoral Index
Standard of Living					
Cooking fuel	48.0%	92.9%	9.4%	0.462	$(0.462 \times 0.530 \times 0.981 \times 0.822 \times 0.413 \times 0.349 \times 0.457)^{(1/7)} = 0.538$
Toilet	55.0%	94.8%	10.1%	0.530	
Water	97.5%	98.9%	26.8%	0.981	
Electricity	93.1%	98.0%	70.2%	0.822	
Pucca house	56.2%	78.1%	40.7%	0.413	
Percentage of Non agricultural workers (main + marginal)	49.8%	95.4%	25.3%	0.349	
				(ln 58171-ln25845) ÷ (ln152795-ln25845) = 0.457	
Health					
Child Mortality Rate	33.00	67.0	25.0	0.810	$(0.810 \times 0.403)^{(1/2)} = 0.572$
Maternal Mortality Rate	235.0	373.0	30.0	0.403	
Education					
Literacy Rate	72.8%	88.6%	46.6%	0.624	$(0.624 \times 1.000)^{(1/2)} = 0.790$
Gross Enrolment Rate at (Primary+Secondary) Schools	105.7%	105.7	74.3	1.000	
HUMAN DEVELOPMET INDEX (HDI) = (Geometric mean of sectoral indices)				**$(0.538 \times 0.572 \times 0.790)^{(1/3)} = 0.624$**	

Note: The observed minimum and maximum figures for the block should be taken into account.

The minimum figure for calculation should be taken as 10 per cent less than the observed minimum figure for all the blocks

Construction of Gender Inequality Index (GII)

Introduction

GII measures the loss in potential of human development due to inequality between female and male achievements. As it reflects an inequality situation, a value of zero represents no inequality and a value of one represents highest level of inequality in the society. The UNDP report of 2010 has brought out the GII index for all the countries. For measuring GII, three dimensions are considered by the report. They are:

1. Reproductive Health
2. Empowerment
3. Labour market

Indicators considered for measuring GII

Dimensions	Indicators	Nature of Indicator
Health	Maternal Mortality Rate (MMR)	Negative
	Share of Institutional deliveries (ID)	Positive
	Share of Ante Natal Coverage	Negative
Empowerment	Female Literacy	Positive
	Male Literacy	Positive
	Share of female Children (0-6) years	Positive
	Share of male Children (0-6) years	Positive
	Share of female and male elected representatives in PRIs and ULBs (PR_F and PR_M)	Positive
	Share of female and male literacy (LIT_F, LIT_M)	Positive
Labour Market	Female Worker Participation Rate	Positive
	Male Worker Participation Rate	Positive
	Female Worker Participation Rate in Non-Agri Sector	Positive
	Male Worker Participation Rate in Non-Agri Sector	Positive
	Female Agri. Wage rate	Positive
	Male Agri. Wage rate	Positive

Method

1. Aggregating across dimensions within each gender group using geometric mean.

For females

$$G_F = \sqrt[3]{\left[\left(\frac{1}{MMR}\right)\times ID\times ANE\right]^{1/3} * \left[PR_F \times CHLD_F \times LIT_F\right]^{1/3} * \left[WPR_F \times NAG_F \times WAGE_F\right]^{1/3}}$$

For Males

$$G_M = \sqrt[3]{1 * \left[PR_M \times CHLD_M \times LIT_M\right]^{1/3} * \left[WPR_M \times NAG_M \times WAGE_M\right]^{1/3}}$$

2. Aggregating across gender group using a Harmonic mean.

$$HARM(G_F, G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2}\right]^{-1}$$

3. Calculate the geometric mean of the Arithmetic means of the each indicator

$$G_{\overline{F},\overline{M}} = \sqrt[3]{\overline{health}\,.\overline{empowerment}.\overline{LFPR}}$$

Where $$\overline{health} = \left[\frac{\left[\left(\frac{1}{MMR}\times ID\times ANE\right]^{1/3} + 1\right]}{2}\right]$$

$$\overline{empowerment} = \frac{\left[PR_F \times CHLD_F \times LIT_F\right]^{1/3} + \left[PR_M \times CHLD_M \times LIT_M\right]^{1/3}}{2}$$

$$\overline{LFPR} = \frac{\left[WPR_F \times NAG_F \times WAGE_F\right]^{1/3} + \left[WPR_M \times NAG_M \times WAGE_M\right]^{1/3}}{2}$$

4. Calculating the GII by comparing the equally distributed gender index to the reference standard. The GII value ranges from zero (no gender inequality across dimensions) to one (total inequality across dimensions)

$$GII = 1 - \frac{HARM\,(G_F, G_M)}{G_{\overline{F},\overline{M}}}$$

Example of GII Calculation

Dimensions	Indicators	Indicator values	
		Female	Male
Reproductive Health	Maternal Mortality Rate (MMR)	235	-
	Share of Institutional deliveries (ID)	0.997	-
	Share of pregnant women with Anemia (ANE) (converted into positive as 1-anemia)	0.924	-
Empowerment	Share of female and male elected representatives in PRIs and ULBs (PR_F and PR_M)	0.411	0.589
	Share of female and male literacy (LIT_F, LIT_M)	0.671	0.784
Labour market	Share of female and male Work Participation Rate (WPR_F, WPR_M)	0.263	0.610
	Share of female and male workers in the non agricultural sector (NAG_F, NAG_M)	0.410	0.535
	Female and male Agricultural wage rate($WAGE_F$, $WAGE_M$) (converted into indicator)	(105-81)/(130-81) = 0.489	(140-101)/(160-101) = 0.662

Step I

$$G_F = \sqrt[3]{\left[\left(\frac{1}{235}\right)\times 0.997\times 0.924\right]^{1/3} * [0.411\times 0.490\times 0.671]^{1/3} * [263\times 0.410\times 0.489]^{1/3}}$$

$$G_F = \sqrt[3]{0.158 * 0.513 * 0.375} = 0.312$$

$$G_M = \sqrt[3]{1 * [0.589\times 0.510\times 0.785]^{1/3} * [0.610\times 0.535\times 0.662]^{1/3}}$$

$$G_M = \sqrt[3]{1 * 0.618 * 0.599} = 0.718$$

Step II

$$HARM(G_F, G_M) = \left[\frac{(0.312)^{-1} + (0.718)^{-1}}{2}\right]^{-1} = 0.435$$

Step III

$$\overline{health} = \left[\frac{0.158+1}{2}\right] = 0.579$$

$$\overline{empowerment} = \left[\frac{0.513+0.618}{2}\right] = 0.565$$

$$\overline{LFPR} = \left[\frac{0.375+0.599}{2}\right] = 0.488$$

$$G_{\overline{F},\overline{M}} = \sqrt[3]{0.579 \times 0.540 \times 0.488} = 0.542$$

Step IV

$$GII = 1 - \frac{0.435}{0.542} = 0.198$$

Other Issues of importance

Another important issue that needs to be addressed in the section relates to the crimes against women that are reported in the Districts. This may relate to issues related to dowry harassment, domestic violence, girl child marriage and other forms of crimes against women including harassment at workplace that are reported within the District.

Construction of Child Development Index (CDI)

Introduction

Child Development Index (CDI) is an index combining performance measures specific to children - education, health and nutrition - to produce a score on a scale of 0 to 100. A zero score would be the best. The higher the score, the worse children are faring.

The Child Development Index (CDI) was developed by the campaign in UK, "Save the Children" in 2008 through the contributions of Terry McKinley, Director of the Centre for Development Policy and Research at the School of Oriental and African Studies (SOAS), University of London, with support from Katerina Kyrili.

The indicators which make up the index are chosen because they are easily available, commonly understood, and clearly indicative of child well-being. At the international level, the three indicators used for measuring child development index are:

- **Health:** the under-five mortality rate (the probability of dying between birth and five years of age, expressed as a percentage on a scale of 0 to 340 deaths per 1,000 live births). This means that a zero score in this component equals an under five mortality rate of 0 deaths per 1,000 live births, and a score of 100 equals our upper bound of 340 deaths per 1,000 live births. The upper bound is higher than any country has ever reached; Niger came the closest in the 1990s with 320 under-five deaths per 1,000 live births.
- **Nutrition:** the percentage of under fives who are moderately or severely underweight. The common definition of moderately or severely underweight, which we use here, is being below two standard deviations of the median weight for age of the reference population.
- **Education:** the percentage of primary school-age children who are not enrolled in school. For our measure of education deprivation, we use the opposite of the Net Primary Enrolment rate, i.e., 100 – the NER. This gives us the percentage of primary school-age children who are not enrolled.

Indicators for Child Development

In the preparation of District Human Development reports , the following four indicators would be used to measure the CDI:

Dimension	Indicator	Nature Of Indicator
Health	U5MR	Negative
	Juvenile Sex Ratio (0-6)	Negative
	Percentage of Malnourished Children	Negative
Nutrition	Enrollment in Primary	Positive
	Enrollment in Secondary	Positive
	Children never enrolled in school	Negative
	Transition rate from primary to upper primary	Negative
	Transition rate from upper primary to Secondary	Positive

Computation of Child Development Index

- The indicators have been broadly categorised under the 3 parameters that influence the HDI.
- All the above indicators are negative and positive in nature.
- The index values for each of the indicators can be calculated by using the following formulas as explained earlier

Index Value = (Max. Value – Actual Value) / (Max.Value – Min.Value)

- The index values for each of the indicators would range between 0 and 1 - 0 indicating the lowest ranking for the blocks and 1 indicating highest ranking of the block
- The Child Development Index would be the average of the index values of the three indicators – with highest value indicating better child development.
- The composite index is the average of the consolidated index values of all sectors and this is to be used to assign the ranks for the blocks within the District.

Multidimensional Poverty Index Indicators

In the preparation of District Human Development reports, the following four indicators would be used to measure the MDPI:

Dimension	**Indicator**	**Nature of Indicator**
Health	IMR	Negative
	MMR	Negative
	Malnourished Children	Negative
Education	Drop out in primary	Negative
	Drop out in secondary	Negative
Living Standards	Access to cooking fuel	Positive
	Access to toilet facilities	Positive
	Access to drinking water	Positive
	Access to Electricity	Positive
	Pucca house	Positive

Computation of Multidimensional Poverty Index

- The indicators have been broadly categorised under the 3 parameters Health Education and Standard of living.
- The data collected for the above indicators has to be used for calculating the index values. This would help in making the values unit-less and would allow summation of the index values of all the indicators.

- The index values have to be calculated for each of the indicators after identifying whether the indicators are positive or negative. This is done to make the index values unidirectional.

  The index value (in the case of a positive indicator) can be calculated using the formula –

  Index Value = (Actual Value – Min. Value) / (Maximum Value – Minimum Value)

  E.g: calculations will be based on highest values being assigned highest ranking
- The index value (in the case of a negative indicator) can be calculated by using the formula –Index Value = (Max. Value – Actual Value) / (Maximum Value – Minimum Value)
- The index values for each of the indicators would range between 0 and 1 - 0 indicating the lowest ranking for the block and 1 indicating highest ranking of the block
- The consolidated index for each of the parameters/sectors/dimensions will be the average index value of all the indicators
- The composite index is the average of the indicators of all the three parameters – Health, Education and Standard of Living - this will be used to assign the ranks for the blocks within the District.

Ways and Means of the Analysis of Socio-economic Data

Our DHDRs contain a mine of data. However, data by themselves cannot and do not say anything about the development issues. We have to make a deliberate attempt to analyse them, unravel them, and classify them in order to derive relevant and meaningful inferences and conclusions. In this note, an attempt is made to give some idea about the ways and means of analyzing the various issues relating to various development indicators. If data constitute the body of the report, the analyses of socio-economic changes in the District indicated by the data constitute the soul of the reports. So, equal importance is to be given to data and the analysis.

Calculation of Trend Rate

In order to understand the development issues in the District, we have to take into account the changes taking place in the given indicator over a period of time. The determination of the mere status at a point of time will not help in finding the causal factors of the socio-economic changes taking place in the District. For ex: if we are interested in

knowing the problem of children dropping out of school stream, we have to take into account the data of school enrolment as well as children dropping out of school over a period of 10 or 20 years. The growth rate of enrolment and the children dropping out of school for two periods of time, say 1991 to 2001 and 2001 to 2011 will go a long way in providing some ideas and clues to understand the performance of the District in the field of primary education. So, it is necessary to go for calculation of growth trends for each and every indicator such as population, 10th and 12th standard results, pupil-teacher ratios, the proportion of female teachers in primary schools and high schools, expectation of life at birth, District domestic product, per capita income etc. We have to keep in mind, while calculating the trend rates, that the rates have to be calculated gender-wise, social groups-wise and rural-urban divide-wise.

The relationship among indicators

The development indicators generally do have some kind of relation with one another. For the derivation of inferences, we have to try to establish and understand the kind of relationship among the indicators. For a given change, there can be any number of causal factors. The relationship between indicators is multi-dimensional and not one-dimensional. For example, let us assume that the performance of students in SSLC examination in a particular District over a period of time is on the lower side. What could be the reason for this lower performance? It is common practice to blame the teachers for the low performance of students in 10th and 12th standard examinations. This could be one of the reasons. We have to take into account various other factors such as attendance rate, health (nutrition) conditions of children, education level of parents, particularly of mothers, time available for children to study in the home, the general educational environment in the village/town etc. We have studies which have established functional relationship between the female literacy rates on the one hand and on the other IMR/U5MR/MMR. It is also revealed that there is a close relationship between gender inequality and higher proportion of girls marring before reaching 18 years of age. The relation among these factors have to be analyzed and based on this, inferences have to be derived. The analysis is to be multi-dimensional. The analysis has to be gender sensitive and it has to take into account the existence of various social-groups.

Derivation of inferences and conclusions

The chief objective of DHDRs, among other things, is to provide guidelines to people's representatives and development administrators at the District level for preparation of the District development plans. The DHDRs have a lot of development policy implications. We have to keep these factors in view while deriving inferences and conclusions relating to socio-economic changes in the Districts. We have to give list of so derived inferences and conclusions of each dimension at the end of the concerned chapter. It is also necessary to give an integrated account of the inferences and conclusions at the end of the report. This constitutes the basis for the formulation of the way forward for the District.

Gender sensitivity and Social group-wise analysis

It is needless to say that human development paradigm is gender sensitive and it is very much conscious of the existence of various social groups in the society. But, the analysis in the report must be such that the gender perspective has to run through all the chapters. Similarly, social-group wise analysis must be done for each dimension of HDI. At the same time, the report must focus on multiple nature of inequality in the District. The inequality analysis need not confine to gender inequality, class inequality, caste inequality etc. It can be extended to intra-District development disparity, inter-generational inequality, intra-household inequality (food distribution between men and women in the family), inequality in terms of dignity of life, participation in social activities etc.

The calculation of final values based of absolute data

The government departments publish data relating to their programmes and activities. For example, SSA publishes data about educational indicators such as enrolment, drop out, pupil-teacher ratios etc. Similarly, health department also collects and publishes data on health matters. For the purpose of our report, it is more useful to calculate the final values of indicators by using the absolute data by ourselves rather than accepting the final calculated values published by the government departments. Of course, we have to depend on departments for the absolute data. There are different methods for calculating the final

values of the indicators. To get the real picture and the process of development, it is necessary to depend on the values calculated based on the absolute data rather than depending on the values released by SSA, Health department, social welfare department, department of women and child development etc.

ABBREVIATIONS

ABL	Activity Based Learning
ADD	Acute Diarrheal Diseases
AIDS	Acquired Immune-deficiency Syndrome
ANC	Ante Natal Care
ASHA	Accredited Social Health Activities
BMI	Body Mass Index
BPL	Below Poverty Line
CBR	Crude Birth Rate
CDR	Crude Death Rate
DDH	Deputy Director of Health
DEO	District Employment Officer
DHDR	District Human Development Report
DoES	Director of Economic and Statistics
FPS	Fair Price Shop
GAR	Gross Access Rate
GDI	Gender Development Index
GDP	Gross Domestic Report
GER	Gross Enrolment Ratio
GH	Governmental Hospital
GII	Gender Inequality Index
GOI	Government of India
GSDP	Gross State Domestic Product
HDFC	Housing Development Finance Corporation
HDI	Human Development Index
HDR	Human Development Report
HH	House Hold
HSC	Health Sub Centre
ICDS	Integrated Child Development Services Scheme
ID	Institutional Delivery

IFA	Iron and Folic Acids
IMR	Infant Mortality Rate
JDH	Joint Director of Health
LBW	Low Birth Weight
LEB	Life Expectancy at Birth
LFPR	Labour Force Participation Rate
LPC	Liters Per Capita
LPG	Liquefied Petroleum Gas
MDG	Millennium Development Goal
MDPI	Multi Dimensional Poverty Index
MDT	Multi Drug Treatment
MDWS	Ministry of Drinking Water and Sanitation
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MMR	Maternal Mortality Ratio
NBA	Nirmal Bharat Abhiyan
NGO	Non Governmental Organization
NICs	National Insurance Contributions
NLEP	National Leprosy Eradication Programme
NMEP	National Malaria Eradication Programme
NMP	Noon Meal Programme
NPE	National Policy on Education
NRHM	National Rural Health Mission (NRHM)
NSDP	Net State Domestic Product
NSSO	National Sample Survey Organization
OAP	Old Age Pension
PDS	Public Distribution System
PHC	Primary Health Centre
RCH	Reproductive and Child Health
RLBs	Rural Local Bodies
SBR	Still Birth Rate
SHG	Self Help Group
SRS	Sample Registration System
SSA	Sarva Shiksha Abiyan

SUW	Severely Under Weighted
TB	Tuberculoses
TINP	Tamil Nadu Integrated Nutrition Project
TN	Tamil Nadu
TNEB	Tamil Nadu Electricity Board
U5MR	Under Five Mortality Rate
ULBs	Urban Local Bodies
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children Education Funds
USAID	United States Agency for International Development
UEE	Universalization of Elementary Education
VES	Vital Events Survey
VHN	Village Health Nurse
WHO	World Health Organization
WPR	Work Participation Rate

References

- Amartya Sen, Development as Freedom, Oxford University Press, New Delhi, 2005.
- Amie Gaye and Shreyasi Jha, (2010) : "A Review of Conceptual and Measurement Innovations in National and Regional Human Development Reports, 1998-2009.
- Human Development Research Papers (2009 to present) Human Development Report Office (HDRO), United Nations Development Programme (UNDP), No HDRP-2010-21.
- Bajpai, Nirupam and Jeffrey D. Sachs, 2001. Harvard University—Harvard Study Paper No. 9, Harvard University Press, Harvard.
- Carl Haub, Demographic Trends and their Humanitarian Impacts , Population Reference Bureau, Washington, DC, 2009.
- Census of India, 2011, Various Volumes.
- Deputy Director of Statistics, District Statistical Hand Book, Thiruvarur, 2013.
- Director of Economic and Statistics, Government of Tamil Nadu, Tamil Nadu Statistical Hand Book, Chennai, 2013.
- Government of India, Census Report, 2001, Various Volumes.
- Government of India, Census Report, 2011, Various Volumes.
- Government of India, Annual Report - Ministry of Rural Development, New Delhi – 2013
- Government of India, Economic Survey, Various issues.
- Government of India, Indian Public finance statistics, Ministry of Finance, New Delhi -2013.
- Government of India, National Human Development, Planning Commission, New Delhi, 2012.
- Government of Tamil Nadu (2003), Tamil Nadu Human Development Report , in association with Social Science Press, Delhi, 21 September 2003, <http://hdrc.undp.org.in/newsite/shdr/TN/TN%20HDR%20final.pdf>
- Government of Tamil Nadu. Tamil Nadu—An Economic Appraisal, Various issues.
- Government of Tamil Nadu , Statistical Handbook of Tamil Nadu, Department of Economics and Statistics, Chennai 2013.

- Government of Tamil Nadu Nadu. Tamil Nadu – an Economic Appraisal, Variouse issues.
- Government of Tamil Nadu, Tamil Nadu – An Economic Appraisal, Department of Evaluation and Applied Research, Chennai 2010-10
- Government of Tamil Nadu, Tamil Nadu Human Development Report, State Planning Commission in Association with Social Science Press, New Delhi, 2003.
- Government reports and other documents.
- International Institute for Population Sciences, November 1999. Rapid Household Survey under RCHP (Tamil Nadu), Phase I, 1998, Tamil Nadu.
- Mahabub Ul Haq Human Development Center, Human Development in South Asia, the Challenges, Oxford University Press, Oxford, 2005.
- Mehtabul Azam and Geeta Kingdon, (2011): "Are Girls the Fairer Sex in India? Revisiting Intra-Household Allocation of Education Expenditure", Institute for the Study of Labor (IZA), IZA Discussion Papers, and Number 5706.
- Ministry of Finance, Government of India 2012-2013
- Mishra S.K and Puri V.K. (2010): Indian Economy, Himalaya Publishing House, Mumbai.
- Sacchidanda Mukherjee and Debashis Chakraborty, (2010): "Is there any relationship between Economic Growth and Human Development? Evidence from Indian States" MPRA Paper from University Library of Munich, Germany 2010.
- Shanmugam.K.R, Monitorable Indicators and Performance :Tamil Nadu, Madras School of Economics, Chennai, 2012.
- Sivakumar, A.K., 1991. 'UNDP's Human Development Index—Computation for States', *Economic and Political Weekly*, 12 October.
- State Planning Commission, Twelfth Five Year Plan Tamil Nadu Overview 2012-2017, Chennai.
- UNDP, Human Development Report, The Rise of the South, Human Progress in a Diverse World, Published for the United Nations Development Programme, 2013
- Union Planning Commission, Twelfth Plan Document, New Delhi.
- Various departments, Policy Notes, Various years.