District Human Development Report - 2017

Tiruchirappalli District

State Planning Commission
Tamil Nadu

TIRUCHIRAPPALI

DISTRICT HUMAN DEVELOPMENT REPORT 2017

District Administration, Tiruchirappali and
State Planning Commission, Tamil Nadu
in association with
Bharathidasan University

Contents

ANIL MESHRAM, I.A.S.,
Member Secretary

State Planning Commission,
Ezhilagam, 5th Floor,
Chepauk, Chennai – 600 005.
Tel : (044) 28545460, Fax: 28545485
e-mail : msspc@tn.nic.in

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
MEMBER SECRETARY
STATE PLANNING COMMISSION

Dr. K.S.Palanisamy,I.A.S.,
District Collector,
Tiruchirappalli.

Office : 0431-2415358
Fax : 0431-2411929
Res : 0431-2420681
0431-2420181

Preface

India has the potential to achieve and the means to secure a reasonable standard of living for all the sections of its population. Though the economy touched the nine per cent growth rate during the Eleventh Five Year Plan (2007-12), there are socio-economically disadvantaged people who are yet to benefit from this growth. There are some disparities among the people, such as wealth, caste, religion, gender, etc. To get rid of these disparities, all levels of the governments have to concentrate and work to promote the progress in social sectors such as health and education.

The State Human Development Report discusses the status of the income of the people, health, and education. Thanks to the unswerving efforts taken by the Hon'ble Chief Minister of Tamil Nadu for preparing the same kind of report at the district level to identify the socio-economic problems at the block level. The report focuses to ascertain the gaps among the blocks in the district in terms of access to employment, education, health, finance, social security, and infrastructure.

As we know that there is strong linkage between economic growth and human development; this report would help the district authorities to categorize the socio-economic issues and find out reasons for the inequality among blocks in terms of various indicators. This report comprises of nine chapters, which give substantiate weightage to education, income, poverty, health, social security and infrastructure. The chapter on the status of human development provides different indices, viz., Human Development Index, Gender Inequality Index, Child Development Index, and Multidimensional Poverty Index, which would help in identifying the weak spots in the blocks. The report would certainly assist the respective departments and district authorities to identify and address issues at different levels and in turn it would also help to frame a policy for balanced and sustainable growth of the blocks in the district.

Dr.K.S.Palanisamy, I.A.S.
District Collector,
Tiruchirappalli.

Acknowledgement

At the outset, we would like to thank the State Planning Commission for the initiative taken in the preparation of Human Development Report at the district level in Tamil Nadu with the support of UNDP.

We would like to express our sincere thanks to Tmt. Santha Sheela Nair, I.A.S. (Retd.), Former Vice Chairman, State Plaanning Commission, Government of Tamil Nadu for her consistent guidance in this process. Also, we would like to express our thanks to Thiru M. Balaji, I.A.S., and Dr. Sugato Dutt, I.F.S., the then Member Secretaries, State Planning Commission, Thiru. Anil Meshram, I.A.S., Member Secretary, State Planning Commission for their constant support.

We are grateful to our Hon'ble Vice-Chancellor, Dr. V.M. Muthukumar, and the Registrar, Bharathidasan University for their constant support throughout the process.

We sincerely acknowledge the timely advices of former District Collector Tmt. Jayashree Muralidharan, I.A.S., and the present District Collector Thiru. Dr. K.S.Palanisamy, I.A.S., in the preparation of the report. We would also like to extend our gratitude to the Mayor of Tiruchirappalli Corporation, Mrs. M.S.R. Jaya, for the support offered in the preparation of the report.

We would like to place on record our thanks to Selvi. S. Namagiri, Senior DPO, SPC, Thiru. P. Selvarajan, Head of Division, Rural Development, and Dr. G.N. Krupa Subramanian, Planning Officer, State Planning Commission for their critical inputs to enrich the report.

Also, we express our deep sense of gratitude to the District Planning Officer, Tiruchirappalli, Mr. Kaliyamurthy, Secretary, DPO Office, Mrs. Uma, Statistical Inspector, Mr. Panbu Kumar, and others in the office for providing data and constant encouragement. We also acknowledge the support of the DRO and the Project Director, DRDA.

It is our pleasure and duty to acknowledge the team involved in the process, Dr. S. Iyyampillai, Senior Professor, Department of Economics, Dr. M. Ravichandran, Professor, Department of Environmental Management and Dr. N. Manimekalai, Professor and Head, Department of Women Studies, who provided their valuable services in the process of writing chapters for the report.

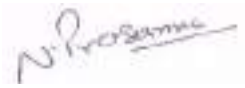
It is our pleasure to acknowledge the helps rendered by the various Block Development Officers, the elected representatives of the district Panchayathi Raj Institutions, SHG members, and Municipal Commissioners, Joint Director, Animal Husbandry Department, Joint Director, Health Service, Joint Director, Agriculture, Project Officer, Mahalir Thittam, Executive Engineer PWD, (WRD) South Vellar Basin Division, P.A.to Collector (Development), Superdentent of Police, Chief Educational Officer, Additional Chief Educational Officer, Executive Engineer, TWAD, Executive Engineer, TNEB, Deputy Director of Statistics, Deputy Collector, SSS, Deputy Director, Health Service, Tiruchirappalli, Joint Director, Municipality,

Thanjore, Assistant Director, Town Panchayat, Tiruchirapalli, Lead District Manager, Lead Bank Office, Tiruchirappalli, Managing Director, PCC Bank, Tiruchirappalli, District Environmental Engineer, Tiruchirappalli, District Supply Officer, Tiruchirappalli, District Adhi Dravidar Welfare Officer, Tiruchirappalli, District Backward Welfare Officer, Tiruchirappalli, Differently Abled Welfare Officer, Tiruchirappalli, District Social Welfare Officer, Tiruchirappalli, Corporation Commissioner, Tiruchirappalli, Project Officer, ICDS, Tiruchirappalli, Employment Officer, Tiruchirappalli, Labour Officer, Tiruchirappalli, General Manager, DIC, Tiruchirappalli, Inspector of Factories, Tiruchirappalli, All Exeutives, Town Panchayats, Tiruchirappalli, Branch Manager, LIC, Tiruchirappalli, General Manager, BSNL, Tiruchirappalli, NIC Officer, Tiruchirappalli, Assistant Director, Panchayat, Tiruchirappalli, and Divisional Engineer, National Highways, Tiruchirappalli.

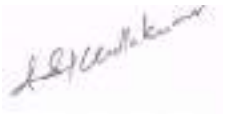
We may fail in our duty, if we miss to acknowledge the work rendered by the Research Scholars of the Department of Economics, Bharathidasan University, who helped us to carry out the field work successfully. We thank Ms. S. Vijayalakshmi who took the responsibilities of removing the syntax and sematic errors in the report. Also, we thank Mr. N. Chandrasekar and The Racy Web Solutions in computerizing the report. We acknowledge all the officers and staff of the State Planning Commission, District Administration, for their consistent support.

Last but not the least, we express our gratitude to the Finance Officer, Bharathidasan University, and the Administrative Staffs of Bharathidasan University for all the help and support provided by them.

Dr. P. Natarajamurthy
Assistant Professor of CYDS
Bharathidasan University
Tiruchirappalli



Dr. N. Prasanna
Assistant Professor of Economics
Bharathidasan University
Tiruchirappalli



Dr. J.A. Arul Chellakumar
Professor of Economics
Bharathidasan University
Tiruchirappalli

List of Boxes

List of Figures

List of Tables

Annexure Tables

CHAPTER 1
TIRUCHIRAPPALLI DISTRICT - A PROFILE

Chapter

District Profile 1

Topography

The district of Tiruchirappalli was formerly called by the British as "Trichinopoly" and is commonly known as 'Tiruchirappalli' in Tamil or 'Tiruchirappalli' in English.The district in its present size was formed in September 1995 by trifurcating the composite Tiruchirappalli district into Tiruchirappalli, Karur and Perambalur districts. Tiruchirappalli District is located centrally in Tamil Nadu between the North Latitude 10° to 11°-30'and the East Longitude 77°-45' to 78°-50'2. The district has a total area of 4,403.83 Square Kilometres and is surrounded by various districts such as Namakkal in the North West, Salem in the North, Karur in the South West, Ariyalur in the North East, Pudukkottai in the South East, Thanjavur in the East and Dindigul in the South. Being the Central District of the State the district has so many advantages. The district is basically agrarian; the industrial growth has been supported by the public sector companies like BHEL, HAPP, OFT and Railway workshop. The district is pioneer in fabrication industry and the front runner in the fabrication of windmill towers in the country.

The total geographical area of the district is 4403 sq. km., which is 3.39 per cent of the total geographical area of Tamil Nadu. The total geographic area of the district is 440383 ha., out of which 17167.470 ha. of land is covered by forests. The soil here is considered to be very fertile. As two rivers flow through the district, the Northern part of

the district is filled with greeneries than other areas of the district. The River Cauvery irrigates about 51,000 ha. in Tiruchirappalli, Lalgudi and Musiri Divisions. Multifarious crops are grown in this District and Agriculture is the main occupation for most of the people in the District. Alluvial sandy loam and loam soil constitute major portion of the central regions, which form the Cauvery delta in the district. In Lalgudi, Manachanallur and Andanallur blocks, loamy soil is predominant. Red soil and black soil are predominant in the dry tracks of the district. With an area of 36,246 hectares under the coverage of the forests the district accounts for 1.65 per cent of the total forest area of the State. Honey and Cashew nuts are the main forest produces besides fuel wood.

The rivers Cauvery (also called kaveri) and the river Coleroon (also called Kollidam) flow through the district. There are a few reserve forests along the river Cauvery, located at the west and the north-west of the city. The Southern and the South-Western part of the district are dotted by several hills which are an offset of the Western Ghats. Eastern Ghats also passes through the district. The earthen minerals available in the district in substantial quantities are Lime Stone, Fire Clay, Soap Stone, Gypsum, Quartz, Rough Stone, Sand Brick, Earth Colour Granite and Black Granite.

History

Tiruchirappalli district is one of the very ancient regions of the civilization in Southern India resting on the banks of the river Cauvery. It is endowed with rich cultural heritage as it has been under several Kingdoms such as Cholas, Pandiyas, Pallavas, Delhi Sultanate, Madurai Sultanate, Vijayanagar Empire, Nayak Dynasty, The Karnatic State and the British. The different rulers of Tiruchirappalli have contributed to diverse culture and architecture in the form of temples, mosques and churches. Some of the prominent temples are in Srirangam Lord Renganathar temple, the Thiruvanaikovil Lord Shiva temple, Rock Fort Uchchi Pillayar temple, Samayamapuram Goddess Mariyamman temple, Vayalur Lord Murugan temple, Nawab Massjid, Holy Redeemer's Church, Lourdes Church and The Cathedral. The Uchchi Pillaiyar Kovil which rests on a rock also acted as a Fort and housed many ancient stone Sculpture and paintings.

There are several other historical marvels in Tiruchirappalli like the 'Kallanai' which is the oldest known dam across the river Cauvery built by the King Karikalan. The Architecture of the district has a mix of many patterns and culture, as many people migrated to this fertile belt in search of opportunities

The population of Tiruchirappalli district is composed predominantly of Hindus but has many pockets following Chritianity and Islam and a few of Jainism and Sikhs. Trichinopoly cigar, a popular international brand of cheroot, was exported in large quantities to UK in the 19th century. The Cigars were mentioned in English literature including in Sir Arthur Conan Doyle's A Study in Scarlet of the famous Sleuth Sherlock Holmes.

Tiruchirappalli district has also been home to many Stalwarts like Sir C.V. Raman, the Noble Prize winning Physisit (was born in Thiruvanaikovil, Tiruchirappalli) T.S.S. Rajan and V.V Subramaniya Iyyer (Freedom Fighters), Sujatha (Rengarajan, writer), Valentine MC Master (Victoria Crowns Recipient) and Kavingnar Vaalli (Poetry), K.A.P. Viswanatha (Tamil Scholar and Social Activist)

Later after independence many Public Sector enterprises and Educational Institutions were developed in Tiruchirappalli district, which has led to the migration of the district of different people across India. This has made Tiruchirappalli district a diverse cultural agglomeration.

Woraiyur, a part of the present day Tiruchirappalli, was the capital city of the Cholas from 300 B.C. onwards. This is supported by archaeological evidences and ancient literatures. There are also literary sources which tell that Woraiyur continued to be under the control of Cholas even during the days of Kalabhra interregnum (A.D. 300 - 575). Later, Woraiyur along with the present day Tiruchirappalli and its neighboring areas came under the control of Mahendra Varma Pallava I, who ascended the throne in A.D. 590. Till A.D. 880, according to the inscriptions, this region was under the hegemony of either the Pallavas or the Pandyas. It was in A.D. 880, Aditya Chola brought the downfall to the Pallava dynasty. From that time onwards Tiruchirappalli and its region became a part of the Greater Cholas. In A.D. 1225 the area was occupied by the Hoysulas. Afterwards, it came under the rule of later Pandyas till the advent of Mughal Rule. Tiruchirappalli was for some time under the Mughal rule, which was put to an end by the Vijayanagar rulers. The Nayaks, the Governors of Vijayanagar empire, ruled this area till A.D. 1736. It was Viswanatha Nayaka who built the present day Teppakulam and the Fort. The Nayak dynasty came to an end during the days of Meenakshi. The Muslims ruled this region again with the aid of either the French or the English armies. For some years, Tiruchirappalli was under the rule of Chanda Sahib and Mohamed Ali. Finally the English brought Tiruchirappalli and other areas under their

control. Soon after the area was ceded to East India Company as per the agreement at the eve of the Karnatic war, Tiruchirappalli district was formed under the the Collectorship of Mr. John (Junior) Wallace in 1801. The district was then under the hegemony of British for about 150 years till the independence of India.

Language

The Language predominantly spoken in Tiruchirappalli district is Tamil. It is also the official language of the Government of Tamil Nadu. The dialect spoken here is known as Central Tamil dialect, which comprises of many literacy Tamil. Due to the rule of many Kingdoms and migration of many communities to the region, several other languages like Telugu, Kannada, Urudu and Sourastrian are also spoken

District Map

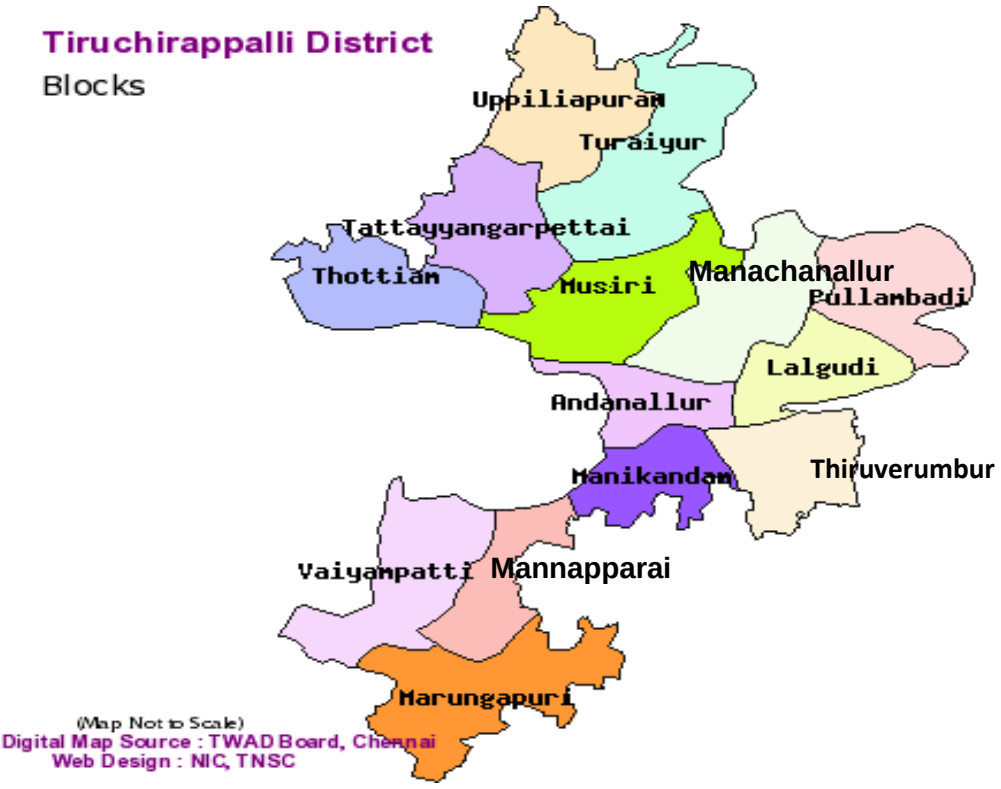


Table 1.1 District Basic Demographic Indicators

Sl. No	Indicators	2001	2011
1	Population (no.)	24,18,366	27,22,290
2	Decennial Growth (per cent)	8.76	12.57
3	Density of Population per sq,km,	542	618
4	Urban Population (per cent)	47.11	49.15
5	Sex Ratio	1,003	1,013
Source: Census Documents 2001 and 2011			

Table 1.1 shows the basic demographic indicators of Tiruchirappalli district. The population of Tiruchirappalli district was 23.8 lakh in 2001, which increased to 27.2 lakh in 2011. The decennial growth was 8.76 per cent in 2001 which increased to 12.57 per cent in 2011. The density of population per sq. km. in 2001 was 542 which increased to 618 in 2011, which shows the increase in urbanization. The urban population was 47.11 per cent in 2001, which increased to 49.15 per cent in 2011. The sex ratio was 1003 females per 1000 males in 2001 which increased to 1013 females per 1000 males in 2011.

Economy

Agriculture

The total area cultivated in the district is 1,85,985 ha., the net sown area is 1,71,002 ha. and the area sown more than once is 14983 ha. The principal crops of the district are paddy (vast tracts), millets and other cereals, pulses, sugarcane (vast tracts), groundnut, gingely, banana, betal, corn, coconut and cotton (small tracts). In the district, 31,920 Government Canals, 6337 Tanks, 10,281 Tube Wells and 43,011 Other Wells, through these irrigation facilities 91,549 ha. are cultivated.

The total geographical area of Tiruchirappalli District was 4,40,383 ha. in 2011. The total cultivable land in 2006-07 was 3,02,574 ha., which decreased to 3,02,085.19 ha. in 2011. The land put to non-agricultural purpose in 2006-07 was 84,851 ha., which increased by 250.05 ha. in 2011 to 85,101.05 ha. The land and trees and misc. groves have increased from 1,927 ha. in 2006-07 to 3166.38 ha. in 2011. This may be due to the

fact that many tracts of land have been reclassified over the years by the agencies concerned.

Table 1.2 Sectoral Distribution of Gross District Domestic Product 2004-05 Prices

(In Rupees Lakhs)

Year	Primary	Secondary	Tertiary	Total
2004-05	83,492	1,99,605	6,06,599	8,89,696
2005-06	92,708	2,34,790	7,00,342	10,27,840
2006-07	1,03,215	2,55,979	8,30,441	11,89,635
2007-08	94,967	2,75,471	9,23,615	12,94,053
2008-09	90,098	2,90,761	10,45,968	14,26,827
2009-10	1,10,967	3,58,601	11,48,393	16,17,961
2010-11	1,06,348	3,86,081	13,11,703	18,04,132
2011-12	1,12,452	4,08,255	14,21,485	19,42,192

Source: Dept. of Economics and Statistics, Tamil Nadu.

Table 1.2 shows the sectoral distribution of Gross District Domestic Product (GDDP) from the years 2004-05 to 2011-12. The total GDDP of the district in the year 2004-05 was Rs.8,89,696 lakh out of which the primary sector (including agriculture and allied activities) contributed Rs.83,492 lakh, the secondary sector, which includes manufacturing, mining, construction, etc., contributed Rs.1,99,605 lakh and the tertiary sector contributed about Rs.6,06,599 lakh. In the year 2011-12, the total GDDP of the district was Rs.19,42,192 lakh, of which, primary sector's contribution was Rs.1,12,452 lakh, secondary and tertiary sectors' contributions were Rs.4,08,255 lakh and Rs.14,21,485 lakh respectively. In terms of percentage share, the share of primary sector to the GDDP was 9.38 per cent in 2004-05, which decreased to 5.79 per cent in 2011-12, similarly the secondary sector's share decreased from 22.44 per cent to 21.02 per cent during the same period. While the tertiary sector's or service sector's share increased from 68.18 per cent to 73.19 per cent during the same period. The share of the tertiary sector is much higher than the other two sectors in the district, which shows the transformation from an agricultural base to service sector driven economy. The contribution of the agriculture sector to the GDDP is the lowest compared to the other two sectors. The primary sector also experiences some fluctuations during the eight year

period, while the other two sectors see a continuous increase. This phenomenon is not unique to Tiruchirappalli district, the State and National scenarios reflect the same picture.

Industry

Tiruchirappalli is a major engineering hub and fabrication centre. This district has seen considerable advancement in modern industrialization, particularly, after the advent of Bharat Heavy Electricals Limited (BHEL), with an array of ancillary units around it. BHEL is a leading Power Plant manufacturer in the world. At Tiruchirappalli, the High Pressure Boiler Plant of the BHEL was setup in 1963. Now, it is one of the foremost manufacturing facilities within BHEL and it has 3 major plants namely, High Pressure Boiler Plant, Seamless Steel Tube Plant and Boiler Auxiliaries Plant. A Labour force of 1,20,000 is absorbed in the industrial belt around Tiruchirappalli Town. It is a highly profitable public sector undertaking, which along with its ancillary industries, contribute nearly 6000 crores of rupees per annum. BHEL is the first state-owned company to acquire ISO 9000 certification during 1993, for all its operations. Further it has been accredited to ISO 14001 Standard. There are also many BHEL groomed small to medium industries in the National and the International market such as Cethar vessels, Vesson's Energy systems, Anand Engineering, GB industries and Adela Software and Services Private limited. The Ordinance Factory (HAPP and small Arms Project), Golden Rock Locomotive Workshop, Sugar mills, Paper mills and Dalmia cements etc., have enabled Tiruchirappalli district to find a place in the industrial map of the country.

Recently, the Government has taken initiatives for setting up Information Technology Park in the city which would shoot up the economy of the city. More over the city has many reputed MNCs and still many more to pop up.

In the year 2012-13, in this district there were 15,143 industrial units, in which 71.43 per cent of the units got registered. The turnover of Small Scale and Medium, and Large Scale industries in the district were Rs 54,085 lakh and Rs 1,840 lakh respectively. In the district, the total number of Micro and Small Enterprises and Artisan units were 10,817 in 17 categories with an average investment of Rs.12.92 lakhs per unit. It provided employment to 1,05,885 people. The district has seven industrial estates with a total area of 760.9 acres.

Income

Table 1.3 Per Capita Income at Constant (2004-2005) Prices

(In Rupees)

Year	District	State
2004-05	35,868	33,998
2005-06	41,175	38,435
2006-07	47,369	43,941
2007-08	51,234	46,293
2008-09	56,188	48,473
2009-10	63,395	53,359
2010-11	70,352	59,967
2011-12	75,393	63,996

Source: District Economics and Statistics, Tamil Nadu.

The per capita income of Tiruchirappalli district was Rs.35,868 in 2004-05 (Table 1.3), which was higher than the State level of Rs.33,998 in the same year. The per capita income of the district increased at an average rate of 11.23 per cent per annum, while that of the State increased at 9.52 per cent per annum during the period 2004-05 to 2011-12 to Rs.75,393 and Rs.63,996 respectively. The district seems to perform better than the State level in terms of the absolute per capita income and the growth rate of per capita income. The reason is the higher level of urbanization and the presence of various industries in and around Tiruchirappalli city. The number of Below Poverty Line (BPL) households in the district was 1,48,671 in 2013-14; as a percentage of the total households, it was 22.95 per cent.

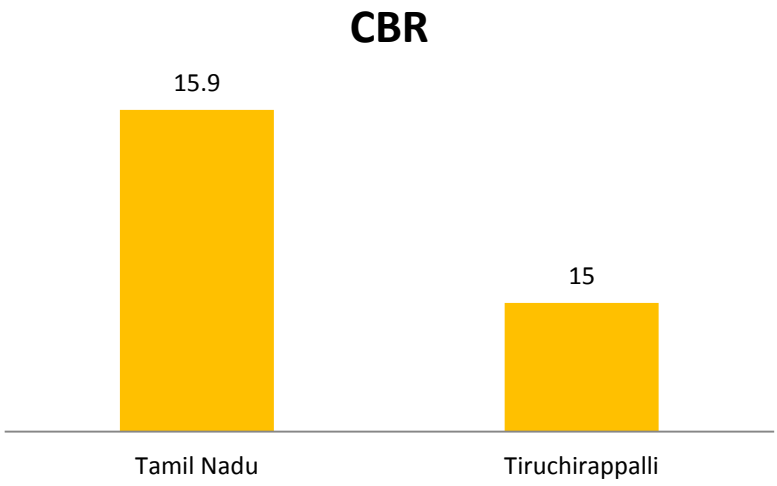
Social Sector

Health

Health is one of the major determinants of human development, while Human Development Index tries to capture this taking into account the longevity of life and certain other indicators like Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR). It is very important to note that other aspects of health such as the birth rate, death rate, diseases and vaccination should also be taken into consideration. In this

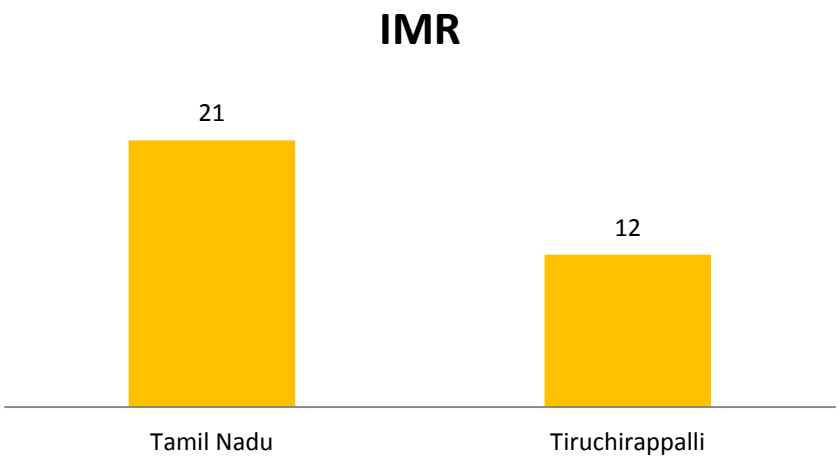
respect in Tiruchirappalli district, the Crude Birth Rate (CBR) stood at 15 in 2014, while that of Tamil Nadu was 15.9 in the same year, which was 0.9 points higher than that of Tiruchirappalli district (Figure 1.1). So, Tiruchirappalli district seems to do marginally better in this aspect. The IMR in Tiruchirappalli district in 2014 was 12, which was less to the IMR of Tamil Nadu 21(Figure 1.2).

Figure 1.1 Crude Birth Rate



Source: Health Department, Tamil Nadu and Tiruchirappalli (2013-14)

Figure 1.2 Infant Mortality Rate (IMR)



Source: Health Department, Tamil Nadu and Tiruchirappalli (2013-14)

Literacy and Education

According to the Census 2011, the Literacy rate in the district was 83.23 in 2011. The female literacy rate was 76.87 per cent, which was much lower than the male literacy rate of 89.72 per cent. The rural literacy rate was 76.69 per cent in which the rural male literacy rate was 85.44 per cent and the rural female literacy rate was only 68.11 per cent; there was a gap of 17.33 per cent between the rural male and female literacy rates. The urban literacy was 89.92 per cent, in which the male literacy rate was 94.11 per cent and the female literacy rate was 85.81 per cent. Here, the gender gap in literacy was 8.3 per cent. The difference between rural male and female literacy rates was more than two times the difference between urban male and female literacy rates. The Gross Enrolment Ratio (GER) at the primary level for both boys and girls was quite high at 102.56 per cent and 102.32 per cent respectively in 2013-14. The GER at the upper primary level for both boys and girls was equally high at 101.26 per cent in 2013-14. The GER at the secondary level for both boys and girls was also quite high at 99.27 per cent and 98.73 per cent respectively.

The primary level completion rates of boys and girls were 98.37per cent and 99.05 per cent in 2013-14, respectively. The upper primary level completion rates for boys and girls were 98.41 per cent and 98.75 per cent respectively in 2013-14. The transition rates from primary to upper primary for boys and girls were 99.85 and 99.75 respectively. The transition rates for boys and girls from upper primary to secondary were 102.96 per cent and 97.48 per cent respectively in 2013-14. There are some instances where there are some gaps between the rates of boys and girls, but such gaps are not much. So, gender discrimination cannot be seen against girls while moving up the education ladder.

CHAPTER 2

STATUS OF HUMAN DEVELOPMENT

Chapter

Status of Human Development

2

"Human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it." - Amartya Sen, Nobel Laureate in Economics, 1998

"Human development is first and foremost about allowing people to lead a life that they value and enabling them to realize their potential as human beings. The normative framework for human development is today reflected in the broad vision set out in the Millennium Development Goals, the internationally agreed set of timebound goals for reducing extreme poverty, extending gender equality and advancing opportunities for health and education. Progress towards these objectives provides a benchmark for assessing the international community's resolve in translating commitments into action. More than that, it is a condition for building shared prosperity and collective security in our increasingly interdependent world." – Human Development Report, 2006

Introduction

According to the Human Development Report 2010, the concept of human development has drawn from the idea of building and expanding capabilities and has been further simplified into expanding people's choices. Human Development is an expansion of people's freedom to live long, healthy and creative lives; to advance other goals they have reason to value; and to engage in shaping development equitably and sustainably. The concept of human development rests on Amartya Sen's Capability approach. It is actually the application part of the capability approach.

Amartya Sen's Capability approach is a moral framework, it proposes that social arrangements should be primarily evaluated according to the extent of freedom people have to promote or achieve the functioning of their value. Thus the Capability approach of Amartya Sen can be classified into two parts, one is freedom and the other is the functioning (beings and doings). The division or classification is just for understanding. Both these attributes and parts should be analysed together. Functions are intuitive in nature and have intrinsic value and may vary from person to person that is to say different resources may require different capabilities and have different functioning's and ulitimately have satisfaction. In Sen's framework, functionings can be identified through some indicators like asset index, access to schooling, body mass index, income, self-reported health, the number of egg consumption per week, etc., On the other hand, freedom is a real opportunity that 'one' has to accomplish one's value. Freedom is to be taken in the true sense and spirit. Freedom is not only about enhancing the choices, but also about exercising what a person really wants to do.

Human Development Index - Inter-Block Variations

The Human Development Index (HDI) is a statistical tool that is used by economists and policy makers to measure a country's or a region's overall achievement in its social and economic aspects. The social and economic aspects of a country or region are based on the health of people, their level of education attainment and their standard of living. This is the base for the Human Development Report prepared by the United Nations Development Programme (UNDP) for the past couple of decades. The latest UNDP Human Development Report-2010 continues to adopt the same basic three indicators of education, health and standard of living/income for the calculation of HDI. In the present exercise, HDI has been calculated using the above mentioned parameters. Each of the three parameters are comprised of their respective indices, viz., Standard of Living Index, Health Index and Education Index. For calculating Standard of Living Index, five indicators, viz., access to cooking fuel, access to toilet facilities, access to drinking water, access to electricity and access to pucca houses have been used. For calculating Health Index, three indicators, viz., Infant Mortality Rate (IMR), Maternal Mortality Ratio (MMR) and Under Five Mortality Rate (U5MR) have been used. And for calculating Education Index, three indicators, viz., Literacy Rate, Gross Enrolment Ratio (GER) for Primary and Secondary Schools have been used.

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 Ratio Under Five Mortality Rate
Education	Literacy Rate Gross Enrolment in Primary Gross Enrolment in Secondary

In terms of HDI in Tiruchirappalli district (Table 2.1), Tiruchirappalli Corporation, Thiruverumbur, T.Pet, Uppiliapuram and Thuraiyur blocks were placed in the top five positions with index values of 0.878, 0.770, 0.658, 0.629 and 0.609 respectively, while Vaiyampatti, Manigandam, Manapparai, Marungapuri and Andanallur blocks were placed at bottom five with the index values of 0.417, 0.444, 0.446, 0.475 and 0.484 respectively.

Table 2.1 Human Development Index

Indicators	Top Five Blocks	Bottom Five Blocks
HDI	Tiruchirappalli Corporation (0.878)	Vaiyampatti (0.417)
	Thiruverumbur (0.770)	Manigandam (0.444)
	T.Pet (0.658)	Mannapparai (0.446)
	Uppiliapuram (0.629)	Marungapuri (0.475)
	Thuraiyur (0.609)	Andanallur (0.484)

Analysing the HDI of blocks in Tiruchirappalli district, various indicators play significant role in determining the ranks of the blocks. Among the indicators, the maximum variations are found in MMR, Access to Cooking Fuel and Access to Drinking Water, while the least variations are found in Access to Electricity, GER Primary and GER Secondary (see Appendix Table 2.1 – 2.3).

Under the Standard of Living parameter, Access to Cooking Fuel, Access to Drinking Water and Access to Pucca House show substantial variations compared to other indicators (within the parameter). In terms of Access to Cooking Fuel Manigandam

has the maximum of 72.43 per cent, followed by Andhanallur (59.24 per cent). Other than these blocks, Thuraiyur, Uppiliapuram and Tiruchirappalli Corporation have more than 50 per cent Access to Cooking Fuel. The least percentage of Access to Cooking Fuel among blocks is found in Marungapuri with 18.26 per cent, which is closely followed by Vaiyampatti (19.55 per cent) and Manapparai (20.84 per cent). Seven blocks have higher percentage than the district level of 44.43 per cent. In terms of Access to Drinking Water, Uppiliapuram and Tiruchirappalli Corporation record cent per cent coverage. M.Nallur has less than 50 per cent Access to Drinking Water. Ten blocks have better Access to Drinking Water than the district level of 81.3 per cent. In terms of Access to Pucca houses Manapparai has the maximum with 91.75 per cent, which is followed by Vaiyampatti with 89.84 per cent, while Musiri has the least Access to Pucca Houses with 52.11 per cent, which is closely followed by Uppliayapuram (52.31).

Probing into the Health parameter, it can be found that MMR exhibits large variations. IMR and U5MR also show some variations among blocks in the district. In terms of MMR, Andhanallur and Uppliyapuram register zero MMR, while Manapparai registers with 290. Seven blocks register with above 100 in terms of MMR. In terms of IMR, Andhanallur and Manigandam share the maximum IMR of 18.6 closely followed by Lalgudi (16.2) and M.Nallur, while in all the other blocks IMR is close to zero. It is interesting to note that Uppiliapuram registers zero IMR. Regarding U5MR, Tiruchirappalli Corporation records the minimum U5MR of 4.04, while Pullambadi records the maximum U5MR of 30.75.

Analysing the education parameter, Literacy Rate shows substantial variations. In terms of GER Primary and GER Secondary the variations are not significant. In terms of Literacy Rate, Tiruchirappalli Corporation tops the table with 91.38 per cent, closely followed by Thiruverambur (89.16 per cent), while Vaiyampatti has the least percentage of 70.47, followed by Marungapuri (71.15 per cent).

Coming to the blockwise analysis, HDI of Tiruchirappalli Corporation stands out first with a high value of 0.878 and departs from the other 14 blocks in the district. It can also be called highly developed compared to the other blocks as it has a HDI value higher than 0.800. Blocks falling in the range 0.799 to 0.500 can be termed moderately developed compared to the other blocks, while blocks with HDI value lower than 0.500 can be classified as poorly developed blocks. The reasons for the variation in the HDI values can be understood by analysing the achievement of the blocks in terms of the

various indicators used to compute the HDI, which are given in the Appendix Tables 2.1, 2.2 and 2.3. In terms of the top five blocks, Tiruchirappalli Corporation stands first as it tops the chart in seven indicators, viz., Access to Toilet Facility (62.18 per cent), Access to Drinking Water (100 per cent), Access to Electricity (97.66 per cent), IMR (0.5), U5MR (4.04), Literacy Rate (91.38 per cent) and GER Primary (108.50 per cent). It also has one indicator above the district level, viz., Access to Cooking Fuel (51.75 per cent). In the remaining three indicators, it performs below the district level.

Thiruverumbur block stands second in terms of HDI ranking as it tops the chart in IMR (0.4) and stands second in four indicators, viz., Access to Electricity (97.45 per cent), U5MR (11.21), literacy Rate (89.16 per cent) and GER Secondary (101 per cent). It performs better than the district level in Access to Toilet Facility (48.18 per cent) and GER Primary (101.6 per cent). T.Pet block stands third in terms of HDI ranking as it performs second in Access to Drinking Water (96.02 per cent) and GER Secondary (101 per cent), and performs better than the district level in Access to Toilet Facility (57.92 per cent), Access to Drinking Water (96.02 per cent) and Access to Pacca House (82.74 per cent). It also performs averagely in IMR (0.8) and MMR (80). Uppiliapuram block stands fourth in terms of HDI ranking as it tops the chart in three indicators, viz., Access to Drinking Water (100 per cent), IMR (zero) and MMR (zero). It also performs above the district level in terms of Access to Cooking Fuel (53.37 per cent) and Access to Electricity (94.51 per cent). Thuraiyur block stands fifth in terms of HDI ranking as it occupies second position in GER Secondary (101 per cent), and performs above the district level in terms of Access to Cooking Fuel (50.43 per cent), Access to Toilet Facility (58.67 per cent), Access to Drinking Water (89.47 per cent), Access to Electricity (94.28 per cent), Access to Pacca House (84.34 per cent) and GER Primary (101.50 per cent).

Vaiyampatti block stands last in terms of HDI ranking as it performs lowest among the blocks in terms of five indicators, viz., Access to Cooking Fuel (19.55 per cent), Access to Toilet Facility (35.41 per cent), Access to Electricity (87.47 per cent), Literacy Rate (70.47 per cent) and GER Secondary (99 per cent). It also performs worse than the district level in Access to Drinking Water (69.91 per cent), MMR (130), U5MR (24.36) and GER Primary (99.85 per cent). Manikandam block stands second last in terms of HDI ranking as performs lowest among the blocks in GER Secondary (99 per cent), and performs poorly, i.e., below (positive indicator) or above (negative indicator)

district level in eight indicators, viz; Access to Drinking Water (55.10 per cent), Access to Electricity (90.01 per cent), Access to Pacca House (62.84 per cent), IMR (18.6), MMR (120), U5MR (23.56), Literacy Rate (80.68 per cent) and GER Primary (99.50 per cent). Surprisingly it comes first in terms of Access to Cooking Fuel (72.43 per cent). Manapparai block stands third from the bottom in terms of HDI ranking as it performs lowest in four indicators, viz., MMR (290), Access to Electricity (87.71 per cent) and GER Secondary (100 per cent). It also performs worse than the district level in terms of Access to Cooking Fuel (20.84 per cent), Access to Drinking Water (75.81 per cent), IMR (2.9 per cent), U5MR (22.81 per cent) and Literacy Rate (78.16). Marungapuri block stands fourth from the bottom in terms of HDI ranking as it performs lowest in two indicators, viz., Access to Cooking Fuel (18.26 per cent) and Access to Toilet Facility (36.23 per cent). It performs worse than the district level in terms of Access to Electricity (87.89 per cent), U5MR (17.26 per cent), Literacy Rate (71.15 per cent) and GER Primary (100.35). Andanallur block stands fifth from the bottom in terms of HDI ranking as it has the highest IMR (18.6 per cent), lowest GER Primary (98.40 per cent) and GER Secondary (99 per cent). It also performs poorly in terms of Access to Drinking Water (51.71 per cent), Access to Electricity (89.75 per cent), U5MR (20.94 per cent) and Literacy Rate (81.26). In this block best MMR (10).

Gender Inequality Index – Inter-Block Variations

Along with HDI, a simultaneous effort was also made to arrive at Gender Inequality Index (GII) by the UNDP. GII measured the loss in potential of human development due to inequality between female and male achievements. For measuring GII, three dimensions were considered by the report, viz., Reproductive Health, Empowerment and Labour market. In the present exercise also, these measures have been incorporated. Reproductive Health was captured by three indicators, viz., MMR, Share of Institutional Deliveries and Share of Ante Natal Coverage. Empowerment is captured by three indicators for Female and Male separately, viz., Literacy Rates, Share of Children (Children in the age group 0 - 6), Share of Elected Representatives. And the Labour Market has been captured by three indicators for female and male separately, viz., Work Participation Rates, Work Participation Rates in Non-agricultural Sector and Wage Rates. HDI presents information on the human development in three dimensions, while GII provides information on gender differentials in achievements.

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 Agricultural Wage Rate Male Agricultural Wage Rate

With regard to GII in Tiruchirappalli district (Table 2.2), Andanallur, Uppliapuram, Marungapuri, Thiruverumbur and Tiruchirappalli Corporation blocks get the top five ranks with the index values of 0.11, 0.11, 0.024, 0.027 and 0.034 respectively, and exhibit lower gender inequality indicating lower gap in the gender achievements between male and female with respect to Health, Empowerment and Labour parameters. On the other hand Musiri, Vaiyampatti, Manapparai, Thuraiyur and Thottiyam blocks had higher GII (0.132, 0.106, 0.089, 0.089 and 0.77 respectively) indicating wider differences in the male and female achievements on the chosen GII indicators.

Table 2.2 Gender Inequality Index

Index	Top Five Blocks	Bottom Five Blocks
GII	Andanallur (0.011)	Musiri (0.132)
	Uppiliapuram (0.011)	Vaiyampatti (0.106)
	Marungapuri (0.024)	Manapparai (0.089)
	Thiruverumbur (0.027)	Thuraiyur (0.089)
	Tiruchirappalli Corporation (0.034)	Thottiam (0.077)

As observed earlier, the analysis of the achievements of the various blocks in the individual indicators is necessary to understand the positions occupied by the respective block in the rankings (see Appendix Tables 2.4 - 2.6). The analysis of GII reveals that, health indicator MMR plays significant role in block ranks in the district. Female Literacy

Rate under the Empowerment parameter and indicators such as Female WPR is Non-Agricultural Sector, Female Agricultural Wage Rate and Male Agricultural Wage Rate under Labour parameter also influence significantly in the determining block ranks.

The variations among blocks in terms of Female Literacy Rate are higher than the Male Literacy Rate. The Female Literacy Rate is higher in Tiruchirappalli Corporation with 88.01 per cent, while Marungapuri block has the lowest Female Literacy Rate. Only two other blocks, viz., Lalgudi and Tiruverambur have better Female Literacy Rate than the district rate of 76.86 per cent.

Under the Labour Parameter, among the blocks, Vaiyampatti has the maximum Female WPR of 50.50 per cent, while Tiruchirappalli Corporation has the least female WPR of 15.23 per cent in the district. In terms of the Female WPR in Non-Agricultural Sector, Tiruchirappalli Corporation records the highest with 95.25 per cent, while Marungapuri (11.40 per cent) records the least, which is closely followed by Uppiliapuram (11.80 per cent). In terms of Male WPR in Non-Agricultural Sector, the maximum percentage is found in Tiruchirappalli Corporation with 97.62 per cent, which is followed by Thiruverambur (86.75 per cent), while Marungapuri Block has the least participation of 28.32 per cent, which is closely followed by Vaiyampatti (29.94 per cent).

The blockwise variations in Female Agricultural Wage Rate are much higher than the Male Agricultural Wage Rate. In terms of Female Agricultural Wage Rate, out of the 15 blocks, only five blocks have better rates than the district rate of Rs.141. Musiri has the least rate of Rs.100. In terms of the Male Agricultural Wage Rate, 10 blocks have better rates than the district rate of Rs.290. Lalgudi block tops the table among the blocks in Tiruchirappalli district with Rs.350, while five blocks Mannapparai, Marungapuri, Thottium, T.Pet and Uppliyapuram have the least rate of Rs.250.

Analysing the blockwise variations, Andanallur block secures the first rank in GII as it performs first in three indicators, viz., MMR (zero), Share of Institutional Delivery (99.72 per cent) and Share of Ante Natal Coverage (100 per cent), and has above district level Share of Female Children (0-6) years (48.88 per cent), above district level Female WPR (34.10 per cent) and low wage gap between male and female (Rs.100). Uppilapuram block secures the second rank in GII as it has zero MMR and performs better than the district level in terms of the Share of Institutional Delivery (100 per cent), Share of Female Elected Representatives in RLBs and ULBs (33.64 per cent), Female WPR (48.70 per cent) and wage gap between male and female (Rs.125). Marungapuri

blocks secures the third rank in GII as it has low MMR (40), highest Share of Institutional Delivery (100 per cent), above district level Share of Ante Natal Coverage (99 per cent), district level Share of Female Children (0-6) years (48.65 per cent), high Female WPR (46.82 per cent), above district level Female Wage Rate (Rs.150), low male – female wage gap (Rs.100), but performs poorly in some indicators like Female Literacy Rate (59.94 per cent) and Female WPR in Non-Agricultural Sector (11.40 per cent). Thiruverumbur block gets the fourth rank in GII as it has low MMR (40), above district level Share of Institutional Delivery (99.92 per cent), very high Female Literacy Rate (84.28 per cent), low Literacy gap between male and female (9.61 per cent), district level Share of Female Children (0-6) years (48.67 per cent), very high Female WPR in Non-Agricultural Sector (72.91 per cent), highest Female Wage Rate (Rs.200) and low gender gap in Wage Rate (Rs.100). Tiruchirappalli Corporation gets the fifth rank in GII as it has low MMR (50), above district level Share of Institutional Delivery (99.98 per cent), above district level Share of Ante Natal Coverage (99 per cent), highest Female Literacy Rate (88.01 per cent), lowest Gender Gap in Literacy (6.85 per cent), above district level Share of Female Children (0-6) years (48.98 per cent), above district level Share of Elected Representatives in RLBs and ULBs(33.85 per cent), highest Female WPR in Non-Agricultural Sector (95.23 per cent), highest Female Wage Rate (Rs.200) and low gender gap in Wage Rate (Rs.100).

Musiri block comes last in terms of GII ranking as it has second highest MMR (160), below district level Female Literacy Rate (69.35 per cent), huge gender gap in Literacy (16.61 per cent), below district level Share of Female Children (0-6) years (48.21 per cent), low Female WPR in Non-Agricultural Sector (22.81 per cent), lowest Female Wage Rate (Rs.100), high gender gap in Wage Rate (Rs.200). Vaiyampatti block stands second from the bottom in terms of GII ranking as it has high MMR (130), below district level Share of Institutional Delivery (99.51 per cent), below district level Share of Ante Natal Coverage (97 per cent), second lowest Female Literacy Rate (60.35 per cent), highest gender gap in Literacy (20.5 per cent), very low Female WPR in Non-Agricultural Sector (12.21 per cent), very low Female Wage Rate (Rs.100) and high gender gap in Wage Rate (Rs.190).

Manapparai block stands third from the bottom in terms of GII ranking as it has the highest MMR (290), below district level Share of Institutional Delivery (97 per cent), below district level Female Literacy Rate (69.37 per cent), huge gender gap in Literacy (17.64 per cent), below district level Share of Female Elected Representatives in RLBs and ULBs (33.33 per cent), below district level Female WPR in Non-Agricultural Sector (32.85 per cent) and below district level Female Wage Rate (Rs.125). Thuraiyur block

stands fourth from the bottom in terms of GII ranking as it has high MMR (130), below district level Share of Institutional Delivery (99.27 per cent), below district level Share of Ante Natal Coverage (98 per cent), below district level Female Literacy Rate (71.45 per cent), high gender gap in Literacy (14.48 per cent), below district level Share of Female Children (0-6) years (48.12 per cent), low Female WPR in Non-Agricultural Sector (21.04 per cent), below district level Female Wage Rate (Rs.125) and high gender gap in Wage Rate (Rs.175). Thottiam block stands fifth from the bottom in terms of GII ranking as it has very high MMR (160), low Share of Ante Natal Coverage (96 per cent), very low Female Literacy Rate (65.81 per cent), huge gender gap in Literacy (18.22 per cent), below district level Share of Female Children (0-6) years (48.15 per cent), below district level Share of Female Elected Representatives in RLBs and ULBs (33.33 per cent), very low Female WPR in Non Agricultural Sector (19.70 per cent) and very low Female Wage Rate (Rs.100).

Child Development Index

The development of the children in society and in the economy are of great importance as they determine the future of the society and the economy. Development at the childhood level is considered to be the most important phase of human life and so, the quality of health, well-being, learning and behaviour are more important in this phase of life. This phase comprises of great opportunity, and also of great vulnerability and risk. Proper development initiatives such as adequate health care and education stimulate development and prevent or minimize disabilities and potential secondary conditions such as diseases and socially unwarranted behaviour. When these are deficient or unsupportive child development can be seriously and even irreversibly affected. Many research studies have found evidence of fruitful results of appropriate interventions to address the risk and vulnerability factors. In this direction, the analysis of Child Development Index (CDI) is of crucial importance.

Dimensions	Indicators
Health	U5MR Child Sex Ratio Percentage of Malnourished Children
Education	Gross Enrolment Ratio in Primary Gross Enrolment Ratio in Secondary Children Never Enrolled in Schools Transition Rate from Primary to Upper Primary Transition Rate from Upper Primary to Secondary

The CDI ranking of the top five and bottom five blocks has been provided in Table 2.3. It can be seen that Tiruchirappalli Corporation, Manachanallur, Musiri, Marungapuri and Manpparai blocks secure the top five ranks in terms of CDI with index values of 0.731, 0.696, 0.530, 0.499 and 0.497 respectively, indicating better development level of children in these blocks, while Vaiyampatti, Uppilapuram, Thuraiyur, Thottiam and Lalgudi blocks are pushed to the last five positions with CDI values of 0.252, 0.332, 0.335, 0.405 and 0.413 respectively, indicating poor level of development of children in these blocks. Except three blocks, viz., Tiruchirappalli Corporation, Manachanallur and Musiri, which get CDI values in the range 0.799 to 0.500 and perform moderately in this regard, all other blocks get CDI values below 0.500 and perform poorly.

Table 2.3 Child Development Index

Index	Top Five Blocks	Bottom Five Blocks
CDI	Tiruchirappalli Corp (0.731)	Vaiyampatti (0.252)
	Manachanallur (0.696)	Uppiliapuram (0.332)
	Musiri (0.530)	Thuraiyur (0.335)
	Marungapuri (0.499)	Thottiam (0.405)
	Manapparai (0.497)	Lalgudi (0.413)

The individual scores of the blocks in terms of the various indicators used to compute the CDI are set out in Appendix Tables 2.7 and 2.8. The analysis of CDI of Tiruchirappalli district reveals that the indicators under the Health parameter show significant impact on the ranks of the blocks. Here also U5MR plays an important role as discussed earlier. The Child Sex Ratio ranges from 927 female per 1000 male in Thuraiyur to 960 female per 1000 male in Tiruchirappalli Corporation. Only three blocks Andhanallur, Manigandam and Tiruchirappalli Corporation have better Child Sex Ratio than the district ratio of 951. In terms of Percentage of Malnourished Children, Tiruchirappalli Corporation performs better with 9.10, while Marungapuri performs poorly with 27.48. In terms of the Education parameter, there are no wide variations among the blocks in Tiruchirappalli district.

The analysis of the individual scores of the blocks in terms of the various indicators reveals that Tiruchirappalli Corporation stands first in terms CDI, as it

performs best with regard to five indicators, viz., U5MR (4.04), Child Sex Ratio (960), Malnourished Children (9.10 per cent), GER in Primary (108.50 per cent) and Transition Rate from Primary to Upper Primary (100 per cent). It also performs better than the district level in terms of GER Secondary (99.50 per cent). Manachanallur block stands second in terms of CDI ranking as it has the best figures for two indicators, viz., Children Never Enrolled in Schools (0.03 per cent) and Transition Rate from Upper Primary to Secondary (100 per cent). It also performs better than the district level in terms of U5MR (14.39), Malnourished Children (15.36 per cent), GER Secondary (101 per cent) and Transition Rate from Upper Primary to Secondary (101.50 per cent). Musiri block stands third in terms of CDI ranking as it tops the chart in GER Secondary (102 per cent), has higher Transition Rate from Primary to Upper Primary (99.70 per cent), has below district level U5MR (14.64), Malnourished Children (18.93 per cent) and Children Never Enrolled in Schools (0.22 per cent). Marungapuri and Manapparai blocks stand fourth and fifth in terms of CDI ranking respectively. But, these blocks get CDI values below 0.500 and hence are classified under poorly performing blocks. Marungapuri block has the lowest Malnourished Children (27.48 per cent), low Child Sex Ratio (947) and GER Primary (100.35 per cent). Manapparai block has a Child Sex Ratio of 947, has higher proportion of Malnourised Children (22.68 per cent) and Children Never Enrolled in Schools (0.28 per cent).

Among the bottom five blocks, Vaiyampatti, Uppilapuram and Thuraiyur blocks have perfromed very poorly in terms of CDI as they get index values of less than 0.300.Vaiyampatti block comes last in terms of CDI ranking as it has the lowest GER Secondary (99 per cent) and Transition rate from Upper Primary to Secondary (99 per cent), and has above district level U5MR (24.36), below district level Child Sex Ratio (948), above district level Malnourished Children (24.19 per cent) and below district level GER Primary (99.85 per cent). Uppiliapuram block stands second from the bottom as it has the lowest Transition Rate from Primary to Upper Primary (98.50 per cent), second lowest Child Sex Ratio (928) and second highest proportion of Malnourished Children (24.87 per cent). Thuraiyur block stands third from the bottom as has the lowest Child Sex Ratio (927), second highest U5MR (30.03) and above district level Malnourished Children (24.93 per cent). Thottiam block stands fourth from the bottom as it has very low Child Sex Ratio (929), below district level GER Primary (100.58 per cent) and Children Never Enrolled in Schools (0.25 per cent). Lalgudi block stands fifth from the bottom as it has a low Child Sex Ratio (938), higher proportion of Malnourished

Children (19.93 per cent), low GER Primary (98.50 per cent) and higher proportion of Children Never Enrolled in Schools (0.24 per cent).

Multidimensional Poverty Index

Multidimensional Poverty Index (MPI) is calculated considering three criteria, health, education and standard of living. The indicators of health are taken as IMR, high order birth rate and Malnourished Children. The indicators of education are taken as drop-outs in primary and secondary levels, while the indicators of the standard of living are taken as in the case of HDI, i.e., access to cooking fuel, access to toilet facilities, access to drinking water, access to electricity and access to pucca houses. MPI is used to understand the deprivation of the basic necessities at the household level. Even though a family may have some amount of income, it may be deprived of certain important services such as access to drinking water or toilet facility, which in turn would make the family prone vulnerable diseases. So, it is necessary to understand the deprivation level of the various blocks in the district through MPI.

Dimensions	Indicators
Health	IMR Higher Order Birth Rate Malnourished 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

With regard MPI, the top rank five blocks in Tiruchirappalli district (Table 2.4) are Tiruchirappalli Corporation, Thiruverumbur, Thuraiyur, Uppiliapuram, and Lalgudi with 0.178, 0.312, 0.358, 0.388 and 0.439 index values respectively, while the bottom five blocks are Manachanallur, Marungapuri, Manigandam, Vaiyampatti and Manapparai with 0.683, 0.672, 0.654, 0.548 and 0.536 index values respectively. Lower value of the MPI denotes better performance with respect to vulnerability due to poverty. The variations among the blocks with regard to MPI can be better understood by analysing the

achivements in terms of the individual indicators which have been used to compute the MPI. The Tables 2.9 and 2.10 in the Appendix section provide the data in this regard.

Table 2.4 Multidimentional Poverty Index

Index	Top Five Blocks	Bottom Five Blocks
MPI	Tiruchirappalli Corporation (0.178)	Manachanallur (0.683)
	Thiruverumbur (0.312)	Marungapuri (0.672)
	Thuraiyur (0.358)	Manigandam (0.654)
	Uppiliapuram (0.388)	Vaiyampatti (0.548)
	Lalgudi (0.439)	Manapparai (0.536)

Analysing the variations in the indicators, the indicators under the Health parameter exhibit substantial variations, which are IMR and Percentage of Malnorished Children. Likewise, in the Standard of Living parameter, Access to Cooking Fuel, Access to Toilet Facility, Access to Drinking Water and Access to Pucca House have many variations among the blocks as discussed in the HDI section. High Order Birth Rate under the Health parameter, Dropout in Primary and Secondary under the Education parameter and Access to Electricity under the Standard of Living parameter do not exhibit significant variations.

In terms of the blockwise analysis, Tiruchirappalli Corporation stands first in terms of MPI ranking as it tops in five out of 10 indicators used to complete MPI, viz., High Order Birth Rate (6), Malnourished Children (9.10 per cent), Access to Toiler Facility (62.18 per cent), Access to Drinking Water (100 per cent) and Access to Electricity (97.66 per cent). It also has very low IMR (0.5), below district level Dropout Primary (0.53 per cent), district level Dropout Secondary (1.86 per cent) and above district level Access to Cooking Fuel (51.75 per cent). Thiruverumbur block stands second in terms of MPI ranking as it has very low IMR (0.4), low High Order Birth Rate (8), below district level Dropout Primary (0.40 per cent), below district level Dropout Secondary (1.54 per cent), district level Access to Toilet Facility (48.18 per cent), high Access to Drinking Water (95.02 per cent) and above district level (97.45 per cent). Thuraiyur block stands third in terms of MPI ranking as it has low IMR (1.3), district level High Order Birth Rate (12), below district level Dropout Primary (0.43 per cent), above district level Access to Cooking Fuel (50.43 per cent), second highest Access to

Toilet Facility (58.67 per cent), above district level Drinking Water (89.47 per cent), Access to Pucca House (84.34 per cent) and Access to Electricity (97.45 per cent). Uppliapuram block stands fourth in terms of MPI ranking as it tops the chart in two indicators, viz., IMR (zero) and Access to Drinking Water (100 per cent). It also has below district level Dropout Primary (0.42 per cent), below district level Dropout Secondary (1.60 per cent), above district level Access to Cooking Fuel (53.37 per cent) and Access to Electricity (94.51 per cent). Lalgudi block stands fifth in terms of MPI ranking as it has below district level High Order Birth Rate (11), lowest Dropout Primary (0.28 per cent), low Dropout Secondary (1.43 per cent), district level Access to Toilet Facility (48.50 per cent), above district level Access to Toilet Facility (48.50 per cent), above district level Access to Drinking Water (86.56 per cent) and above district level Access to Pucca House (77.42 per cent).

Manachanallur block stands last in terms of MPI ranking as it has high IMR (13.2), high Dropout Primary (1 per cent), highest Dropout Secondary (3.35 per cent), below district level Access to Toilet Facility (39.73 per cent),lowest Access to Drinking Water (46.56 per cent) and below district level Access to Electricity (91.09 per cent). Marungapuri block stands second from the bottom in terms of MPI as it has the highest High Order Birth Rate (17), highest Malnourished Children (27.48 per cent), above district level Dropout Primary (0.63 per cent), high Dropout Secondary (2.68 per cent), lowest Access to Cooking Fuel (18.26 per cent), second lowest Access to Toilet Facility (36.23 per cent) and very low Access to Electricity (87.89 per cent). Manigandam block stands third from the bottom in terms of MPI ranking as it has the highest IMR (18.6), above district level High Order Birth Rate (14), above district level Malnourished Children (21.54 per cent), above district level Dropout Primary (0.80 per cent), very high Dropout Secondary (2.51 per cent), low Access to Drinking Water (58.10 per cent), low Access to Pucca House (62.84 per cent) and low Access to Electricity (90.01 per cent). Vaiyampatti block stands fourth from the bottom in terms of MPI as it has very High Order Birth Rate (16 per cent), very high Malnourished Children (24.19 per cent), second lowest Access to Cooking Fuel (19.55 per cent), below district level Access to Toilet Facility (35.41 per cent), low Access to Drinking Water (69.91 per cent) and lowest Access to Electricity (90.01 per cent). Manapparai block stands fifth from the bottom in terms of MPI ranking as it has very high High Order Birth Rate (16), high Malnourished Children (22.68 per cent), above district level Dropout Primary (0.73 per cent), very low

Access to Cooking Fuel (20.84 per cent), below district level Access to Drinking Water (75.81 per cent) and very low Access to Electricity (87.71 per cent).

Table 2.5 Indices and Ranks

Name of the Blocks	HDI		GII		CDI		MPI	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Andanallur	0.485	11	0.011	1	0.431	10	0.499	8
Lalgudi	0.592	5	0.069	9	0.413	12	0.439	5
Manachanallur	0.508	9	0.074	10	0.696	2	0.683	15
Manigandam	0.445	14	0.057	7	0.443	8	0.654	13
Mannapparai	0.447	13	0.089	13	0.497	6	0.536	11
Marungapuri	0.476	12	0.024	3	0.499	5	0.672	14
Musiri	0.549	8	0.132	15	0.530	3	0.503	9
Pullambadi	0.495	10	0.063	8	0.457	7	0.498	7
Thiruverumbur	0.775	2	0.027	4	0.515	4	0.312	2
Thottium	0.589	6	0.077	11	0.425	11	0.506	10
Thuraiyur	0.611	4	0.089	12	0.335	14	0.358	3
T.Pet	0.659	3	0.057	6	0.433	9	0.447	6
Uppliapuram	0.589	7	0.011	2	0.352	13	0.388	4
Vaiyampatti	0.418	15	0.106	14	0.252	15	0.548	12
Tiruchirappalli Corporation	0.885	1	0.034	5	0.752	1	0.178	1

Conclusion

The analysis of the status of the human development in Tiruchirappalli district at the block level reveals that Tiruchirappalli Corporation stands first in the HDI ranking with an index value of 0.878 departing from all other blocks in the district. There is no surprise as it is the district headquarters and more importantly a big business centre in the middle of Tamil Nadu State. Six blocks get HDI Values below 0.500; viz., Vaiyampatti, Manigandam, Manapparai, Marungapuri, Andanallur and Pullambadi. These blocks perform very poorly in the standard of living and health parameters. Basic infrastructural facilities need to be strengthened in these blocks so that they can also

develop along with other blocks in the district. The individual indicators in which these blocks perform poorly are discussed in the chapter, which may be used to take appropriate policy interventions. The GII reveals the inequality in gender achievements in the district. Here, Andanallur and Uppliapuram show the way to other blocks followed by Marungapuri and Thiruverumbur. These blocks are able to secure very low values of GIIas all these blocks have very low MMR and achievements like, higher female WPR, higher Female Wage Rate and lower gender gap in wages. While some blocks perform poorly in these indicators combined with lower level female literacy rate and higher gender gap in literacy rate, which pushes them to lower ranks. Such blocks are Musiri, Vaiyampatti, Manapparai, Thuraiyur, Thottiyam and Manachanallur. These blocks require a strong dose of gender sensitization, which would lead to improvement in the achievement levels of females. The particular aspects or indicators where each block needs to look into have been discussed earlier and may be taken for formulating neccessory strategies.

From the analysis of the CDI, it could be gathered that Tiruchirappalli Corporation gets a higher value compared to all other blocks, which is again not a surprise. It performs well in all the indicators. Three blocks, viz., Vaiyampatti, Uppliapuram and Thuraiyur perform very poorly in most of the indicators used to compute CDI and get very low values. But, Thuraiyur and Uppliyapuram seem to figure in the top five blocks with respect to HDI. So, what has gone wrong here is that in terms of the education indicators, they perform well, but in terms of the health indicators such as U5MR, Child Sex Ratio and Malnourished Children, they tend to perform very poorly compared to the other blocks in the district. All the other blocks that perform poorly with regard to CDI are weak in terms of health indicators and so, health parameter all the blocks of Tiruchirappalli district need to be strengthend. The MPI reveals the level of vulnerability of the blocks in Tiruchirappalli district. Once again Tiruchirappalli Corporation is able to get the first rank with MPI, which departs from all other blocks. Blocks that get very high MPI values are Manachanallur, Marungapuri and Manigandam. Two of these blocks, (last two) also figure in the bottom five lists in the HDI analysis. As observed earlier, these blocks perform poorly in the standard of living and health parameters and hence, the basic infrastructural facilities in these blocks need to be strengthened.

Overall, the analysis of Tiruchirappalli district's block rankings in terms of HDI, GII, CDI and MPI reveals that urbanized regions have been able to perform better and were also better resource endowed than the other blocks in the district. The indicators that influence the ranking of the various indices were the ones that come under Standard of Living and Health parameters. The Education indicators also exhibited considerable influence on the rankings, but these influences may not reflect the true picture as these indicators have already touched the cent percent mark or are nearing the same. So, what needs to be concentrated upon in terms of the Education sector is the quality of education and the infrastructure facilities.

CHAPTER 3

EMPLOYMENT, INCOME AND POVERTY

Chapter

Employment, Income and Poverty

3

Introduction

Employment, Income and Poverty still remain the biggest issues in the Indian economy in general and in the States in particular. These concepts and issues are intertwined, complex and very difficult to define. In many developing countries, poverty is associated with certain characteristics including low education, unstable employment, low job status, low and unstable income, poor housing conditions, large families, absence of savings, constant struggle for survival and absence of material possessions. However, economic growth reduces the intensity of poverty and provides relief to the poor, via creation of jobs, improving the revenue and creation of infrastructure to enable the poor to have easy access to information and opportunities.

The purpose of this chapter is to know the present status of one of the Central Districts of Tamil Nadu namely Tiruchirappalli, by using the block level statistics made available by the employees of the government agencies at gross-root level. The readers of the chapter need to understand the sources of data and their reliability and veracity before making any conclusion or designing any policies. The details regarding employment, income and poverty of Tiruchirappalli is presented in this chapter. These details include net domestic product, work participation rate, land utilization pattern, operational landholding size of different social groups, agricultural land holdings, irrigation intensity, cropping intensity, livestock, employment patterns, poverty, public distribution system (PDS) and Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

Employment

Employment, here refers to the population engaged in productive activity. It determines the quantity and quality of the output produced by a set of people in a certain area. Hence, it is a significant aspect and needs to be discussed in this report. But, employment is a very complicated concept. There are at least three aspects of employment; one, production aspect, two, income aspect, and three, recognition aspect. Wage is determined by various factors. The worker producing more important services may get lower wages, while the people with little contribution may get higher wages, depending upon their bargaining power and not necessarily by productivity or usefulness of the work.

Size of the Workforce and Workers Participation Rate

Table 3.1 shows the size of the workforce in Tiruchirappalli district in the years 2001 and 2011. Since, the population has grown over the reference period, it is quite natural that different groups of population would also increase; in similar fashion, worker population would also increase. In almost all the blocks of Tiruchirappalli district, total worker population as well as non-worker, population have increased between 2001 and 2011. This indicates the fact that the size of non-worker population continued to exist without much reduction. Among the blocks, Tiruverambur block appeared to be unique, where the growth rates of total workers, marginal workers, main workers, non-workers and the total population had all increased very substantially; these growth rates were much smaller in other blocks. The reason for this large increase in Tiruverambur block might have been due to immigration; and it can hardly be attributed to normal situations. Now the relevant question is: What do these increases show?

The small increases in the above categories of people in the blocks of Tiruchirappalli (other than Tiruverambur) only show that the pace of the development process is not very fast. While analyzing the figures in Table 3.1 one must be very careful to see that these figures are not the percentage change in total worker participation rates; rather, these are percentage change in total workers population (and in other categories of population). If these figures were percentage change in the workforce participation rates, then there should have been some drastic changes in the determinants of the workforce rates.

Table 3.1 Total Workers and Non-Workers (in no.)

Sl. No.	Blocks/District/State	Total Workers		Main Workers		Marginal Workers		Non Workers		Total Population	
		2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
1	Andanallur	40,678	46,669	36,456	40,432	4,222	6,237	49,298	53,299	89,976	99,968
2	Lalgudi	61,579	66,917	51,197	56,013	10,382	10,904	81,875	78,575	1,43,454	1,45,492
3	Manachanallur	78,542	89,022	64,813	79,660	13,729	9,362	80,471	1,03,847	1,59,013	1,92,869
4	Manigandam	38,802	48,444	32,625	43,310	6,177	5,134	45,911	59,082	84,713	1,07,526
5	Mannapparai	61,829	68,645	55,620	61,152	6,209	7,493	67,196	78,316	1,29,025	1,46,961
6	Marungapuri	61,651	69,941	50,199	60,390	11,452	9,551	54,275	61,982	1,15,926	1,31,923
7	Musiri	59,938	66,546	52,906	60,078	7,032	6,468	60,281	62,147	1,20,219	1,28,693
8	Pullambadi	51,561	54,518	36,881	46,065	14,680	8,453	50,683	54,855	1,02,244	1,09,373
9	Thiruverumbur	47,444	88,622	41,063	73,706	6,381	14,916	91,885	1,36,895	1,39,329	2,25,517
10	Thottium	70,522	70,624	60,528	65,545	9,994	5,079	56,047	64,496	1,26,569	1,35,120
11	Thuraiyur	69,029	74,577	58,794	69,124	10,235	5,453	65,479	72,082	1,34,508	1,46,659
12	T.Pet	57,890	56,172	52,193	48,519	5,697	7,653	42,946	46,790	1,00,836	1,02,962
13	Uppliapuram	54,022	55,970	41,978	50,637	12,044	5,333	42,967	46,698	96,989	1,02,668
14	Vaiyampatti	48,814	53,786	44,738	48,775	4,076	5,011	37,490	42,700	86,304	96,486
15	Tiruchirappalli Corpor.	2,62,220	3,03,526	2,47,797	2,78,923	14,423	24,603	5,27,041	5,46,547	7,89,261	8,50,073
	District	10,64,521	12,13,979	9,27,788	10,82,329	1,36,733	1,31,650	1,35,3845	15,08,311	24,18,366	27,22,290
	State	2,78,78,282	3,28,84,681	23,75,778	2,79,42,181	41,20,499	49,42,500	3,45,27,397	3,92,62,349	6,24,05,679	7,21,47,030

Source : Census 2011

In terms of the inter-block variations in the share of each category of workers, the total work participation rate has undergone a small change between 2001 and 2011. The shares of a majority of the blocks, namely, Lalgudi, Manachanallur, Manapparai, Marungapuri, T.Pet, Uppliapuram and Vaiyampatti had slightly decreased. Only in Andanallur, Thiruverumbur blocks and Tiruchirappalli Corporation, the compensating increases in the work participation rates were observed. The urbanization process may have acted as one of the influencing forces.

Work Participation

According to the Classical Theory of Employment, the economy is always fully employed with certain frictional aspects, which may cause a small percentage of the population to be unemployed. But, in a country like India, unemployment has been eternal and pervasive. In this section, employment has been discussed in terms of the Work Participation Rate (WPR). WPR is a measure of the active portion of an economy's labour force. It refers to the number of people who are either employed or actively looking for work. The portions of the population who are not looking for employment are not taken into account. The WPR is an important tool to analyse the employment and unemployment situation in an economy.

Table 3.2 Work Participation Rate

Rural/Urban	2001	2011
Rural		
Male	59.7	60.0
Female	45.3	43.8
Persons	52.5	51.9
Urban		
Male	53.8	56.7
Female	15.2	17.8
Persons	34.5	37.1
Total		
Male	56.9	58.4
Female	31.1	31.0
Persons	44.0	44.6
Source : Census 2001 and 2011		

Table 3.2 gives the details of the work participation rates of Tiruchirappalli district. The WPR of the district is 44.6 per cent in 2011. The urban work participation rates have slightly gone up in the study period, whereas in the rural area, this it is just the opposite. This ratio has slightly improved for male in both rural and urban areas, whereas the changes are not uniform for rural and urban females. In the case of rural females, the ratio has gone down from 45.3 per cent (2001) to 43.8 per cent (2011). The urban female work participation rates were much smaller compared to the rural rates, but it has gone up from 15.2 per cent in 2001 to 17.8 per cent in 2011.

The very low WPR for female could be due to various reasons. Higher income for urban male members may push the female out of market work; then the female may prefer or can afford leisure for work; hence, their WPR is very low. The urban female may (i) find it difficult to get jobs in nearby places; (ii) jobs may be available far away from their respective homes and may be unfamiliar to them; (iii) the worker relationship may be quite different in urban areas than in the rural areas. In villages, (i) the workers are known to each other; (ii) their dwelling places are nearby and they are related or known to each other. Similar congenial work places cannot be found in urban areas, which restrict women to go for jobs.

Case Study: Work Participation

Work participation is multidimensional. It influences and gets influenced by many aspects. The size of workers participating in work has no definite relationship with the level of development or standard of living of the workers. Work participation is influenced by the employment opportunities, wage rates, gender balances and many social cultural variables. Work participation influences the productivity and income levels and growth and development patterns. So, it is important to study the ground reality of work participation.

According to the census 2011, T.Pet block stands first in Work Participation Rate in Tiruchirappalli district. So, Perugalur village of Oorakkarai village panchayat was randomly selected from T.Pet block for this case study. Totally, 48 people were interviewed in the village to get information regarding the various aspects of work participation. The majority of the respondents belonged to the agricultural sector, while some of them were employed in the industrial sector and some were employed in construction works in nearby towns. Some of the male workers worked in Tiruppur and Coimbatore. The working hours ranged from 12 hours to 14 hours a day, while the wage rate was around Rs.100-150 per day, which was very low. The general opinion of the respondents was that there was much loss in agriculture due to monsoon failure and lack of irrigation facilities. However, some people were cultivating crops that are less water intensive. But, such crops are not remunerative as their market price is quite low. So, people were pessimistic with regard to agriculture and seeked jobs in other sectors even if the wage rates were low. It was found that male and female participated in work equally, but it did not mean that they had knowledge about gender equality. The real situation was that the male's earning and availability of work was not sufficient to run a family. So, women were forced to go to work every day. The illiterate female workers were involved in onion harvesting work and construction work, while educated female workers were able to get employment in nearby spinning mills.

Overall, it can be said that people in this village are hard workers and were willing to work given the opportunity. Hence, agriculture here should be revived by improving the irrigation facilities and the water table. Also training the youth in vocational streams would enable them to get employment in industrial units or get self-employed.

Sectoral Composition of Workers and Output

The structure of workforce could be understood by the percentage shares of different kinds of workers. These are influenced by the occupational background of the blocks. For instance in Marungapuri, Vaiyampatti, Pullambadi and T.Pet, a large proportion of workers have reported to be cultivators. Obviously this is very low in urban centres like Thiruverambur and Tiruchirappalli Corporation, which are predominantly occupied by the workers of other categories. Taking Tiruchirappalli district as a whole, agricultural labourers formed a single majority occupation group. Household workers were very small in number. As compared to the size of agricultural labourer population, cultivator population was smaller in all the blocks in Tiruchirappalli district. The number of female cultivators is lesser than the male cultivators. But, in the case of agricultural labourers, female outnumbered male. Number of land owners among women is smaller, hence the number female cultivators is smaller. This is so, because women are mostly landless and landless population is more than land owning population. As expected, female agricultural labourers are more than male agricultural labourers in most of the blocks and in Tiruchirappalli district. The same trend is observed in the case of household workers (women are more than men), except in Vaiyampatti, Thuraiyur and Uppiliapuram blocks. On the whole, female household workers are slightly more than the male household workers. In the case of workers of other categories, men outnumbered women in all the blocks and in the district as well.

Box 3.1 – Child Labour Decline in District

The administration of Tiruchirappalli district has taken series of measures to eradicate the prevalence of child labour in the district. Besides implementing schemes relating to child labour, officials of the Child Labour Effective Elimination and Eradication Society (CHEERS), Child Line, District Child Protection Unit (DCPU), Sarva Shiksha Abhiyan (SSA) and Police Department often conduct surprise raids to hotels, shops and manufacturing units in order to rescue if children are employed. Rescued children are either enrolled in nearby schools or taught in bridge schools before being mainstreamed. However, the officials could not file cases against the establishments for employing the child labourers as the law permits to register a case only if children below the age of 14 years are employed. The team of officials mostly target children who are forced to work and those employed for economic reasons. Generally, officials counsel the parents of the children to enroll them in schools to pursue their studies. The rescued children are handed over to their parents only after they submit the admission papers to the officials.

Table 3.3 Compositions of Workers in Major Sector (in no.)

Sl.No	Blocks	Total Workers		Cultivators		Agri. Labourers		Household Workers		Other Workers	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	Thiruverumbur	65,261	23,361	3,121	942	5,527	5,387	1,267	1,543	55,346	15,489
2	Andanallur	29,613	17,056	3,473	1,341	11,178	10,833	479	504	14,483	4,378
3	Manikandam	31,272	17,172	4,085	2,201	7,583	7,903	410	542	19,194	6,526
4	Manapparai	42,006	26,639	8,077	5,741	9,455	12,147	656	1,108	23,818	7,643
5	Marungapuri	38,932	31,009	12,597	8,519	15,309	18,954	582	602	10,444	2,934
6	Vaiyampatti	29,229	24,557	8,437	6,001	12,040	15,557	389	291	8,363	2,708
7	Lalgudi	41,860	25,057	4,998	1,464	15,927	16,321	707	743	20,228	6,529
8	Pullambadi	31,358	23,160	9,199	5,907	10,764	12,742	450	456	10,945	4,055
9	Mannachanallur	55,287	33,735	7,294	4,248	15,279	16,109	1,118	1,345	31,596	12,033
10	Musiri	38,793	27,753	8,266	5,312	13,765	16,110	850	953	15,912	5,378
11	T.Pet	32,128	24,044	7,610	5,116	12,009	14,589	660	754	11,849	3,585
12	Thottiyam	41,239	29,385	6,307	3,476	20,614	20,120	2,104	2,152	12,214	3,637
13	Thuraiyur	43,628	30,949	9,835	7,629	12,640	16,809	680	654	20,473	5,857
14	Uppiliyapuram	30,616	25,354	9,736	7,311	11,696	15,051	410	377	8,774	2,615
15	Tiruchirappalli Corporation	2,37,984	65,542	1,860	566	3,803	2,561	3,579	4,021	2,28,742	58,394
	District	7,89,206	4,24,773	1,04,895	65,774	1,77,589	2,01,193	14,341	16,045	4,92,381	1,41,761
Source : Census 2011											

The number of workers in other work category was almost 50 per cent of the total workers. In this category, the percentage of male workers is more than 50 per cent of total workers and slightly less than 40 per cent for female category. The large number of workers in the categories mentioned above show that people may have been forced to take up self-employment, most of whom are hawkers, street vendors, road-side petty shop owners.

In terms of the inter-block variations, the number of male cultivators is high in Marungapuri block with 12,597 followed by Thuraiyur with 9,835. The number of female cultivators is also more in Marungapuri followed by Thuraiyur. The number of female

agricultural labourers is higher than the male agricultural labourers in all the blocks except three blocks, viz., Thiruverumbur, Thottiyam and Tiruchirappalli Corporation. In Thottiyam block, the number of both male and female agricultural labourers are high compared with other blocks in the district. Likewise, the Household Workers were also large in Thottiam block compared to other blocks. In the Other Workers' category, Tiruchirappalli Corporation had higher number of male and female workers, followed by Thiruverumbur block. In this category, Vaiyampatti had the lowest number of male workers and Uppiliyapuram had the lowest number of female workers. Since Tiruchirappalli and Thiruverambur are urban centres, the workers of other categories are greater here.

The sector-wise Gross District Domestic Product (GDDP) for Tiruchirappalli (Table 1.2, p-6) district provides a glimpse into the contribution by each sector to the output. The primary, secondary and tertiary GDDPs were Rs.83,492 lakh, Rs.1,99,605 lakh and Rs.6,06,599 lakh in 2004-05 respectively. The primary GDDP increased in the year 2011-12 to Rs.1,12,452 lakh, the GDDPs of the secondary and tertiary sectors substantially increased to Rs.4,08,255 lakh and Rs.14,21,485 lakh respectively in 2011-12. The primary sector recorded average annual average growth rate of 4.86 per cent during the above period, while the secondary sector grew by 10.94 per cent and the tertiary sector grew by 12.98 per cent. Comparing the three sectors, the tertiary sector has recorded the highest average annual growth rate during the period 2004-05 and 2011-12 followed by the secondary sector. The primary sector registers the lowest growth rate. It can also be observed that the percentage share of both the primary and secondary sectors' shares had slightly decreased between the two periods, which had been compensated by a slight increase in the share of the tertiary sector. In terms of the percentage share, the tertiary sector forms the largest chunk (73.19 per cent). This shows that the service sector, which flourished during the early 2000s, has substantially improved the economy. Certainly, the agriculture sector seems to be in a poor condition in the district, and needs urgent attention.

Box 3.2 MGNREGA –Employment and Income

A majority of the poor in rural areas mainly depended on the wages earned through unskilled, casual and manual labour. Inadequate labour demand or unpredictable crisis had adverse impacts in their employment opportunities. Moreover, the unorganized sector that provided employment to the unskilled rural poor was not able to provide sufficient employment or remuneration to all. In this regard the Mahatma Gandhi National Rural Employment Guarantee Act was an attempt to provide job for the rural illiterate and aged persons with some wage income. It is understood that majority of the households had got jobs through MGNREGA. In terms of blockwise variations, Thuraiyur block recorded the highest percentage of households being provided employment under MGNREGA with 86 per cent followed by Vaiyampatti block with 85 per cent (see Apendix Table 3.1). The least performing blocks in this regard were Thiruverumbur (60 per cent) and Manigandam (68 per cent). This was understandable as Tiruverumbur and Manigandam are more urbanized compared to the remaining blocks in Tiruchirappalli district and hence, productive labour was absorbed by various sectors in the respective blocks. The most important impact of the MGNREGA has been on rural wages, which have seen the daylight in the past six to seven years. Indeed, the rural wages have increased tremendously in the past six to seven years since the advent of MGNREGA. The increase has not only been in nominal terms, but also in real terms, which is a heartening fact in terms benefits, trickling down to the poor rural masses. The wage increase for female labourers was quite remarkable and the women were now able to bargain for higher wages, thanks to MGNREGA.

Registration and Placement

The Employment Exchanges in various districts of the State is operated by the Department of Employment and Training. The major objectives of the Employment Exchanges are, registration of the jobseekers, nomination against notified vacancies, providing vocational guidance to students and unemployed, periodical collection, compilation and preparation of statements on employment and unemployment, etc. In this respect the number of jobseekers registered over years and their placement has been provided in Table 3.4. It can be observed from the Table that the persons registering with the District Employment office over the period 2007 to 2011 was more or less the same. There was a small variation during the year 2007 to 2011.

Table 3.4 Registration and Placement (in no.)

Sl No	Year	Registration	Placement
1	2007	46,035	710
2	2008	37,860	1,858
3	2009	43,716	1,060
4	2010	42,554	829
5	2011	45,831	924
	Total	2,30,175	5,381

Source: District Employment Office, Tiruchirappalli.

The total number of persons who registered during the reference period was around 2.3 lakhs. The total number of people placed through the District Employment Office during the period 2007-2011 is 5,381, which was 2.33 per cent of the total number of the registered persons during the same period. Through employment exchanges, most of the jobs are provided by Government Departments. Hence, from this data, it cnnot be said that all are unemployed, because some may join private companies or even through Public Service Commission exams. Also, it is to be noted that the persons who get placed through the District Employment Office are placed at very low level jobs, as higher level jobs are filled through competitive examinations. So, the District Employment Office should act as an agent to make the job seeking candidates competitive and employable.

Income

Per Capita Income

The data available in Table 3.5 shows the progress of Tiruchirappalli economy with reasonably higher (higher than inflation rates) per capita income growth rates between 2004-05 and 2011-12. The per capita income of Tiruchirappalli district was Rs.35,868 in 2004-05, which grew by an average rate of 11.23 per cent per year over the reference period and stood at Rs.75,393 in 2011-12. The per capita income of the Tiruchirappalli district was substantially higher than the State per capita income of Rs.63,996 for the year 2011-12. In terms of the average annual growth rate growth rate of PCI, Tiruchirappalli district's performance (13.78 per cent) had been better than that of

Tamil Nadu State (11.03 per cent). This was quite possible as this district is relatively prosperous in terms of industry as well as agriculture.

Table 3.5 Per Capita Income at Constant (2004-2005) Prices (in Rs.)

Year	District	State
2004-05	35,868	33,998
2005-06	41,175	38,435
2006-07	47,369	43,941
2007-08	51,234	46,293
2008-09	56,188	48,473
2009-10	63,395	53,359
2010-11	70,352	59,967
2011-12	75,393	63,996
Average Annual Growth Rate (%)	13.78	11.03
Source: Department of Economics and Statistics.		

Poverty and Inequality

Poverty and inequality need no introduction in the developing countries. Poverty is generally defined as the inability to attain a minimal standard of living. Inequality is not the same as poverty, whereas poverty is concerned with the absolute standard of living of a part of the society – the poor – inequality refers to the relative living standards across the whole society. The burdens of poverty and inequality are spread unevenly among various regions – different countries, states, districts, blocks, etc. So, poverty level at the block level has to be analysed in the district.

The poverty figures for Tiruchirappalli district are given in Table 3.6 in terms of Below Poverty Line (BPL) households (HHs) for the year 2013-14. The lowest poverty level can be seen in Tiruchirappalli Corporation with 14.98 per cent BPL HHs followed by Thiruverambur block with 21.86 per cent.

Table 3.6 Trends in Poverty Level

Sl. No	Blocks /District /State	Total No. of HHs	Total No.of BPL HHs	Percentage of BPL HHs
1	Andanallur	23,611	7,050	29.86
2	Lalgudi	34,807	8,149	23.41
3	Manachanallur	47,603	10,523	22.11
4	Manigandam	27,301	6,859	25.12
5	Mannapparai	27,909	6,362	22.80
6	Marungapuri	30,963	9,685	31.28
7	Musiri	29,462	7,758	26.33
8	Pullambadi	26,576	8,151	30.67
9	Thiruverumbur	26,378	5,766	21.86
10	Thottium	31,598	11,747	37.18
11	Thuraiyur	34,150	10,658	31.21
12	T.Pet	24,593	6,454	26.24
13	Uppliapuram	26,190	7,831	29.90
14	Vaiyampatti	22,741	6,642	29.21
15	Tiruchirappalli Corporation	23,3947	35,036	14.98
	District	6,47,829	1,48,671	22.95
Source: PO Mahalir Thittam, City Corporation, Tiruchirappalli.				

The highest poverty level can be seen in Thottiyam, Marungapuri, Thuraiyur and Pullambadi with 37.18 per cent, 31.28 per cent, 31.21 per cent and 30.67 per cent respectively. On the whole, the district level was 22.95 per cent. Four blocks, viz., Tiruchirappalli Corporation, Thiruverumbur, Manachanallur and Manapparai performed better than the district level in terms of percentage of BPL HHs. This shows the spread of backwardness of the district and lack of reach of development initiatives in the district in many blocks. A quick look at the work participation of the various blocks reveals that the blocks with larger main workers were less poor, while blocks having more marginal workers and non-workers were at high poverty level.

The Public Distribution System

The Public Distribution System (PDS) has been playing an important role in attaining higher level of household food security and thereby reducing the incidence of poverty, ever since it was started in 1939. The PDS was started for a different purpose but has undergone metamorphosis several times. In its present form PDS roughly distributes about 10 to 12 per cent of the annual foodgrains production or it meets 12 to 15 per cent of the individual requirements. This is the reason why the PDS is often criticized for its failure to serve the BPL population. But, Tamil Nadu is different from the rest of India; it has the history of following universal PDS for over three decades. Currently, the Government of Tamil Nadu provides 35 kg of rice to AAY card holders and 20 kg of rice to other card holders per month, free of cost through the PDS. Other than this, the Government of Tamil Nadu also offers wheat, palm oil, coarse cereals, sugar and kerosene at subsidized prices through the PDS.

Table 3.7 Family Card Holders (in no.)

Sl. No	Blocks	HHs Provided Family Cards
1	Andanallur	43,981
2	Lalgudi	34,193
3	Manachanallur	45,720
4	Manigandam	56,940
5	Mannapparai	38,234
6	Marungapuri	38,950
7	Musiri	42,273
8	Pullambadi	27,044
9	Thiruverumbur	59,917
10	Thottium	39,247
11	Thuraiyur	42,520
12	Tattayyangarpettai	31,560
13	Uppliapuram	30,740
14	Vaiyampatti	27,480
15	Tiruchirappalli Corporation	2,06,955
	District	7,65,754

Source: District Supply Officer, Tiruchirappalli (2013-14).

Table 3.7 presents the blockwise family card holders details of Tiruchirappalli district for the year 2013-14. The district had 7,65,754 cards. The Tiruchirappalli corporation had 2,06,955 family cards, it constituted 27.03 per cent of the total family cards issued in the district.

Land Use Pattern and Agriculture

Blockwise details of land use pattern for the years 2006-07 and 2013-14 (Appendix Table 3.2) reveal that all the blocks register changes in the areas of all categories of lands. The area under forest, and barren and uncultivable categories had declined in the district with Thuraiyur and Uppiliapuram blocks mainly contributing to the decline of the former and Thiruverumbur block for the latter. Thuraiyur and Uppiliapuram blocks are the areas with hilly terrain and much forest cover. These areas have borne the brunt of deforestation as a result of the modern development process. The net and gross areas sown have also recorded a decline over the reference period in the district due to the fall in the net cropped area in all blocks except Pullambadi and gross cropped area in 10 blocks. Some structural changes can be observed in Tiruchirappalli district. Looking at the patterns of changes, it can be concluded that more and more lands were allocated for the use of non-agricultural purposes, which had recorded an increase in all blocks except Marungapuri. Lands classified as waste, current fallows, and areas covered by tree have increased. The other fallows have increased significantly, suggesting fall in cultivation in the district. This trend is reflected in all the blocks except Pullambadi.

The analysis of cropping intensity of Tiruchirappalli district at the block level (Appendix Table 3.3) revealed there were marginal variations between the net cropped area and the gross cropped area in 2006-07 (i.e., cropping intensity was 1.00 or just above it), except Lalgudi block in which the cropping intensity was 1.46. The situation changes in 2013-14 with three blocks, viz., Lalgudi (1.56), Andanallur (1.36), Manigandam (1.23) and Uppiliapuram (1.11) having cropping intensity much greater than 1.00. All the other blocks had either 1.00 or just above 1.00 in the year 2013-14. Lalgudi block perfromed exceedingly well in terms of cropping intensity as it was adjacent to the river Cauvery and was very well irrigated through canals. The maximum increase in the gross cropped area was found in Pullambadi block over the reference period (2,254 ha.) and the maximum decline during the same period has been found in Marungapuri block (6,473 ha.).

In terms of irrigation intensity (Appendix Table 3.4) also the same picture as of cropping intensity was reflected. All the blocks had irrigation intensity of 1.0 or just above one ranging from 1.00 to 1.09 in 2006-07 with the exception Lalgudi block, which had an irrigation intensity of 1.39. In 2013-14 also Lalgudi block (1.47) registered the highest irrigation intensity among the various blocks in Tiruchirappalli and also recorded an increase compared to 2006-07. In 2013-14, five other blocks had irrigation intensity significantly more than 1.00, which are Manachanallur (1.21), Uppiliapuram (1.19), Manigandam (1.18), Thuraiyur (1.14) and Musiri (1.13). In 2013-14 only one block, viz., Manigandam had registered an increase in the gross area irrigated during the reference period, all other blocks registered a decline during the same period. All the blocks including Manigandam registered a decline in the net irrigated area also. The maximum decline in gross and net irrigated areas were found in Thuraiyur block over the reference period (4,508 ha. and 4,852 ha. respectively).

Conclusion

Tiruchirappalli district, one of the central districts in Tamil Nadu, has got certain geographical, locational and historical advantages. Thanks to these advantages, and the district with good infrastructure facilities such as roadways, railways and airport has helped in setting up of small industries as well as large industries like BHEL, Railway Workshop, Small Arms Factory. In the education field, many institutions have been set up by the Government and private sector. In per capita income, it is noticed that the district has performed better than the State. In the sectoral GDDP, it is encouraging to note that the secondary sector or the manufacturing sector is growing faster in the district, though the primary sector seems to perform poorly.

It can be known from Chapter 3 that the urban WPRs had slightly gone up in the study period, whereas in the rural area, this was just the opposite. In the case of rural females, the ratio had gone down from 45.3 per cent (2001) to 43.8 per cent (2011). The non-worker population has increased in almost all blocks of Tiruchirappalli district except Lalgudi. Marginal worker population has increased in blocks like Andanallur, Manapparai, Thiruverambur and Tiruchirappalli Corporation, whereas it has declined in the blocks like Manachanallur, Manigandam, Marungapuri, Musiri, Pullampadi, Thottiyam, Thuraiyur and Uppliapuram. The main worker population has increased in all the blocks of Tiruchirappalli District. The rates of increase in the main workers, marginal workers and non-workers clearly show the process of semi - urbanization of the

rural areas of Tiruchirappalli District. It is this migrant society that is in dire need of homes, basic amenities of life, health, education, employment and Mass Rapid Transint System (MRTS). Thanks, to the plans of urban development in the district to tide over the growing urban congestion may help solve such problems in future.

Thuraiyur block recorded the highest percentage of households being provided employment under MGNREGA with 86 per cent followed by Vaiyampatti block with 85 per cent. While the least performing blocks in this regard were Thiruverumbur (60 per cent) and Manigandam (68 per cent). The lowest poverty level can be seen in Tiruchirappalli Corporation per cent BPL HHs followed by Thiruverambur. The highest poverty level can be seen in Thottiyam, Marungapuri, Thuraiyur and Pullambadi. Poverty and inequality levels had come down in the district, thanks to various welfare oriented schemes and effective public distribution initiated by Tamil Nadu State. Few blocks like Pullampadi, Vaiyampatti, Uppliapuram and T.Pet need special attention to achieve sustainable development. Overall, what can be said about the economy of Tiruchirappalli is that the big-push initiated through large public sector investments have not been adequately supported by private initiatives and a large dose of private investment will surely lead to further the development process assisted by the already blossomed public sector industries, in and around Tiruchirappalli.

CHAPTER 4

DEMOGRAPHY, HEALTH AND NUTRITION

Chapter

4

Demography, Health and Nutrition

Introduction

Public Investment in social sector, i.e., health and education could enhance everyone's potential and can mitigate the effects of the rising inequality. It would be possible to achieve substantial health gains particularly among people at the lowest rung of the society if the rising revenue was invested prudently for universalizing a core package of health care service for all that addresses the major causes of morbidity and mortality. Planners and Policy makers in developing countries like India have to take into account the ongoing demographic changes (number and age structure of the population) so that available human resources could optimally be utilized as agents of change and development to achieve improvement in quality of life.

Demography, health and nutrition are one among the important aspects of human development in any area, State or Country. The main objective of development is to mend the quality of life of the society. Population - its growth, composition, size, and quality plays an important role in the process of development in any area. The hyper growth of population, undergoing in a poor economy with limited resources and embryonic technology can be a liability. Whereas, when population is efficiently engaged, it will result as an asset and a resource to the State and the Nation.

Good health is the basic objective of any development effort. The concept of human development as defined by UNDP rests on three pillars: knowledge, health and livelihood. Health of the people has been recognized as a valuable national resource and

the government's endeavor has been to improve the same and enable them to contribute to the enhancement of the nation's productivity.

Health was defined by World Health Organization (WHO) as a state of complete physical, mental and social well-being and not just avoidance of disease. Physical health implied the perfect functioning of the body (WHO 1948). Mental health implies not merely the absence of illness but the state of balance between the individuals (Sartorious, 1983). Social well-being implies the quality and quantity of interpersonal ties and the extent of involvement within the individual, between each individual and other members of the society. Thus, health is a multi-dimensional and a holistic concept involving the well-being of the whole community.

In this chapter we have analyzed the changes in demography, health and nutritional pattern in the district and the way government has tried to improve the health status ofthe people.

Demographic Trends and Health Indicators

Population and Demographic Transition

Recently growing literature had evolved, which contradicts the commonly accepted view stating that higher population growth is hindrance to development. There are positive as well as negative impact of population growth on human development. There are many known arguments regarding the negative impacts of population growth, which are known very well. One of the arguments of large population is that it increases the rate of technological progress. But, this could be only possible with proper schooling and health facilities available and accessible to all. Anyhow the demographic dividend has a bearing on the economy and the society.

The population in Tiruchirappalli district has grown from 24,18,366 to 27,22,290 between the years 2001 and 2011 at a decennial rate of 12.57 per cent. The district population as a share of the State's population in 2001 was 3.9 per cent, and it marginally declined to 3.8 per cent in 2011. In Tiruchirappalli district, Tiruchirappalli Corporation had the highest population of 7,89,261 in 2001 and it increased to 8,50,073 in 2011. Among the blocks, the highest population was seen in Manachanallur (1,59,103) in 2001, while in 2011 it can be seen in Thiruverumbur as (2,25,517). In terms of growth of population between 2001 and 2011, Thiruverumbur block records the highest decennial

growth rate of 61.9 per cent. This may be due to the rapid growth of industries and the consequent in migration of population in the block. Manigandam block had the lowest population of 84,713 in 2001, while Vaiyampatti recorded the lowest population in 2011 with 96,486. Among the blocks, T.Pet recorded the lowest growth rate between 2001 and 2011 as (2.1 per cent).

Table 4.1 Demographic Profiles

Sl. No	Blocks /District /State	Population (no.)		Density (per sq km)		SC Pop per cent		ST Pop per cent	
1	Andanallur	89,976	99,968	625	694	25.73	26.41	0.07	0.05
2	Lalgudi	1,43,454	1,45,492	698	708	24.20	24.51	0.14	0.21
3	Manachanallur	1,59,013	1,92,869	427	518	18.72	18.91	0.16	0.12
4	Manigandam	84,713	1,07,526	396	502	17.88	17.66	0.40	0.46
5	Mannapparai	1,29,025	1,46,961	465	529	15.06	16.29	0.38	0.15
6	Marungapuri	1,15,926	1,31,923	260	296	19.81	20.96	0.03	0.00
7	Musiri	1,20,219	1,28,693	344	369	20.08	22.06	0.28	0.04
8	Pullambadi	1,02,244	1,09,373	263	282	15.27	16.21	0.18	0.37
9	Thiruverumbur	1,39,329	2,25,517	410	664	19.87	19.28	0.41	0.51
10	Thottium	1,26,569	1,35,120	455	486	21.19	22.25	0.05	0.01
11	Thuraiyur	1,34,508	1,46,659	283	309	19.02	20.20	5.76	4.96
12	T.Pet	1,00,836	1,02,962	321	328	19.30	17.82	0.09	0.11
13	Uppliapuram	96,989	1,02,668	291	308	24.75	24.69	5.63	5.37
14	Vaiyampatti	86,304	96,486	323	361	15.26	15.52	0.00	0.01
15	Tiruchirappalli Corporation	7,89,261	8,50,073	4,792	5161	9.86	10.53	0.39	0.28
	District	24,18,366	27,22,290	549	618	16.52	17.14	0.78	0.67
	State	6,24,05,679	7,21,47,030	480	555	19.01	20.01	1.04	1.10
Source: Census 2011									

The density of population in the district was 549 in 2001 and it increased to 618 in 2011. So, the population density had been quite higher than the State level during the reference years (480 in 2001 and 555 in 2011). The population density was quite higher in the district as Tiruchirappalli Corporation is a buzzling urban area with a population of 8.5 lakhs in 2011, i.e., it accounted for 40 per cent of the population of Tiruchirappalli district. In terms of population density, Tiruchirappalli Corporation's figures were 4,792 in 2001 and it increased to 5,161 in 2011. Among the blocks, Lalgudi registered the highest population density with 698 in 2001 and 708 in 2011. In the year 2001,

Manaparai block registered the lowest population density of 260, while in 2011 Pullambadi block registered the lowest figure of 282.

In terms of growth, Thiruverumbur recorded the highest increase in population density from 410 in 2001 to 664 in 2011, whereas Uppiliapuram registered the least increase from 291 in 2001 to 308 in 2011. These two can be attributed to migration – the former was the case of in-migration, while the latter was the case of out-imigration.

SC population of the Tiruchirappalli district in 2011 increased as compared to 2001 population. The share of SC population of to the total population of Tiruchirappalli district was 16.52 per cent in 2001 and it increased to 17.14 per cent in 2011. Highest SC population during 2001-11 was in Andanallur block recorded the highest share of 25.73 per cent in 2001 Census and 26.41 per cent in 2011 Census. Highest increase in SC population was recorded in Musiri block as it increased from 20 per cent to 22 per cent out of the total population during 2001-2011. Highest decline in SC population was recorded in T.PET block as it decreased from 19.30 per cent in 2001 to 17.52 per cent in 2011. Likewise Manigandam, Thiruverambur and Upiliapuram also recorded a decline in the SC population between 2001 and 2011. The lowest SC population had been recorded in Tiruchirappalli Corporation in 2001 and 2011 (9.86 per cent and 10.53 per cent respectively).

ST population of Tiruchirappalli district declined to 0.67 per cent in 2011 from 0.78 per cent in 2001 out of the total population of the district; in state it increased from 1.04 per cent in 2001 to 1.10 per cent in 2011. As per the 2011 Census, four blocks registered an increased share in the ST population on comparison with the 2001 Census and the share of the rest of the blocks decreased. Uppliapuram had the highest share of ST population of 5.63 per cent in 2001 and 5.37 per cent in 2011, but the ratio of the block declined. Marungapuri is a habitation of 0.03 per cent STs, in 2001, but in 2011, the Census data showed no ST population in the block. In overall terms, ST population of the district had decreased during the reference years.

Crude Birth Rate and Crude Death Rate

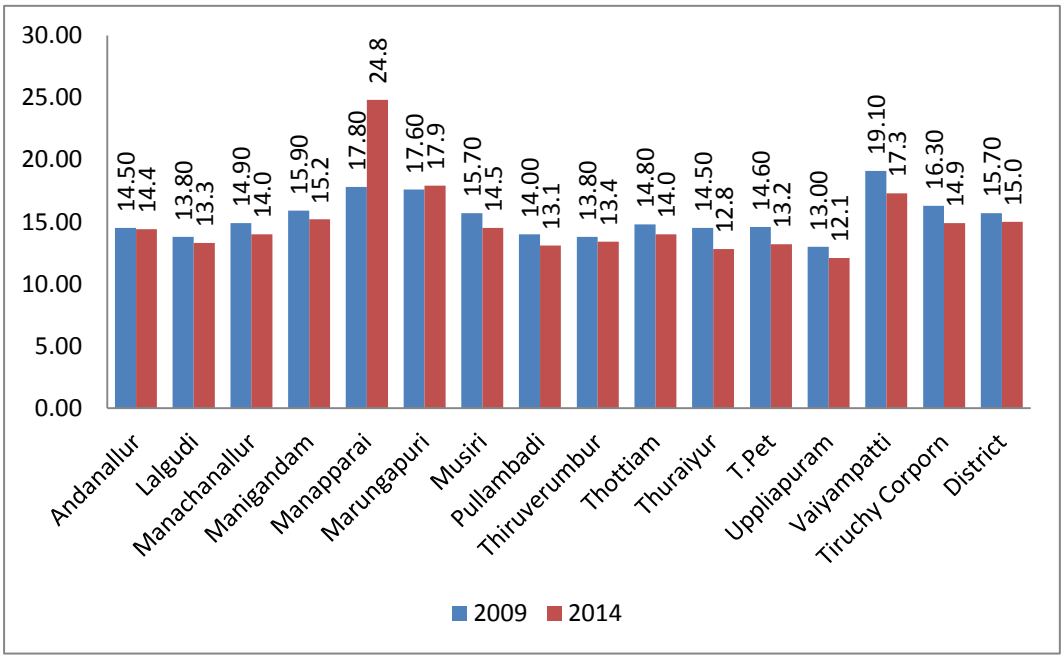
Achievements and gaps can be assessed by observing the trends for various health indicators like life expectancy at birth, infant mortality rate, crude birth rate, crude death rate, total fertility rate maternal mortality rate, and morbidity patterns in any block, district, state or country.

Crude birth rate is the number of live births occurring among the population of a given geographical area during a specified period of time usually one year; it is often

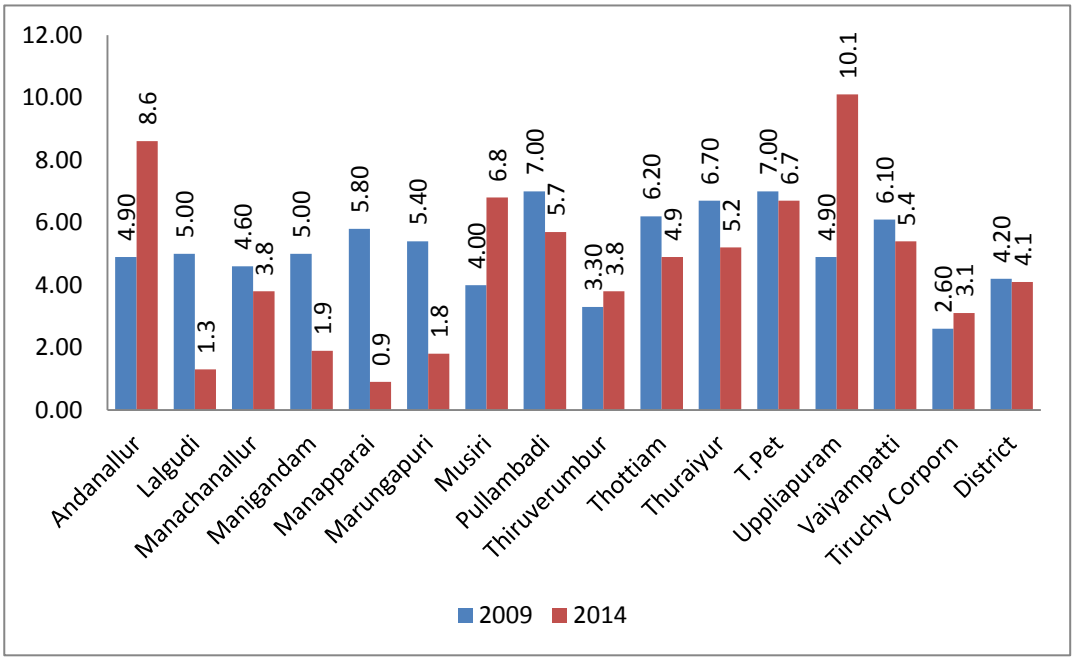
expressed as the number of live births per 1,000 of the population per year. This is a common measure of fertility for a given population. Crude death rate (CDR) is the simplest method of measuring death rate in any area. Crude death rate is the ratio of total deaths to total population in a specified community or area over a specified period of time. The death rate is often expressed as the number of deaths per 1,000 of the population per year.

Figure 4.1 Trends in CBR and CDR

CBR



CDR



Source: Health Department, Tiruchirappalli

The CBR in the district was almost constant between the reference years, i.e., 2009 (15.7) and 2014 (15.0) (see Appendix Table 4.1). Among blocks, most of the blocks revealed CBR in a range of 13 to 19 during 2009, while the range increased in 2014 (12 to 25). This is due to the increase in the CBR of Manapparai from 17.8 in 2009 and 24.8in 2014. This figure was much higher than all other blocks and the district level in 2014. Compared to 2009, all blocks registered a marginal decline in 2014 except Manapparai and Marungapuri. The lowest CBR in 2009 and 2014 was recoreded in Uppiliapuram block with 13 and 12.1 respectively.

The CDR in the district did not show any significant decline in 2014 compared to 2009 as it was 4.20 in 2009 and 4.1 in 2014 (see Appendix Table 4.1). Among most blocks CDR was between 2.6 to 7.0 during 2009 and in the year 2014, the range increased (0.9 to 10.1). This is due the sharp fall in the CDR in Manapparai and sharp increase in Uppilapuram. In 2009, only two blocks, viz., Thiruverumbur and Musiri, and Tiruchirappalli Corporation had lower CDR than the district level, whereas it has increased in seven blocks including Tiruchirappalli Corporation in 2014. In five blocks including Tiruchirappalli Corporation, the CDR has increased during the reference period, while in the remaining blocks, it has declined.

Sex Ratio

Sex ratio is an important component of demography. It has major implications for the marriage and labour markets in an economy. Skewed sex ratio in favour of male can affect their behavior in terms of income, expenditure, saving and investment pattern. It can also affect psychomotor behavior of a particular sex, which may have societal consequences. So, it is important to analyze the sex ratio of the population.

The sex composition of the population has been an important indicator of social development. It is a great source to find the equality of males and females in a society in a given period of time. In India, the sex-ratio has been defined as number of females per 1,000 males. It was observed that there was a declining trend in sex ratio consistently in many states, since last six decades and in some states it continued to be a demographic enigma. It has been reflected in the sex ratios of the districts also.

Table 4.2 Sex Ratio

Sl. No	Blocks/District /State	General		Variation	SC		Variation
		2001	2011		2001	2011	
1	Andanallur	1,012	1,001	-11	1,047	1,036	-11
2	Lalgudi	1,024	1,028	+4	1,014	1,057	+43
3	M.Nallur	1,010	1,006	-4	1,034	1,025	-9
4	Manigandam	1,001	1,017	+16	1,018	1,047	+29
5	Mannapparai	1,013	1,002	-11	1,022	998	-24
6	Marungapuri	1,004	1,008	+4	1,033	1,003	-30
7	Musiri	980	1,018	+38	993	1,045	+52
8	Pullambadi	1,014	1,051	+37	1,037	1,024	-13
9	Thiruverumbur	987	965	-22	1,030	979	-51
10	Thottium	1,001	1,009	+8	1,023	1,027	+4
11	Thuraiyur	1,006	1,018	+12	1,013	1,033	+20
12	T.Pet	994	980	-14	1,019	1,004	-15
13	Uppliapuram	999	1,029	+30	1,004	1,047	+43
14	Vaiyampatti	1,014	1,016	+2	1,045	1,036	-9
15	Tiruchirappalli Corporation	1,001	1,025	+24	1,018	1,010	-8
	District	1,003	1,013	+10	1,018	1,022	+4
	State	987	996	+9	999	1,004	+5
Source: Census 2001 and 2011							

Table 4.2 gives the sex ratio of Tiruchirappalli district blockwise. The overall sex ratio in Tiruchirappalli district has improved during 2001 to 2011. The sex ratio of the district increased from 1,003 in 2001 to 1013 in 2011 and was higher than State level in both the years. Highest sex ratio among general category was in Uppliapuram (1029) followed by Lalgudi (1028) in the year 2011, whereas Thiruverumbur and T.Pet blocks' sex ratios declined during the decade and were below the 1,000 mark. The sex ratios of eight blocks were higher than the district sex ratio.

In Tiruchirappalli district SC sex ratio of was 1,022 in 2011, which was higher than the SC sex ratio of the State (1,004) in the same year. Highest SC sex ratio was recorded in Lalgudi block as it increased from 1,014 to 1,057 between the years 2001 to 2011. Two blocks Thiruverumbur and Mannapparai had the lowest sex ratio. The sex ratio in Manapparai block was recorded as 998 during 2011, which declined from 1022 in 2001. In Thiruverumbur block, sex ratio decreased from 1,030 in 2001 and 979 in 2011.

Child Sex Ratio

The Child Sex Ratio is a very important component of the demographic data. It has a bearing on the future characteristics of the population of an economy. A skewed child sex ratio also implies social evils prevailing in the society like sex selection and female feticide. Hence, it is important that the child sex ratio of the district as well as the block, be discussed.

In India, the child sex ratio has been the number of female children per 1,000 of male children in the population within the age group of 0-6 years. Changes in child sex ratio reflected the underlying socio-economic and cultural patterns of the society, especially its attitude towards the girl child which drew the society towards the early scanning of fetus through scientific techniques like ultra-sonogram, etc. The child sex ratio also has a bearing on the future demography of a country.

Table 4.3 gives the child sex ratio of the various blocks of Tiruchirappalli district. Tamil Nadu had a child sex ratio of 943 in 2011 as per census of India estimates, while the district had a child sex ratio of 947 in 2011, which was higher than the State level. Among blocks, Tiruchirappalli Corporation had the highest child sex ratio of 960 in the district. The child sex ratio was 927 for Thuraiyur block, which was the lowest among all the blocks of the district. Among the 15 blocks, seven blocks registered a higher sex ratio than the district level. The lower level of child sex ratio in certain blocks might reflect low girl preference in the blocks and increased level of private medical practices where the chances of female feticide exist, which could not be refuted. Also the natural decline in the birth of female children could be responsible for the decline in child sex ratio because of female infanticide which was available.

Table 4.3 Child Sex Ratio

Sl. No	Blocks/District /State	Population in the Age Group of 0-6 in 2011		Sex-Ratio
		Male	Female	
1	Andanallur	4,099	3,919	956
2	Lalgudi	7,394	6,937	938
3	Manachanallur	9,936	9,430	949
4	Manigandam	7,289	6,967	956
5	Mannapparai	8,744	8,284	947
6	Marungapuri	7,637	7,236	948
7	Musiri	6,903	6,425	931
8	Pullambadi	5,355	5,023	938
9	Thiruverumbur	11,016	10,444	948
10	Thottium	7,090	6,585	929
11	Thuraiyur	7,120	6,603	927
12	T.Pet	5,424	5,048	931
13	Uppliapuram	5,371	4,982	928
14	Vaiyampatti	5,755	5,453	948
15	Tiruchirappalli Corporation	40,813	39,174	960
	District	1,39,946	1,32,510	947
	State	38,20,276	36,03,556	943
Source: Census 2011				

Life Expectancy at Birth

Life expectancy at birth indicates the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout his/her life. It is one of the most preferred indicators in demographic and health analysis. Life expectancy measures quantity rather than the quality of life. It is a proxy measure for several dimensions like adequate nutrition, good health, education and other valued achievements.

Table 4.4 Life Expectancy at Birth (in years)

Sl. No	District/ State	2001-02		2013-14#		Rise or Fall in LEB	
		Male	Female	Male	Female	Male	Female
1	District	65.3*	69.8*	71.8	75.2	6.5	5.4
2	State	64.8^	67.1^	71.8	75.8	7.0	8.7

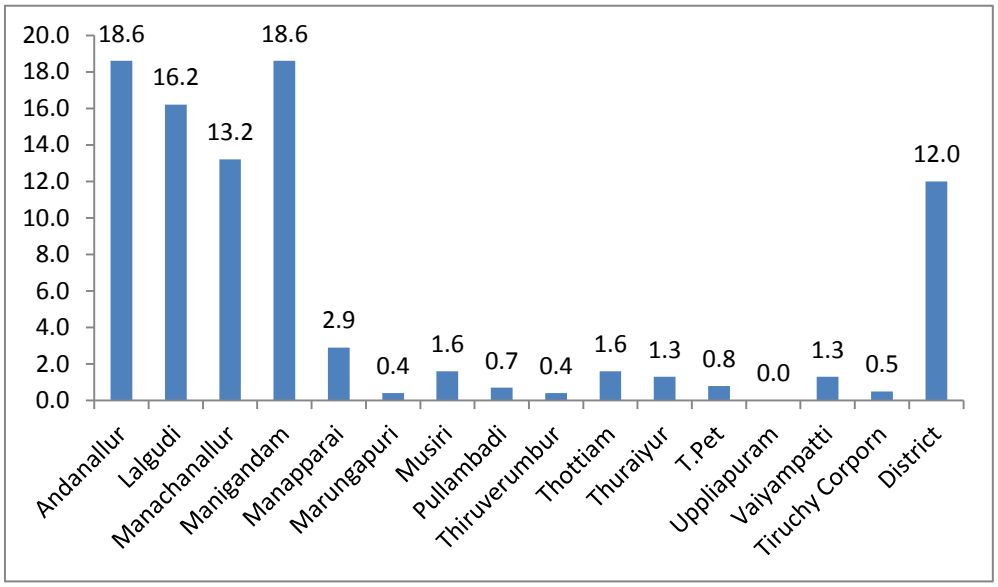
Source: Health Department, *Tiruchirappalli, #Tamil Nadu, ^Statistical Handbook of TN 2013

The life expectancy at birth in Tiruchirappalli district was 65.3 years for male and 71.8 years for female in the year 2001-02, which was higher than the State levels during the same year. In 2013-14, the male life expectancy at birth in Tiruchirappalli district increased by 6.5 years to 71.8 years, while the female life expectancy at birth increased by 5.4 years to 75.2 years. The male life expectancy at birth of Tiruchirappalli district caught-up with the State level in 2013-14, while the female life expectancy at birth, though higher than the male, could not catch-up with the State level as its growth was comparatively lower than the growth of the male life expectancy at birth. There can also be noticed an increase in the life expectancy at birth of male and female at the State and District levels.

Infant Mortality Rate

There are various indicators of the overall state of health status of a country, region and community. Some indicators are widely accepted while others are not widely accepted. Infant Mortality Rate (IMR) is one such indicator of health and it is widely accepted as good indicator of health by Governments as well as International Health Organizations such as World Health Organization (WHO). IMR is the number of infants dying before reaching one year of age. It is calculated per 1,000 live births in a given year. It is most widely accepted as one of the most sensitive indicators of health status due to several reasons. The IMR always reflects the overall health scenario of a region. The rate is low in developed regions and high to very high in developing or underdeveloped regions. If health infrastructure (preventive and curative infrastructures) of a region of a country is very good, the IMR is always good.

Figure 4.2 Infant Mortality Rate



Source: Health Department, Tiruchirappalli (2013-14)

Figure 4.2 depicts the blockwise IMR of Tiruchirappalli district for the year 2013-14 (see Appendix Table 4.2). The district level IMR was 12 in 2013-14, which was less than the State level IMR of 21. Among the blocks, 11 blocks including Tiruchirappalli Corporation had lower IMR compared to the district level. The lowest IMR of zero was recorded in Uppiliapuram closely followed by Tiruverambur and Marungapuri blocks with 0.4 IMR. Tiruchirappalli Corporation was not far behind with 0.5 IMR. The remaining seven blocks also had very low levels of IMR, which ranged from 0.7 to 2.9. In four blocks, viz., Andanallur (18.6), Manigandam (18.6), Lalgudi (16.2) and Manachanallur (13.2), the IMR is much higher. The prevailing rates of infant mortality in these four blocks were a symptom of inadequate care given at the ante-natal and post-natal levels. The quality of ante-natal and post-natal care influences the survival of infants. This was reflected in the high incidence of pre-mature births as being the significant cause of infant mortality. Low birth weight including premature birth was one of the major causes for infant mortality as this increased their receptiveness towards infection. The major causes of infant mortality are respiratory infections, water-borne diseases, poor immunity of neo-nates and infants, unclassified conditions peculiar to infancy, anemia and unspecified fevers, owing to poor nutritional and hygiene standards in few blocks of the District. Other causes providing stimulus to infant deaths are cord

infection, congenital malformation and birth injuries. Thus, a combination of poor nutrition, and inadequately treated infections caused preventable mortality during early childhood in the district. Early marriage in several rural parts of Tiruchirappalli district is also responsible for the high IMR in those parts.

Case Study: Infant Mortality

Infant mortality is used as one of the key indicators of community health. It has been considered as a crucial test for health services despite social progress of a country and the improvement in hospitals, survival of infants continues to be a challenge in the area. So its decline is one of the pre-requisite for acceptance of a small family norm and improvement in the hygiene of the mother and the baby. High infant mortality is considered as social and demographic enigma in the modern society which results as disorder in the demographic structure of the area. It also has its effects on the health of the mother due to immediate conceiving of the next baby. So, it is important to examine the causes of infant mortality.

Pullambadi block was selected at random for the case study related to find the reasons of infant mortality in Tiruchirappalli district. Few cases were studied intensively in the block. Also personal interview method was followed apart from the data provided by the PHCs in the block. In Pullambadi block 42 cases of infant mortality were registered from the year 2013 to 2014 and eight cases were registered under K.K.Nallur PHC, which was highest among the seven PHCs in the block. From the field visits of the villages under K.K.Nallur PHC, fecundity ratio was high among the women which resulted as infant death because of weak physical structure. Other causes were aspiration lung disease, pre-mature delivery and low birth weight. Most of the respondents had studied up to class eight and their husbands were either illiterate or had attained just basic education. Out of all eight cases, two were registered as premature delivery, two as conjunctive heart disease, one as Jaundice, one with Aspiration lung disease, and two with several other diseases.

Proper health education is necessary for the newly married couples and the married women up to the age of 40 years, to teach them the values of the gap after the first delivery and its impact upon the health of child and pregnant women. Also for males and females there should be some basic programmes conducted at local sub-centres and dispensaries to teach them about the use of contraceptives

Maternal Mortality Ratio

Maternal Mortality Ratio (MMR) is the number of women who die during pregnancy and childbirth, per 1,00,000 live births. Maternal death refers to the death of a woman during pregnancy or within 42 days of the termination of pregnancy, irrespective

of the duration and site of the pregnancy, from any cause related to or aggravated by pregnancy or its management, but not from accidental or incidental causes. The MMR represents the risk of hyper tension and anemia during pregnancy, i.e., the obstetric risk. Complications during pregnancy and childbirth are a leading cause of death and disability among women of reproductive age in developing countries. Life Saving Anesthetic skills (LSAS) training for medicos in Tamil Nadu State were provided to facilitate the mitigation of maternal deaths in circumstances in which, cause of death were preventable.

Table 4.5 Maternal Mortality Ratio

Sl.No	Blocks /District /State	2013-14
1	Andanallur	0
2	Lalgudi	50
3	Manachanallur	110
4	Manigandam	120
5	Mannapparai	290
6	Marungapuri	40
7	Musiri	160
8	Pullambadi	70
9	Thiruverumbur	40
10	Thottiam	160
11	Thuraiyur	130
12	T.Pet	80
13	Uppliapuram	0
14	Vaiyampatti	130
15	Tiruchirappalli Corporation	50
	District	89
	State	68
Source: Health Department, Tiruchirappalli (2013-14)		

But, more than the medical issues behind maternal mortality, there lies a myriad of socio-economic issues occurring at different levels in the society. One instance can be the education of reproductive health among the youth, which is suppressed due to social stigma. The fact is however that it should be a major concern for the youth; being the segment of the population that is most sexually active, but has limited information and knowledge about sexual and reproductive health. Without having the right information, access to services and health systems adequately meeting service needs, young people in their families (especially young women) will not only face the mortality risks when they are adults, but may also be prone to the functioning of reproductive system at young age. Without the pre-requisites mentioned above, the ability to make positive, sound and

sustainable health decisions, especially those effecting maternal health will be significantly low. Therefore the emphasis for young people to get informed and seek sexual and reproductive health services that would enable them to make the right health decisions could not be over emphasized.

Table 4.5 provides the MMR of the blocks of Triuchirappalli district for the year 2013-14. The district MMR stood at 89 in 2013-14, whiles the State MMR 68 during the same year. A wide gap seems to be there between the State level MMR and the district level MMR. Among the blocks, seven blocks, viz., Mannapparai (290), Musiri (160), Thottiam(160), Thuraiyur (130), Vaiyampatti (130), Manigandam (120) and Manachanallur (110) had higher MMR than the district level. Andanallur and Uppiliapuram recorded the lowest MMR of zero in the year 2013-14, while the remaining six blocks recorded lower MMR than the district level ranging from 40 to 80. In general, the causes of maternal mortality as discussed earlier may be kept in mind and better support mechanisms for pregnant women may be developed at the grass root level in order to reduce the risk of maternal deaths.

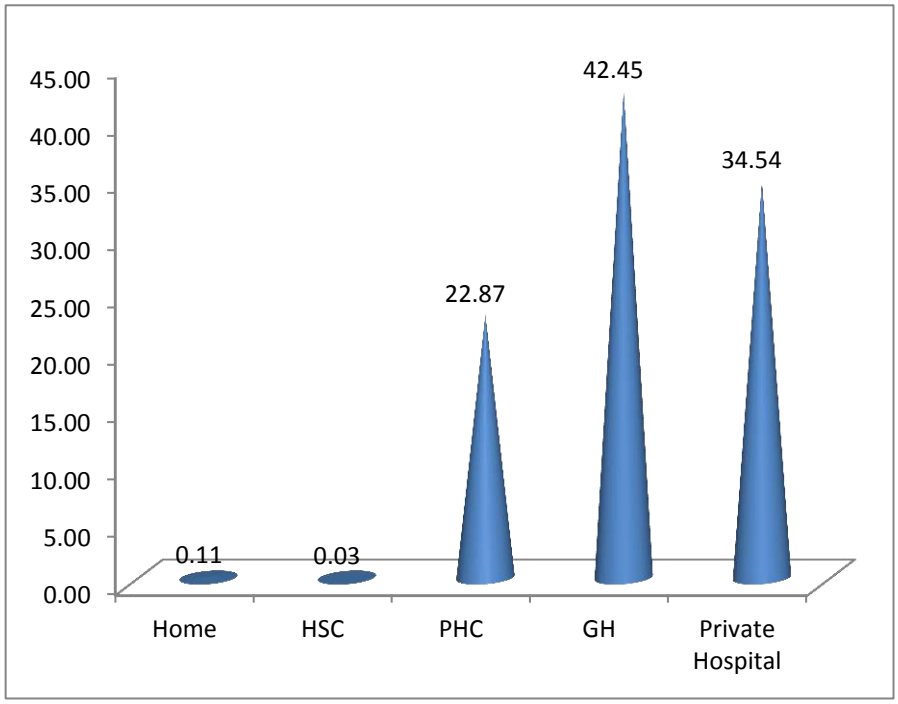
Place of Delivery

The place of delivery is of crucial importance as it has significant implications for the fetus/infant and the mother. These are the places where pregnant women get medical care at a time of giving birth to the children. These places have usually been equipped with better medical facilities and well experienced doctors and other medical staff. There were different types of medical centers available in India for this service usually known as Health Sub Centers (HSCs), Primary Health Centers (PHCs), government hospitals and privately owned hospitals. Despite this in some places home deliveries have been reported to be taking place because of the distance factor. In Tamil Nadu PHC's HSC's have been operative in every district.

The Figure 4.3 shows the share of deliveries at different places such as Home, Health Sub-Centre, Primary Health Centre, Government Hospital and Private Hospital in Tiruchirappalli district during the year 2013-14. The deliveries taking place other than at 'Home' are considered as institutional deliveries and it can be seen that the district records almost cent per cent in terms of institutional deliveries in line with the State level (99.9 per cent). Among the different places of deliveries, Government Hospital tops the chart with a share of 42.45 per cent deliveries followed by Private Hospital (34.54 per

cent) in Tiruchirappalli District. Deliveries in the rural side took place at PHCs at an average of 22.87 per cent. Deliveries taking place at HSCs and at Home are negligible. Among the blocks, four blocks, viz., Manapparai, Marungapuri, Thottiam and Uppiliapuram record 100 per cent institutional deliveries. In all the remaining blocks, there are some cases of deliveries at Home with Thuraiyur recording 14 such deliveries, which is the highest number of such deliveries in a block in Tiruchirappalli district. It is also interesting to note that Thuraiyur and Uppiliapuram blocks have higher share of deliveries at Private Hospital, compared to Government Hospital (Thuraiyur – 11 per cent higher), along with Manigandam block, which is near Tiruchirappalli Corporation.

Figure 4.3 Percentage of Institutional Deliveries



Source: Health Department, Tiruchirappalli (2013-14)

Still Birth Rate

The definition recommended by WHO for international comparison referred that still birth means, "a baby born with no signs of life at or after 28 weeks' gestation". In calculating the stillbirth rate, the number of stillbirths has been divided by the number of live births and stillbirths and then multiplied by 1,000. Sometimes (mainly for the sake of comparison), the number of stillbirths be calculated per 1,000 live births only. The

major causes of stillbirth include: childbirth complications, maternal infections in pregnancy, maternal disorders (especially hypertension and diabetes), fetal growth restriction, congenital abnormalities.

Table 4.6 Still Birth Rate

Sl.No	Blocks/District /State	2007	2008	2009	2010	2011	2014
1	Andanallur	22.60	23.20	15.80	13.50	15.50	14.70
2	Lalgudi	22.80	22.90	17.00	17.10	24.20	21.10
3	Manachanallur	25.80	20.00	16.00	15.20	13.60	16.00
4	Manigandam	19.00	23.00	16.10	15.40	13.80	11.80
5	Mannapparai	14.30	6.80	8.95	7.60	12.80	8.80
6	Marungapuri	19.50	17.00	23.60	21.30	20.80	15.80
7	Musiri	13.80	18.10	15.70	16.70	11.50	12.60
8	Pullambadi	33.40	15.30	24.40	14.90	17.00	18.40
9	Thiruverumbur	16.00	16.60	15.30	12.80	9.80	17.60
10	Thottium	23.70	24.50	17.70	17.80	18.80	12.40
11	Thuraiyur	13.55	12.65	10.60	9.70	11.20	12.10
12	T.Pet	28.00	22.00	19.40	21.60	21.30	14.20
13	Uppliapuram	15.50	14.20	21.50	25.00	20.30	11.70
14	Vaiyampatti	24.10	21.40	18.60	15.40	19.40	14.70
15	Tiruchirappalli Corporation	2.30	3.40	1.10	1.60	2.10	3.80
	District	14.90	13.80	11.80	11.40	11.70	11.00
Source: Health Department, Tiruchirappalli							

The data for Still Birth Rate (SBR) has been provided in Table 4.6 for the various blocks of Tiruchirappalli district. The SBR in the district was 14.9 during the year 2007, which decreased to 11 in the year 2014. The highest SBR was registered in Pullambadi and T.Pet blocks in 2007, while in 2014 Lalgudi registered the highest SBR of 21.1, followed by Pullambadi (18.4). During the year 2007, the lowest SBR was recorded by Tiruchirappalli Corporation (2.3) followed by Thuraiyur (13.55), whereas during 2014,

the lowest still birth rate was recorded by Tiruchirappalli Corporation (3.8) followed by Manapparai (8.8). In 2014, except Tiruchirappalli Corporation and Manpparai block, all the other blocks recorded double digit SBRs.

Immunization

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically with the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease. In modern scientific era immunization has been a part and parcel of health maintenance activity which helped in improving the health status of children at later stages of development. Immunization is particularly done below the age of five year children, so that; their immune system would fight against the diseases like polio, ear infections, respiratory infections, diarrhoeal infections, etc. The best way to treat any disease before its occurrence was by way of immunization. Past studies have proven that vaccines have always been very safe and helpful in reduction of some severe diseases.

In Tiruchirappalli district 98.3 per cent of children between zero and five years of age were immunized during the year 2013-14 (Appendix Table 4.4). Nine blocks achieved more than 100 per cent immunization and totally ten blocks registered above the district average. Tiruchirappalli Corporation registered the lowest percentage of immunization with 95.2 per cent target achievement followed by Lalgudi, Thuraiyur, T.Pet and Vaiyampatti blocks. In overall terms the immunized percentage of children in the district was satisfactory. The Health Department has been serving to provide immunization cover to children against the six dreaded diseases of polio, diphtheria, pertussis, tetanus, TB and measles in addition to prophylaxis against the vitamin A deficiency.

Female Infanticide

Female infanticide refers to the killing of newborn female child by parents due to their desire for a male child. It has been a social evil prevalent in many States of India, since the pre independence era, which has considerably increased after globalization. The modern scientific advancement in technologies like ultra-sonography have complicated this issue by helping the parents to identify the gender of the fetus an in early stage, thus this technology has promoted feticide or aborting the female child. This malpractice has

led to considerable decline in the child sex ratio in India. Mostly, in the district preference to male child is prevalent, but there is no official record of female infanticide. Though unofficial sources reveal that feticide was present in the district.

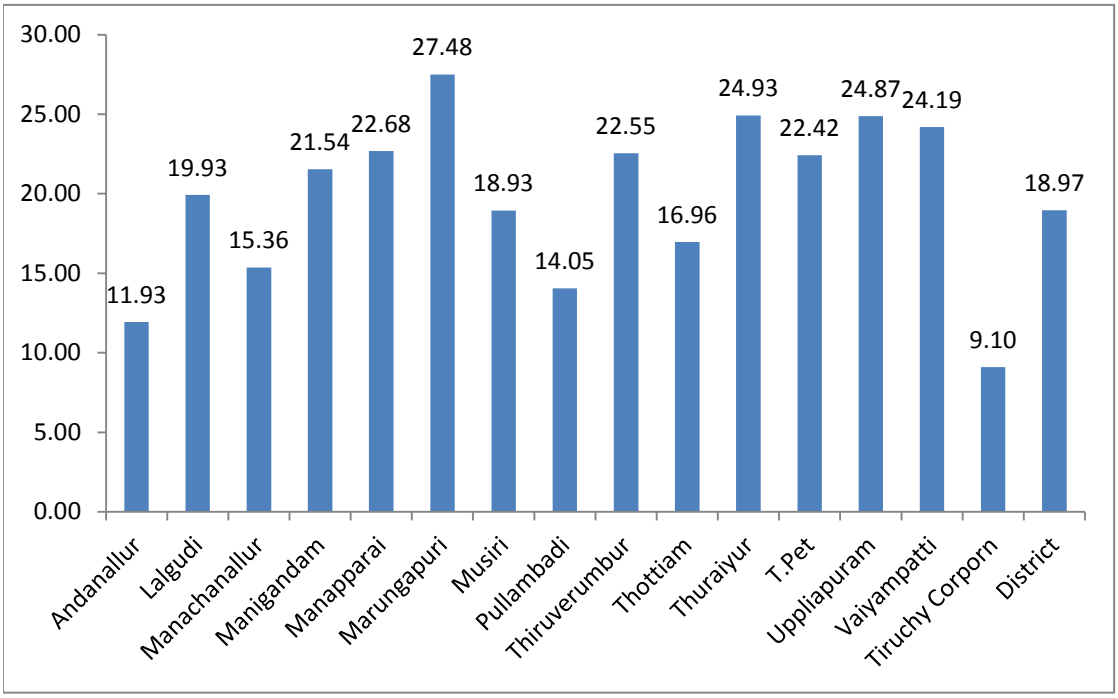
Nutritional Status

Nutritional Level and Trend

Eradication of hunger, poverty, and halving the proportion of people in poverty, ensuring adequate nutrition and dietary improvement for the poor were few among the goals of SAARC Development Goals. The National Nutrition Policy (NNP) has considered poverty in terms of a self-perpetuating vicious circle: causative sequential links being low intake of food and nutrition – under nutrition with attendant nutrition related diseases and infections – faltering growth of children – small body size of adults – impaired productivity – low learning capacity — back to poverty. Children are vulnerable to malnutrition because of low dietary intakes, infectious diseases, and lack of appropriate care and inequitable distribution of food within the household which may even be newly coined as 'Family Welfare Index'. Anyhow, the two standard indices commonly used for physical growth that normally describe the nutrition status of children are height and weight for knowing about stunting and adequate body weight in accordance with age.

Correlation between highly educated people and malnutrition has decreased. Over the decade nutritional programmes have covered a wide area resulting as improvement in the health status of children. Basic educational status has been increased through the Mid-day-meal programme as most of the poor people admit their children to the Sarva Shiksha Abhiyan (SSA) schools and other government schools. The provision of iron, folic acid and calcium tablets, pulses, daliya, channa and other food items prepared at Anganwadi centres in the villages has been done in order to improve the health status of children particularly among adolescent girls. Nutritious Meal Scheme followed by the State had the above indicators in mind while implementing it.

Figure 4.4 Trends in Nutritional Status (0-5 years) (in percentage)



Source: ICDS, Tiruchirappalli (2013-14)

Figure 4.4 shows the blockwise Malnourished Children in the age group 0 – 5 years in Tiruchirappalli district indicating the levels of nutritional status in the district during 2013-14. The Figure shows that the malnourishment in the district ranged from 9.10 per cent to 27.48 per cent in the year 2013-14, with the district level of 18.97 per cent. Six blocks, viz., Tiruchirappalli Corporation, Andanallur, Pullambadi, Manachanallur, Thottiam and Musiri, recorded low rates of malnourishment among children in the age group 0 -5 years, while the remaining nine blocks registered higher rates. Marungapuri had registered malnutrition level of 27.48 per cent, which is quite high when compared to the other blocks in the district and some intervention in this regard needs to be done at the earliest. Tiruchirappalli Corporation had recorded the lowest levels of malnutrition among children in the age group 0 – 5 years in the district. This may be due to the urban characteristics of the block and better awareness and access levels.

Provision of IFA Tablets

One of the major issues faced by the female gender in India is anaemia. Anaemia is the root cause for other diseases due to lack of resistance power. The problem of anaemia during pregnancy is acute putting both the mother and the child at risk. The most important cause of anaemia during pregnancy is an inadequate dietary intake of iron. Hence, in this regard, the Reproductive and Child Health Programme in India aims at providing pregnant women with at least three antenatal check-ups, two doses of tetanus toxoid vaccine, and iron and folic acid (IFA) supplementation during pregnancy. The adolescent girls were also covered under the programme through the provision of IFA tablets.

Table 4.7 presents the provision of IFA tablets during 2013-14 among three categories of population, viz., women, adolescent girls and children. In Tiruchirappalli district 83 percent of women took IFA tablets during the year 2013-14.In Uppiliapuram block, the percentage of women took IFA tablets (96) was highest among the blocks, the least was recorded in Marungapuri (67). Totally, five blocks had the percentage of women who took IFA tablets to be below the district level, viz., Marungapuri (67), Manapparai (75), Tiruchirappalli Corporation (78), Thottiam (80) and Musiri (81). Moving on to the percentage of adolescent girls who took IFA tablets, Thottiam and Manachanallur recorded more than 100. Manapparai recorded the lowest percentage of 29. Eight blocks registered higher percentage than the district average of 76 in this regard. Other than Manapparai, Marungapuri (42), Vaiyampatti (46) and Manigandam (60) blocks recorded much lower percentages in this regard compared to the district level. In the children's category, the percentage who took IFA tablets was 15 on an average in the district. Uppiliapuram block registered the highest (61) percentage of children took IFA tablets, while the least (6) was registered by Tiruchirappalli Corporation. Three blocks, viz., Tiruchirappalli Corporation, Marungapuri and Manapparai had lower percentages in this regard compared to the district level.

Table 4.7 Provision of IFA Tablets

Sl.No	Blocks/District	% of Women took IFA Tablets	% of Adolescent Girls took IFA Tablets	% of Children took IFA Tablets
1	Andanallur	93.00	92.00	25.00
2	Lalgudi	92.00	68.00	31.00
3	Manachanallur	94.00	103.00	28.00
4	Manigandam	95.00	60.00	23.00
5	Mannapparai	75.00	29.00	11.00
6	Marungapuri	67.00	42.00	7.00
7	Musiri	81.00	82.00	35.00
8	Pullambadi	94.00	74.00	25.00
9	Thiruverumbur	95.00	82.00	25.00
10	Thottium	80.00	115.00	31.00
11	Thuraiyur	86.00	87.00	39.00
12	T.Pet	95.00	95.00	35.00
13	Uppliapuram	96.00	75.00	61.00
14	Vaiyampatti	90.00	46.00	27.00
15	Tiruchirappalli Corporation	78.00	82.00	6.00
	District	83.00	76.00	15.00

Source: Health Department, Tiruchirappalli (2013-14)

The provision of IFA tablets in the district with regard to children seems to be much lower than that of women and adolescent girls. Children also very importantly need nutritional supplements that would determine the learning outcomes and their overall development. So, the lacuna in the provision of IFA tablets should be addressed appropriately and awareness campaigns regarding the same, on similar lines with immunization campaign, should make in order to achieve better results.

Box 4.1 Nutrition Programmes of Government

Most of the nutritional programmes of the government in the district were taken up by ICDS in the district and has achieved most of its unique feature in improvement of the health status of children, women and adolescent girls in the district. It also takes care of the pregnant women during pre and post-delivery. It provides nutritious noon meals to the children between the age group of 0-5 years, so as to improve the nutritional level and to provide them pre- school education. As af June 2014, total number of Anganwadi centers in the district among the 15 blocks was 1828 out of which 1666 comprised of main centers and 162 as mini centers, where 1547 workers were providing their service and still 281 posts of workers were vacant. There were also 1668 Anganwadi helpers in the district where 1304 were providing their service and rest vacancies were vacant. They were providing the food to 152639 children within the age group of 0-5 years of age and also took care of 12112 SNP fed ANW and 10808 SNP fed PNM. Among the blocks of the district Lalgudi was having highest number of Anganwadi centers (153) and lowest were in Andanallur Block (90).

Every year ICDS conducts "International breast feeding day" in the 1st week of August and in 1st week of September to give more focus upon breast feeding. "National Nutritional week" is celebrated on October 8th with a vision to make awareness for hygienic food. Early childhood care and Education Day at village level on 23rd of October to promote basic education and child care at every village level with the help of Anganwadi workers. One day training was given to the newly married couples for taking precautions at time of pregnancy, calorie in take for better health of pregnant women and also awareness about Dr. Muthulakshmi Reddy scheme. This is a scheme from which pregnant women get Rs.12,000 on 3 installment basis.

Rajiv Gandhi Scheme for empowerment of Adolescent Girls (SABLA) was initiated on April 1st 2011 under Ministry of Women and Child Development. It was implemented using the platform of ICDS Scheme through Anganwadi center under which 45308 adolescent girls were covered within different age groups.

Kishori Shakti Yojna (KSY) was implemented using the platform of ICDS Scheme through Anganwadi centers and is currently functioning in the district. The objectives of the Scheme were to improve the nutritional and health status of girls in the age group of 11-18 years as well as to equip them to improve and upgrade their home-based and vocational skills to promote their overall development including awareness about their health, personal hygiene, nutrition, family welfare and management. In everyAnganwadi centre 2-3 adolescent girls were targeted under these schemes and provided supplementary nutrition by the State government. From the data and field visits it was observed that every block of the district covered non-school going girls in the district. For the proper implementation of the scheme in the district school going girls were also included in the scheme after their school hours.

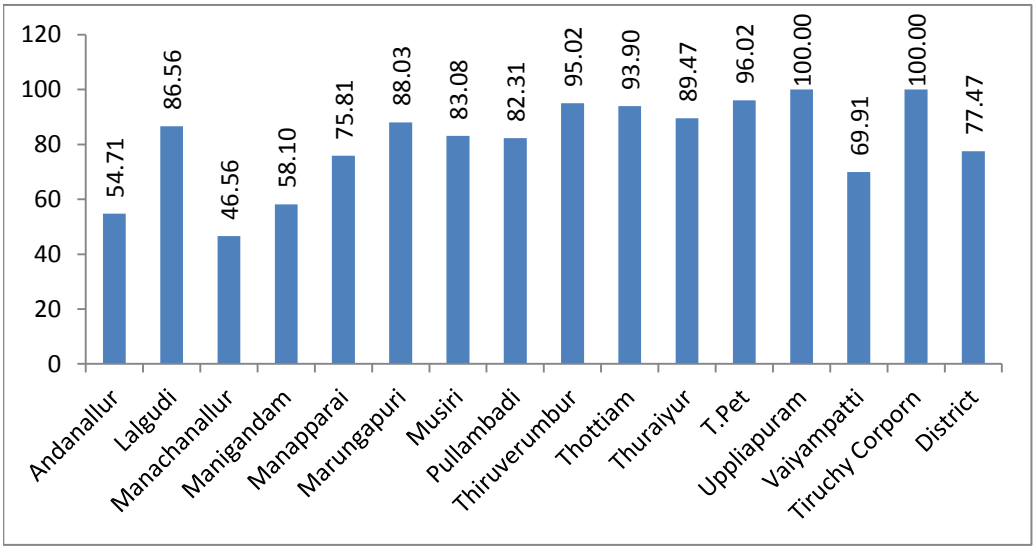
Other programmes included registration of Ante Natal Women (ANW) and Post Natal Mothers (PNM) under which total 5,932 ANW were covered till June 2014 and 1,973 were registered in the month of June and 5,020 PNM were covered till the reference month where 1,740 were registered in the month of June 2014. Supply of Vitamin A Programme etc was running in the district.

Non-Nutritional Factors and their Impact on Nutrition

Water Supply

Considering access to safe drinking water and access to water in general, all other activities are a pre-requisite for human development. The State Government has made huge investments in this regard. Safe water in sufficient amounts can have positive effects on the general health of the people in terms of helping them to absorb the nutrition in the food they consume. Regular water surveillance and water purification through cost-effective methods to get rid of water-borne diseases including intestinal infections, worm infection, diarrhoea, jaundice, typhoid, etc. which in turn would bring down the cost spent on the treatment of these diseases and would improve the economic condition of the people.

Figure 4.5 Access to Drinking Water



Source: Nirmal Bharat Abiyan Report 2013-2014

Figure 4.5 shows the details of the access to drinking water in the various blocks of Tiruchirappalli district (see Appendix Table 4.6). In Tiruchirappalli district 77.47 per cent of habitations were covered with access to drinking water facility. Total number of habitations covered was 2,685 during 2013-14. Uppliapuram block and Tiruchirappalli Corporation recorded 100 per cent access to drinking water. Ten blocks registered above the district level with regard to access to drinking water, while five blocks registered below the district level in this regard, in which Manachanallur (46.56 per cent),

Andanallur (54.71 per cent) and Manigandam (58.10 per cent) were very far behind the district level. It is surprising that even though Manachanallur and Andanallur fall near river Cauvery and are covered by the Cauvery canal system, the percentage of habitations with drinking water facility is quite low when compared to the district level, while it would be expected to be the other way round. In terms of the number of habitations, Marungapuri covered the largest number of 397 habitations followed by Manapparai (329). The blocks that had 100 per cent access to drinking water facility, i.e., Uppiliapuram block and Tiruchrappalli Corporation covered only 132 (habitaitons) and 60 (wards) respectively. So, it can be observed that larger blocks need to cover much ground in terms of access to drinking water.

Sanitation

According to the WHO, sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces. Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities. The word 'sanitation' also refers to the maintenance of hygienic conditions, through services such as garbage collection and waste water disposal.

Table 4.8 provides the blockwise details of the number of households with toilet facilities in Tiruchirappalli district according to the Nirmal Bharat Abiyan data for 2013-14. In Tiruchirappalli district 51.88 per cent of the households had access to toilet facility during 2013-14. The maximum number of households provided with toilets was Tiruchirappalli Corporation (62.18 per cent) followed by Thuraiyur with 58.67 per cent. The least percentage of households provided with toilets was recorded by Vaiyampatti block with 35.41 per cent and it is also the least in terms of the number of households having toilets. The second lowest percentage is recorded in Marungapuri block with 36.23 per cent. Four blocks in the district achieved more than 50 per cent provision of toilets, while 11 blocks had provided toilets to less than 50 per cent of the households in 2013-2014. Awareness in this regard is to be enhanced in the district as a whole.

Table 4.8 Provision of Toilet Facilities

Sl. No	Blocks/District /State	Total Number of HHs	Number of HHs are with Toilet Facilities	Per cent of HHs Provided with Toilets
1	Andanallur	22,391	10,750	48.01
2	Lalgudi	29,528	14,312	48.50
3	Manachanallur	38,247	15,196	39.73
4	Manigandam	20,700	10,088	48.73
5	Mannapparai	26,196	13,325	50.87
6	Marungapuri	34,825	12,618	36.23
7	Musiri	35,196	15,837	45.00
8	Pullambadi	24,940	10,271	41.18
9	Thiruverumbur	31,844	15,345	48.18
10	Thottium	33,759	15,571	46.12
11	Thuraiyur	36,825	21,605	58.67
12	T.Pet	31,691	18,356	57.92
13	Uppliapuram	27,517	12,507	45.45
14	Vaiyampatti	22,443	7,948	35.41
15	Tiruchirappalli Coporation	2,15,194	1,33,802	62.18
	District	6,31,296	3,27,531	51.88
Source: Nirmal Bharat Abiyan Report 2013-2014				

Case Study: Toilet Facility

Toilets with proper water connection are to be ensured in every household, so as to ensure the households free of Health hazards. In Tiruchirappalli district only 52 per cent of the households had access to toilet facility during the year 2013-14. This implies that 48 per cent households did not have access to toilet facility in the district and that open air defecation is very common in the district. And hence, this issue has been taken for case study. The objective of the case study is to analyse the access to toilet facility of the households in Vaiyampatti block, Tiruchirappalli districtas the block with the lowest access to toilet facility (35.41 per cent). Inampudhur village was selected at random from Vaiyampatti block for the study. Only one per cent of the people in the village had toilet facility in their house. Only two per cent of people are well educated and use toilets, others don't have enough knowledge about the merits of toilet usage. Many households had built the toilets with Government aid in different periods, but all of them were not using it for the purpose it was built. People used the toilet as animal shed and fire-wood shed. One of the reasons for not using toilets was that toilets were not built properly. Another fact is that people did not have proper awareness and guidance about toilet usage. Also many openly admitted to open air defecation and believed that it was safe. The building of toilets alone is not sufficient, the mindset or attitude of the people has to be changed in this respect.

Box 4.2 Utilization of Public Health Services and Health Programmes of State and Central Governments

The health programs of State Government running in the district are as follows: A) Maternal and Child Health Programme, B) Epidemic Prevention and Control Programme, C) Malaria & Fileria control Programme, D) Adolescent Anaemia Control Programme, E)School Health Programme, F) Dental Programme, G) Hospital on WheelsProgramme, H) MRMBS benefit for pregnant mother for two deliveries, I) Birth and Death Registration Programme, J) E-Governance of all the Programmes, K) Family Welfare Programme, L) Fund support for building construction through TNHSP etc. Central Government programs running in the district include: A)National Aids Control Programme, b) National Leprosy Eradication Programme, C) Tuberculosis Control Programme, E) Janani–Shishu Suraksha Karyakaram, F) Janani Suraksha Yojna, G) Funding for MCHV & public health services through NRHM, H) Building, Vehicle, and Infrastructure support through NRHM and much more.

Total number of GH in the district was 20 comprising of nine modern medicine, ten Siddha and one Homeopathy hospitals during 2012-13. There were also eight dispensaries in the district which comprised of six modern medicines and two Siddha during the reference period. Total number of Primary Health Centers (PHCs) in the district was 307, which wholly comprised of modern medicine. Other medical institutions comprised of two modern medicines only. Total bed strength for in patients in the district was 1,155 in modern medicine and 16 in Siddha hospitals during the reference period. 211 doctors and 773 nurses were providing their services in the district, which comprised of 177 doctors and 773 nurses in modern medicine hospitals, three doctors in Ayurvedic hospitals, 31 doctors in Siddha, three doctors in Unani, two doctors in combined Unani, Siddha and Ayurveda, and three in Homopathy hospitals. Total number of patients registered during 2012-13 was 47,44,957.

Progress of family welfare programmes was notable during 2012-13 as 12,000 was kept as target for sterilization out of which 9701 was achieved. Likewise for IUD 1,35,000 was kept as target and 11,255 was achieved during the reference period. For the users of conventional contraceptives a target of 7000 was put forth and 3,561 was achieved. For oral pill users 4,000 was kept as target and achievement was 1,012 the district during the reference period. Highest share of patients has been registered in Tiruchirappalli Corporationwith 13.03 per cent, as it is a highly populated area of the district and the main center of trade. The next highest of 11.21 per cent of the cases have been registered in Thiruverumbur block, which is adjusent to Tiruchirappalli Corporation. In all other blocks less than 10 per cent of OPD cases have been reigistered in each block. Total number of in-patients in the district has been paced at 51,927, where 13.69 per cent registrations took place in Thiruverumbur block which was the highest number among all other blocks. All other blocks registered less than 10 per cent in-patirnt registrations except M.Nallur (10.06 per cent). The least has been registered by Mannapparai block with 3.62 per cent out of the total registrations in the district.

Special Programmes

AIDS Control

AIDS (Acquired Immune Deficiency Syndrome) is one of the worst pandemics the world has ever known. HIV (Human Immunodeficiency Virus), the virus that causes AIDS, was first discovered in 1981 in a remote area of central Africa. It has since swept across the globe, infecting millions in a relatively short period of time. Millions have died due to this dreaded disease, which can go unnoticed for even a decade and during the same period, infecting many others. While many cases go unreported, the prevalence of the disease is increasing and so, controlling its spread is of paramount importance. AIDS is not only a medical problem, but also a social problem. AIDS patients are often not accepted by the conservative society. In many cases the children affected by AIDS are denied admission in many schools. People affected by AIDS are prone to various diseases that make them physically weak and often they can hardly bear the high cost of frequent treatments. Gradually their economic condition worsens and their life becomes tougher.

Though a full-fledged war against AIDS was started in the 1980s, the AIDS Control Programme as a 100 per cent centrally sponsored scheme in India was initiated in 1992 to arrest and eradicate the disease.

Table 4.9 Prevalence of HIV AIDS (in no.)

Age and Sex-Wise HIV AIDS					
S.No.	Age-Group	2007		2014	
		Male	Female	Male	Female
1	0-14	3	4	7	4
2	15-19	80	92	17	12
3	20-24	370	190	115	102
4	25-29	320	288	142	112
5	30-39	490	372	183	104
6	40-49	383	201	60	52
7	50 and above	200	100	40	26
Total		1,846	1,247	564	412
Source: Health Department, Tiruchirappalli					

Table 4.9 gives the details of the HIV positive cases in the years 2007 and 2014. From the Table it can be seen that the total HIV positive cases had been reduced from 3,093 to 976 between 2007 and 2014. The number of HIV positive cases was the highest in the age group 30-39 (both male and female) during 2007, which had considerably reduced in the year 2014. The age group 40-49 (male) and age group 25-29 (female) recorded the second highest number of HIV positive cases in the year 2007. There was no increase in the HIV positive cases in any of the age groups from 2007 to 2014.

Prevalence of Tuberculosis and Leprosy

According to the WHO, Tuberculosis or TB, is an infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease. The symptoms of active TB of the lung are coughing, sometimes with sputum or blood, chest pains, weakness, weight loss, fever and night sweats. Tuberculosis is treatable with a six-month course of antibiotics.

According to the WHO, Leprosy is a chronic infectious disease caused by Mycobacterium leprae, an acid-fast, rod-shaped bacillus. The disease mainly affects the skin, the peripheral nerves, mucosa of the upper respiratory tract and also the eyes, apart from some other structures. Leprosy has afflicted humanity since time immemorial. Today, the diagnosis and treatment of leprosy is easy.

Table 4.10 Prevalence of TB and Leprosy (in no.)

Sl. No	District	TB		Leprosys	
		2013	2014	2013	2014
1	Tiruchirappalli District	1,479	1,502	127	113
Source: Health Department, Tiruchirappalli					

Table 4.10 provides information of prevalence of TB and Leprosy for the years 2013 and 2014. The prevalence of leprosy has declined from 127 to 113 between 2013 and 2014, which is around 12.39 per cent. But, the prevalence of TB increased from 1,479 to 1,502 between 2013 and 2014, which was around 1.56 per cent.

Conclusion

The Chapter 4 reveals the demographic and health details of the various blocks of Tiruchirappali district. It can be noted that all blocks registered with an increase in population. The proportion of growth of SC population is high in blocks like Musiri and Thottiam, while it is negative in T. Pet and Thiruvermbur. The ST population is high in Thuraiyur and Uppliapuram blocks. The CBR has come down marginally in all the blocks during 2014 except Manapparai and Marungapuri. The lowest CBR in 2009 and 2014 was recorded in Uppiliapuram block with 13 and 12.1 respectively. The CDR in the district did not show any significant decline in 2014 compared to 2009 as it was 4.20 in 2009 and 4.1 in 2014. A sharp fall in Manapparai and a sharp rise in Uppilapuram can be noticed with regard to CDR between the years 2009 and 2014. The sex ratio has decreased to a great extent in Thiruverumbur, T.Pet, Manaparai and Andanallur blocks between 2001 and 2011, whereas it has increased tremendously in Musiri, Pullambadi, Uppilapuram, and Tiruchirappalli Corporation during the same period. The improvement in the sex ratio in most of the blocks can be attributed to the measures taken by the State to mitigate mortality during child birth, female infanticide and increased health awareness for nutritional status among children and pregnant women. Anyhow, it could not be denied that there was Boy Preference vehemently present in the district which could be changed only over a period of time with incessant and insistent statutory and non-statutory measures to be ministered by GOs and NGOs.

The LEB has gone up for both male and female, thanks to health care facilities available in the district. High IMR can be noticed in Andanallur, Lalgudi, Manachanallur and Manigandam in the year 2013-14, which needs special attention. Post-natal mortality was higher than the Neo-natal mortality in the district showing that there was not enough child care for the newly born. Adequate counseling to married couple and pregnant mothers would fetch desirable results in this regard. The MMR is high in Manapparai, Musiri, Thottiam, Thuraiyur, Vaiyampatti, Manigandam and Manachanallur, which also needs special attention in ensuring sound maternal health in such blocks. Health Information System, High Health Intelligence Quotient, Linkages of Primary Health Centers with District Level and State Level Health Organizations and training selected villagers and ICDS staff as health workers need to be initiated. The SBR has increased in Manachanallur, Pullampadi, Thiruverumbur and Thuraiyur during 2014 compared to 2011, which needs to be addressed immediately.

The access to toilets in the blocks of the district is not up to the mark, especially in Vaiyampatti, and Marungapuri, so the government has to take steps to bring in behavior change to ensure toilet for all, which would improve the health of the people particularly in rural areas and urban-slums. More than construction of toilets, education regarding the usage of toilets is urgently required as open air defecation is common in many blocks of the district and this makes the people more prone to water related diseases. Strict Statutory measures also could bring forth desirable results in this regard.

The district has achieved reduction in HIV prevalence to the tune of 30 per cent thanks to incessant efforts regarding AIDS control programmes of the State. Increase in prevalence of TB warrants appropriate measures to improve the standards of care among people and at the same time mitigate the causes for TB. Air Pollution caused by urban congestion and heavy traffic movements were the major causes for increasing COPD, Bronchial Asthma related restrictive lung diseases and there by increasing TB cases in the district. Corrective measures should be initiated to mitigate the problems and rehabilitative ventures through TB Sanatoriums should be made to improve the situation. Satellite sanatoriums need to be started more in the district.

There has been impressive growth in physical infrastructure and personnel in public health care in the district. In view of addressing the neo-natal mortality, post-natal care, health of women, water and sanitation status and other health related issues, target and area specific schemes need to be implemented. Integrated approaches between Health and Education Departments co-ordinated by the district authority would fetch results. People Participatory Approach and Peoples Movement initiated by NGOs and SIGs (Special Interest Groups) in safeguarding water bodies and environment and Health could make strides in Inclusive Growth.

CHAPTER 5

LITERACY AND EDUCATION

Chapter

5

Literacy and Education

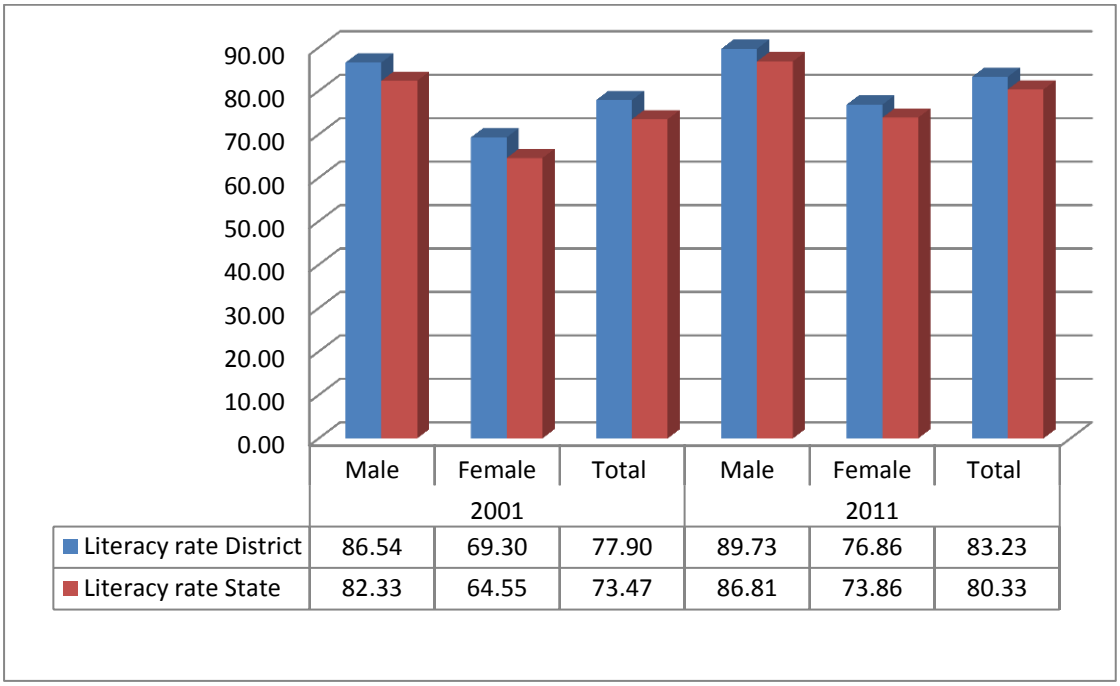
Introduction

Economic and Social Development of any Nation depends on the Human Development Index (HDI). Human capital formation is determined by factors such as literacy and education. Literacy is just the first step for any human beings to build their capacity. The human capital formation to be realised, every individual must be offered with necessary skills and capacity building, knowledge etc., so that the human resources will be developed. The right kind of education, say education with quality and the required skill-base would certainly improve the human resource potential on the one hand and help the people to contribute to the development and to knowledge based society on the other. HDI is associated positively with increased literacy and education. Hence, any initiative to improve HDI may need to primarily concentrate on improving literacy and education. When education is attained such that there is no inequality, it will still be appreciable to move towards development with gender parity and social justice. Hence, a chapter in the HDR on literacy and education has been included to analyse the educational achievements.

Literacy

Literacy is one of the indicators and basic necessity for human development. The literacy achievements of men and women in Tiruchirappalli district is analysed in this section. Tiruchirappalli has 14 blocks and Tiruchirappalli Corporation, put together has 15 blocks. Literacy is the basic indicator of development. The percentage of illiterate population is an indicator of social backwardness; as such persons fail to get information regarding what is happening around the world. It is observed in Figure 5.1 that the growth of literacy rate had shown some progress as per 2011 Census data compared to the 2001 Census data.

Figure 5.1 Literacy Rate Male/Female



	Male	Female	Total	Male	Female	Total
	2001			2011		
Literacy rate District	86.54	69.30	77.90	89.73	76.86	83.23
Literacy rate State	82.33	64.55	73.47	86.81	73.86	80.33

Source: Census 2001 and 2011

The literacy rate in Tiruchirappalli district demonstrates a gap between district and State average for both male and female as per 2011 Census (see Appendix Table 5.1). The district administration had been intervening to bring all eligible cohorts of children to be enrolled and also to non-formal group to be enfolded into literacy mission. There has been improvement over the decades which is observed in the figure presented. The district literacy rate was 83.22 per cent in the year 2011, which had increased from 77.90 per cent in 2001. This was better than the State level of 73.47 per cent and 80.33 per cent for the years 2001 and 2011 respectively. The district male and female literacy rates had also improved in 2011 over 2001 to 86.54 per cent and 69.30 per cent respectively. These rates were also better than the State level of 86.81 per cent and 73.86 per cent respectively. The male and female literacy gap was 17.3 per cent and 17.8 per cent for district and State respectively, for the year 2001. In 2011, the difference between male and female literacy rates had been reduced by 4.4 per cent and 4.8 per cent for district and State respectively, but still the male and female literacy gap was in double digit in many blocks, which needs to be taken care of. Even though Tiruchirappalli district performed better than the State level during the years of reference, it had achieved the 100 per cent mark. Moreover, total literacy is necessary though not the sufficient condition for human development and overall well being. The total literacy mission has certainly contributed to improve the status in literacy achievement in the district, yet it needs to further continue to achieve full literacy.

Elementary Education

Gender-Wise Enrolment in Primary Education

Next to literacy is the primary education. The enrolment in primary education is analysed in this section. When a person gets enrolled at the primary level, he or she will be a literate. However, there is a challenge in increasing Gross Enrolment Ratio (GER) right from the primary level. There have been many awareness programmes carried out by the State in a mission mode towards universal enrolment of children in schools, which have resulted in better enrolment over the years.

Table 5.1 Gender-Wise Enrolment in Primary Education

Sl. No	Blocks/District	Primary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	98.00	99.00	100.00	96.00	97.00	96.80	97.00	98.00	98.40
2	Lalgudi	96.00	96.00	97.00	99.00	100.00	100.00	97.50	98.00	98.50
3	Manachanallur	99.00	101.00	101.00	98.00	100.00	100.00	98.50	100.50	100.50
4	Manigandam	98.00	100.00	99.00	99.00	100.00	100.00	98.50	100.00	99.50
5	Manapparai	100.00	104.00	103.00	100.00	102.00	102.00	100.00	103.00	102.50
6	Marungapuri	98.00	99.00	98.70	98.00	102.00	102.00	98.00	100.50	100.35
7	Musiri	98.00	100.00	100.00	97.00	101.00	101.00	97.50	100.50	100.50
8	Pullambadi	99.00	100.00	100.00	100.00	101.00	101.35	99.50	100.50	100.68
9	Thiruverumbur	98.00	99.00	99.20	100.00	104.00	104.00	99.00	101.50	101.60
10	Thottiyam	98.00	99.00	99.15	97.00	102.00	102.00	97.50	100.50	100.58
11	Thuraiyur	100.00	103.00	103.00	99.00	100.00	100.00	99.50	101.50	101.50
12	T.Pet	100.00	100.00	100.00	99.00	102.00	102.00	99.50	101.00	101.00
13	Uppliapuram	99.00	100.00	99.78	99.00	99.00	99.00	99.00	99.50	99.39
14	Vaiyampatti	99.00	100.00	99.80	97.00	100.00	99.90	98.00	100.00	99.85
15	Tiruchirappalli Corporation	110.00	111.00	112.00	99.00	105.00	105.00	104.50	108.00	108.50
	District	99.33	100.73	101.26	98.47	101.00	101.25	98.90	100.87	101.26

Source: Education Department, Tiruchirappalli

It can be observed in Table 5.1 that there was an improvement in the primary enrolment at the district level among boys and girls during the period 2011-12 to 2013-14. The primary level enrolment in Tiruchirappalli district during the period 2011-12 to 2013-14 increased by 1.93 per cent for boys and 2.78 per cent for girls. The overall increase was 2.36 per cent. The gender difference in the district primary enrolment was 0.10 per cent during 2013-14 in favour of boys, which is negligible. The district level total primary enrolment ratio in 2013-14 was 101.26 per cent, the district level of boys and girls was 101.26 per cent and 101.25 per cent respectively. The same at the State level was 102.45 per cent, 102.49 per cent and 102.42 per cent respectively. There was no big difference between the district and State levels, so it can be said that the disitrict performs almost at par with State as far as primary enrolment ratio is concerned.

The gender gap in the primary GER at the district level was negligible in the year 2013-14, however there were gender gaps in the primary GER among the blocks during the same year. Tiruchirappalli Corporation had the highest gender gap of seven per cent in favour of the boys, i.e., the GER of boys was seven per cent higher than the GER of girls. Contrarily, Thiruverambur block had gender gap in favour of the girls (4.8 per cent). Out of the total 15 blocks, nine blocks had gender gap in favour of girls. So, the problem of gender gap needs to be addressed in the schools of Tiruchirappalli Corporation.

Among the blocks, Tiruchirappalli Corporation out-performed all the other blocks in terms of both boys' and girls' enrolment at the primary level with GERs of 112 per cent and 105 per cent respectively in 2013-14. The lowest enrolment in the district was recorded at Lalgudi for boys and Andanallur for girls with GERs at the primary level of 97 per cent and 96.80 per cent respectively in the same year. Only Tiruchirappalli Corporation, Thuraiyur (103 per cent) and Manapparai (103 per cent) blocks had boys GERs at the primary level higher than the district level of 101.26 per cent in the same year; however Manachanallur, Andanallur, Musiri, Pullambadi and T.Pet blocks had boys GERs at the 100 per cent level or slightly higher. In terms of girls GERs at the primary level, seven blocks including Tiruchirappalli Corporation registered higher values than the district level of 101.25 per cent. Apart from that five blocks had 100 per cent (or slightly above) girls GERs at the primary level. The combined GER at the primary level of the blocks in the district revealed that except Andanallur (98.40 per cent) and Lalgudi (98.50), all other blocks performed near the 100 per cent level or above. The highest combined GER at the primary level was registered by Tiruchirappalli Corporation

(108.50 per cent).

The blockwise primary enrolment during 2011-12 to 2013-14 in Tiruchirappalli district demonstrated that, there had been overall improvement in the primary enrolment in the district. The increase in the district level and positive growth in enrolment in the district had been contributed by all the blocks. There is not much gap between the boys' and girls' primary enrolment at the district level, but some gaps is seen in some of the blocks. Significant gender gap was observed in Tiruchirappalli Corporation against the girls, which needs to be addressed. Hence, any strategy to universalize primary education should focus its attention on improving enrolment of girls.

Completion Rate and Dropout Rate in Primary Education

More than the enrolment rates, the completion and dropout rates are significant and equally challenging. The situation where students enroll, but remain absent is very critical. So, it is not just enrolment that needs to be analysed, but also the completion and dropout rates need to be analysed. The Table 5.2(a) and (b) provide the gender-wise completion and dropout rates at the primary level in the various blocks of Tiruchirappalli district during the period 2011-12 to 2013-14.

The Table 5.2(a) reveals that the completion rates at the primary level, of both boys and girls in the district, improved over the reference years. The completion rate of boys was 97 per cent in 2011-12, which has increased to 98.37 per cent in 2013-14 and the completion rate of girls was 96.80 per cent in 2011-12, which has increased to 99.05 per cent in 2013-14. The combined completion rate also increased from 96.90 per cent to 98.71 per cent during the same period. The highest completion rate of boys was observed in Marungapuri (99 per cent) followed by Andanallur (98.90 per cent), while the least was observed in Musiri (97 per cent) followed by Tiruchirappalli Corporation (98 per cent) during the same year. Out of the fifteen blocks, 10 blocks perform better than the district level. The highest completion rate of girls was observed in Vaiyampatti (99.87 per cent), closely followed by Thiruverambur (99.86 per cent), while the least was observed in Manapparai (97 per cent) followed by Musiri (98.40 per cent) during the year 2013-14. Only six blocks performed better than the district level.

Table 5.2(a) Completion Rate in Primary Education

Sl. No	Blocks/District	Primary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	97.00	99.00	98.90	98.00	99.00	99.00	97.50	99.00	98.95
2	Lalgudi	97.00	98.00	98.50	98.00	99.00	99.00	97.50	98.50	98.75
3	Manachanallur	98.00	99.00	98.75	98.00	99.00	99.50	98.00	99.00	99.13
4	Manigandam	98.00	99.00	98.78	97.00	98.00	98.50	97.50	98.50	98.64
6	Marungapuri	98.00	99.00	99.00	96.00	97.00	97.00	97.00	98.00	98.00
7	Musiri	97.00	97.00	97.00	96.00	98.00	98.40	96.50	97.50	97.70
8	Pullambadi	98.00	98.00	98.00	97.00	99.00	99.00	97.50	98.50	98.50
9	Thiruverumbur	96.00	98.00	98.00	97.00	100.00	99.86	96.50	99.00	98.93
10	Thottiyam	97.00	98.00	98.56	96.00	99.00	98.65	96.50	98.50	98.61
11	Thuraiyur	97.00	98.00	98.50	96.00	98.00	98.45	96.50	98.00	98.48
12	T.Pet	96.00	98.00	98.56	96.00	100.00	99.79	96.00	99.00	99.18
13	Uppliapuram	96.00	98.00	98.60	98.00	99.00	99.50	97.00	98.50	99.05
14	Vaiyampatti	95.00	97.00	98.70	94.00	100.00	99.87	94.50	98.50	99.29
15	Tiruchirappalli Corporation	97.00	98.00	98.00	97.00	99.00	99.00	97.00	98.50	98.50
	District	97.00	98.13	98.37	96.80	98.87	99.05	96.90	98.50	98.71

Source: Education Department, Tiruchirappalli

In terms of the combined completion rate, Vaiyampatti topped the chart with 99.20 per cent, closely followed by T.Pet (99.18 per cent), while the least was observed in Musiri (97.70 per cent) followed by Marungapuri (98 per cent) during the year 2013-14. Out of the 15 blocks, only six blocks are above the district level. At the district level, the girls' completion rate was better than the boys' completion rate. In 11 blocks, the girls' completion rate was better than the boys' completion rate. Overall, the completion rate of boys and girls at the primary level suggests that the district is performing well and attention is needed in a few blocks, which fell much below the district average.

Table 5.2(b) Dropout Rate in Primary Education

Sl. No	Blocks/District	Primary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	0.50	0.45	0.45	0.90	0.85	1.00	0.70	0.65	0.73
2	Lalgudi	0.45	0.35	0.35	0.35	0.30	0.20	0.40	0.33	0.28
3	Manachanallur	0.52	0.56	0.40	0.30	0.23	1.60	0.41	0.40	1.00
4	Manigandam	0.35	0.25	0.50	1.75	1.70	1.10	1.05	0.98	0.80
5	Manapparai	0.55	0.45	0.45	0.90	0.85	1.00	0.73	0.65	0.73
6	Marungapuri	0.45	0.35	0.35	2.80	2.72	0.90	1.63	1.54	0.63
7	Musiri	0.60	0.50	0.40	1.30	1.28	0.60	0.95	0.89	0.50
8	Pullambadi	0.35	0.45	0.45	1.00	0.95	1.15	0.68	0.70	0.80
9	Thiruverumbur	0.75	0.75	0.40	0.30	0.20	0.40	0.53	0.48	0.40
10	Thottiyam	0.45	0.45	0.45	1.00	1.04	0.55	0.73	0.75	0.50
11	Thuraiyur	0.25	0.25	0.41	1.25	1.20	0.45	0.75	0.73	0.43
12	T.Pet	0.35	0.25	0.25	0.10	0.03	1.50	0.23	0.14	0.88
13	Uppliapuram	0.35	0.35	0.33	0.80	0.74	0.50	0.58	0.55	0.42
14	Vaiyampatti	0.40	0.30	0.30	0.30	0.19	0.30	0.35	0.25	0.30
15	Tiruchirappalli Corporation	0.80	0.83	0.50	1.00	0.89	0.55	0.90	0.86	0.53
	District	0.47	0.44	0.41	0.94	0.77	0.75	0.71	0.66	0.58

Source: Education Department, Tiruchirappalli

The Table 5.2(b) reveals that the dropout rate had been brought to fractions and kept as minimum as possible among boys and girls in all the blocks of Tiruchirappalli district during the period 2011-12 to 2013-14. The district dropout rates were 0.41 per cent, 0.75 per cent and 0.58 per cent for boys, girls and combined respectively during the year 2013-14. The lowest dropout rate for boys was recorded in T.Pet (0.25 per cent) followed by Vaiyampatti (0.30 per cent), while the highest rate was witnessed in Tiruchirappalli Corporation and Manigandam (0.50 per cent each) during the year 2013-14. In six blocks, boys dropout rate is lower than the district level. The lowest dropout rate for girls is recorded in Lalgudi (0.20 per cent) followed by Vaiyampatti (0.30 per cent), while the highest rate is observed in Manachanallur (1.60 per cent) followed by T.Pet (1.50 per cent) during the year 2013-14. Andanallur, Manigandam, Manapparai and

Pullambadi are other blocks, which had above one per cent dropout rate for girls in the district during the year 2013-14. The comparison of the combined dropout rate among the blocks revealed that Lalgudi block has the lowest rate of 0.28 per cent followed by Vaiyampatti (0.30 per cent), while the highest rate was recorded in Manachanallur (1 per cent) followed by T.Pet (0.88 per cent).

Comparing the dropout rates of boys and girls in the district suggests that the dropout rates were low in general, but the girls' dropout rate is relatively higher than the boys' dropout rate in many blocks. There seems to be a gender gap of 0.34 per cent at the district level and the highest gender gap was found in T.Pet (1.25 per cent) closely followed by Manachanallur (1.20 per cent). The gender gap in these blocks need to be addressed with suitable policy measures.

Enrolment in Upper Primary / Middle School Education

The enrolment of boys and girls in the upper primary or middle schools normally depends on the access to schools within the reach either in the same village or in the neighbouring villages. The upper primary enrolment rate in Tiruchirappalli District for the period 2011-12 to 2013-14 (Table 5.3), shows that there was an increase in the boys enrolment from 100.23 per cent to 101.26 per cent (i.e., by 1.03 per cent) and girls enrolment from 99.69 per cent to 101.26 per cent (i.e., by 1.57 per cent). The overall enrolment at the upper primary level showed an increase of 1.30 per cent from 99.96 per cent to 101.26 per cent during the same period.

Among the blocks, Tiruchirappalli Corporation had the highest GER for boys in the district with 112.65 per cent, while the least is registered in Manpparai with 93.60 per cent. Another block with low boys GER at the upper primary level was Thottiyam with 95 per cent. Out of the 15 blocks in Tiruchirappalli district, seven blocks performed better than the district average of 101.26 per cent in this regard. Other than that three blocks had boys GER at the 100 per cent level or above. In terms of the girls upper primary GER, Thiruverambur stands first with 114 per cent closely followed by Tiruchirappalli Corporation with 113 per cent. The lowest in this regard was Thottiyam with 92 per cent followed by T.Pet (93 per cent). Out of the 15 blocks in the district, seven blocks register girls' upper primary GER above the district level, while five blocks had 100 per cent or above in this regard. The combined upper primary enrolment was highest in Tiruchirappalli Corporation with 112.83 per cent, which was closely followed by Thiruverambur (110 per cent). The least was recorded by Thottiam with 93.50 per

cent in this regard, which was followed by T.Pet (95.50 per cent) and Manapparai (96.38 per cent).

Table 5.3 Gender-Wise Enrolment in Upper Primary Education

Sl. No	Blocks/District	Upper Primary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	100.00	104.00	104.00	99.50	100.40	100.00	99.75	102.20	102.00
2	Lalgudi	100.00	102.00	102.00	98.40	100.40	100.00	99.20	101.20	101.00
3	Manachanallur	100.40	102.00	102.00	97.50	100.00	100.00	98.95	101.00	101.00
4	Manigandam	98.00	99.00	99.00	99.00	100.40	99.90	98.50	99.70	99.45
5	Manapparai	97.00	94.40	93.60	97.30	99.40	99.15	97.15	96.90	96.38
6	Marungapuri	102.00	106.40	106.00	103.50	104.40	104.00	102.75	105.40	105.00
7	Musiri	103.00	103.40	100.00	101.50	103.40	103.35	102.25	103.40	101.68
8	Pullambadi	99.00	99.00	99.00	100.10	102.40	102.00	99.55	100.70	100.50
9	Thiruverumbur	105.00	106.00	106.00	107.00	114.40	114.00	106.00	110.20	110.00
10	Thottiyam	95.00	95.00	95.00	92.00	92.40	92.00	93.50	93.70	93.50
11	Thuraiyur	100.00	101.00	102.00	100.00	100.40	100.00	100.00	100.70	101.00
12	T.Pet	98.00	98.40	98.00	93.00	93.40	93.00	95.50	95.90	95.50
13	Uppliapuram	100.00	101.00	101.00	97.50	100.00	100.00	98.75	100.50	100.50
14	Vaiyampatti	99.00	100.00	100.00	98.00	98.40	98.00	98.50	99.20	99.00
15	Tiruchirappalli Corporation	107.00	111.00	112.65	111.00	113.00	113.00	109.00	112.00	112.83
	District	100.23	101.51	101.26	99.69	101.52	101.26	99.96	101.51	101.26

Source: Education Department, Tiruchirappalli

There was no gender difference in the district level as the GER at upper primary in Triuchirapalli district is 101.26 for both boys and girls in the year 2013-14. However, there are blockwise variations. Thiruverambur block had the highest gender gap of eight per cent in favour of girls followed by Manapparai (5.55 per cent). T.Pet block has the highest gender gap of five per cent in favour of the boys followed by Andanallur (4 per cent). Other than these blocks, seven blocks, viz., Lalgudi, M.Nallur, Marungapuri, Thottiam, Thuraiyur, Uppiliapuram and Vaiyampatti, have gender gap in favour of boys, i.e., girls enrolment is lower than boys enrolment. Any attempt to improve the GER may need to concentrate on reducing the gender gap and also improve the least performing

GER blocks by identifying the block specific social barriers for girls and boys at the upper primary level.

Completion Rate and Dropout Rate in Upper Primary / Middle School Education

The Gender-wise upper primary completion and dropout rates for various blocks inTiruchirappalli district for the period 2011-12 to 2013-14 is given in Table 5.4(a) and (b). The Table 5.4(a) reveals that the completion rates at the upper primary level, of both boys and girls in the district, improved over the reference years.

Table 5.4(a) Completion Rate in Upper Primary Education

Sl. No	Blocks/District	Upper Primary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	98.00	99.00	99.10	97.00	98.00	98.40	97.50	98.50	98.75
2	Lalgudi	98.00	99.00	98.70	97.00	99.00	99.00	97.50	99.00	98.85
3	Manachanallur	98.00	99.00	99.00	96.00	98.00	97.60	97.00	98.50	98.30
4	Manigandam	98.00	99.00	99.15	95.00	98.00	99.00	96.50	98.50	99.08
5	Manapparai	97.00	98.00	98.60	96.00	99.00	99.00	96.50	98.50	98.80
6	Marungapuri	97.0	98.00	98.00	95.00	98.00	98.00	96.00	98.00	98.00
7	Musiri	96.00	98.00	98.00	95.00	99.00	99.00	95.50	98.50	98.50
8	Pullambadi	97.00	98.00	98.00	96.00	99.00	98.90	96.50	98.50	98.45
9	Thiruverumbur	94.00	97.00	97.75	96.00	98.00	99.00	95.00	97.50	98.38
10	Thottiyam	95.00	97.00	97.50	95.00	98.00	98.70	95.00	97.50	98.10
11	Thuraiyur	95.00	98.00	98.60	94.00	98.00	98.40	94.50	98.00	98.50
12	T.Pet	94.00	97.00	98.60	94.00	98.00	99.00	94.00	97.50	98.80
13	Uppliapuram	94.00	98.00	98.50	96.00	98.00	99.20	95.00	98.00	98.85
14	Vaiyampatti	94.00	98.00	98.30	92.00	99.00	98.80	93.00	98.50	98.55
15	Tiruchirappalli Corporation	96.00	98.00	97.80	97.00	98.00	99.00	96.50	98.00	98.40
	District	96.07	98.07	98.41	95.40	98.33	98.75	95.73	98.20	98.55

Source: Education Department, Tiruchirappalli

The completion rate of boys increased from 96.07 per cent in 2011-12 to 98.41 per cent in 2013-14 and the completion rate of girls increased from 95.40 per cent in 2011-12 to 98.75 per cent in 2013-14. The combined completion rate also increased from

95.73 per cent to 98.58 per cent during the same period. The highest completion rate of boys is recorded in Manigandam (99.15 per cent) followed by Andanallur (99.10 per cent), while the least is recorded in Thottiam (97.50 per cent) followed by Thiruverambur (97.75 per cent) during the same year. Out of the fifteen blocks, seven blocks perform better than the district level. The highest completion rate of girls is registered in Uppiliapuram (99.20 per cent), followed by seven blocks (99 per cent each), while the least is registered in Thuraiyur and Andanallur (98.40 per cent each) during the year 2013-14. Only four blocks performed below the district level with respect to completion rate in the upper primary level.

The combined completion rate at the upper primary level suggests that Manigandam with 99.08 per cent topped the blocks in the district, followed by Lalgudi and Uppliapuram (98.55 per cent), while the remaining blocks are not far behind in this respect during the year 2013-14. At the district level, the girls' completion rate was better than the boys' completion rate marginally. In nine blocks, the girls' completion rate is better than the boys' completion rate. Overall, the completion rate of boys and girls at the upper primary level is lower than the completion rates at the primary level. This can be understood as there would be more failures and dropouts at higher levels. But, efforts should be made in all the blocks of the district to improve the completion rates of the boys and girls at the upper primary level.

The Table 5.4(b) shows the dropout rates of boys and girls in all the blocks of Tiruchirappalli district during the period 2011-12 to 2013-14. The district upper primary dropout rates marginally declined over the reference period and stood at 1.28 per cent, 1.18 per cent and 1.23 per cent for boys, girls and combined respectively during the year 2013-14. There is not much variation among these rates, i.e., between boys and girls rates, and the combined rate; but there exists variation among the blocks. The lowest dropout rate for boys is observed in Andanallur (0.20 per cent) followed by Uppiliapuram (0.60 per cent), while the highest rate is witnessed in Thiruverambur (2.25 per cent) followed by Manachanallur and Manigandam (2.10 per cent each) during the year 2013-14. Marungapuri is another block with two per cent dropout rate for boys during the same year. In nine blocks, boys dropout rates were lower than the district level.

Table 5.4(b) Dropout Rate in Upper Primary Education

Sl. No	Blocks/District	Upper Primary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	0.50	0.20	0.20	1.75	1.50	1.50	1.13	0.85	0.82
2	Lalgudi	1.10	1.22	1.22	0.50	0.42	0.42	0.80	0.82	0.79
3	Manachanallur	2.20	2.10	2.10	2.60	2.50	2.50	2.40	2.30	2.15
4	Manigandam	2.30	2.10	2.10	0.90	0.82	0.82	1.60	1.46	1.35
5	Manapparai	1.20	1.00	1.00	0.50	0.49	0.49	0.85	0.75	0.72
6	Marungapuri	2.25	2.00	2.00	1.40	1.35	1.35	1.83	1.68	1.55
7	Musiri	1.20	1.02	1.02	0.60	0.55	0.55	0.90	0.79	0.75
8	Pullambadi	1.30	1.13	1.00	0.65	0.51	0.51	0.98	0.82	0.81
9	Thiruverumbur	2.30	2.25	2.25	2.10	2.05	2.05	2.20	2.15	2.10
10	Thottiyam	2.10	1.92	1.90	1.30	1.20	1.20	1.70	1.56	1.55
11	Thuraiyur	1.15	1.13	1.00	0.75	0.55	0.40	0.95	0.84	0.83
12	T.Pet	1.30	1.25	1.00	1.25	1.20	1.20	1.28	1.23	1.22
13	Uppliapuram	0.90	0.72	0.60	1.50	1.40	1.00	1.20	1.06	1.05
14	Vaiyampatti	1.20	1.10	1.10	1.45	1.35	1.35	1.33	1.23	1.21
15	Tiruchirappalli Corporation	2.10	1.99	1.50	3.60	3.56	1.46	2.85	2.78	1.45
	District	1.54	1.32	1.28	1.39	1.30	1.18	1.47	1.35	1.23
Source: Education Department, Tiruchirappalli										

The lowest dropout rate for girls is registered in Thuraiyur (0.40 per cent) closely followed by Lalgudi (0.42 per cent), while the highest rate is witnessed in M.Nallur (2.50 per cent) followed by Thiruverambur (2.05 per cent) during the year 2013-14. Another five blocks, viz., Marungapuri, Thottiam, T.Pet, Vaiyampatti and Tiruchirappalli corporation had dropout rates for girls above the district level during the year 2013-14. The combined dropout rate among the blocks shows that Manapparai block has the lowest rate of 0.72 per cent followed by Lalgudi (0.79 per cent), while the highest rate was recorded in Manachanallur (2.15 per cent) closely followed by Thiruverambur (2.10 per cent). Four other blocks, viz., Manigandam, Marungapuri, Thottiam and Tiruchirappalli corporation had higher combined dropout rates compared to the district level.

The dropout rates of boys and girls at the upper primary level seem to be higher than the primary level. Comparing the boys and girls dropout rates, there is not much difference at the district level, while differences could be noticed in many blocks. The girls' dropout rates are relatively lower than the boys' dropout rates in 10 blocks. The higher dropout rate in boys suggests that many boys would have discontinued their education for several reasons, like getting employment to make an addition to their family income, getting influenced towards anti-social activities, etc. Such situations should be overcome through proper education and counseling. In this regard, suitable measures such as counseling for students at all levels is necessary.

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

The challenge of increasing the GER, reducing the dropout rate and increasing the retention and completion rate determine the transition rate from one level to another. In Table 5.5(a) and (b) the transition rates of the various blocks in Tiruchirappalli district for the period 2011-12 to 2013-14 has been presented. Transition rate depends on the access to school, transport, distance, parental perception on the contribution of such education to their wards empowerment, the cultural expectation of minimum education to girls for their socially defined gender roles, the size of the family, income, number of earning members, safety of girls, etc. If the above mentioned issues were addressed, the transition rate would be high, and it can be seen that the transition rates are high and have registered an increase over the reference period.

Table 5.5(a) provides the gender-wise transition rates from primary to upper primary in the various blocks of Tiruchirappalli district. The district transition rates of boys, girls and combined categories are 99.36 per cent, 99.49 per cent and 99.43 per cent respectively in the year 2013-14 and do not show much variation between boys and girls. However, there are much variations among the blocks in the district. The highest rate of 100 per cent for boys is recorded in six blocks, viz., Manachanallur, Manigandam, Manapparai, Marungapuri, Thiruverambur and Tiruchirappalli Corporation, while the lowest rate is recorded in Andanallur with 98 per cent, followed by Thuraiyur (98.50 per cent). Except Andanallur and Thuraiyur, all other blocks have rates near the district level. In the transition rate from primary to upper primary level for girls, five blocks, viz., Manachanallur, Manigandam, Manapparai, Thiruverambur and Tiruchirappalli corporation achieved the 100 per cent mark in the year 2013-14, while Uppilaipuram (98

per cent) is the only block, which has the lowest transition rate. The same five blocks as in the case of girls transition rate, achieve the 100 per cent level in the combined category also. The same goes for Uppliapuram, i.e., it performs much lower than the district level in the combined category.

Table 5.5(a) Transition Rate from Primary to Upper Primary

Sl. No	Blocks/District	Primary to Upper Primary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	97.00	100.00	98.00	99.00	100.00	99.95	98.00	100.00	98.98
2	Lalgudi	97.00	100.00	99.00	97.00	99.00	99.65	97.00	99.50	99.33
3	Manachanallur	99.00	100.00	100.00	99.00	100.00	100.00	99.00	100.00	100.00
4	Manigandam	97.00	100.00	100.00	99.00	100.00	100.00	98.00	100.00	100.00
5	Manapparai	99.00	100.00	100.00	98.00	100.00	100.00	98.50	100.00	100.00
6	Marungapuri	97.00	100.00	100.00	99.00	100.00	99.30	98.00	100.00	99.65
7	Musiri	97.00	99.00	99.50	98.00	100.00	99.90	97.50	99.50	99.70
8	Pullambadi	97.00	99.00	99.45	98.00	100.00	99.00	97.50	99.50	99.23
9	Thiruverumbur	98.00	100.00	100.00	97.00	100.00	100.00	97.50	100.00	100.00
10	Thottiyam	98.00	99.00	99.00	97.00	100.00	99.60	97.50	99.50	99.30
11	Thuraiyur	99.00	100.00	98.50	98.00	100.00	99.00	98.50	100.00	98.75
12	T.Pet	98.00	99.00	99.00	98.00	99.00	99.00	98.00	99.00	99.00
13	Uppliapuram	99.00	100.00	99.00	98.00	100.00	98.00	98.50	100.00	98.50
14	Vaiyampatti	99.00	100.00	99.00	97.00	100.00	99.00	98.00	100.00	99.00
15	Tiruchirappalli Corporation	99.00	99.00	100.00	98.00	100.00	100.00	98.50	99.50	100.00
	District	98.00	99.67	99.36	98.00	99.87	99.49	98.00	99.77	99.43
Source: Education Department, Tiruchirappalli										

In terms of the gender gap in transition rate from primary to upper primary level, Andanallur recorded the highest gap of 1.95 per cent against the boys. Gender gap in favour of girls or against boys could be found in four other blocks, viz., Manachanallur,

Musiri, Thottiam and Thuraiyur. There is no gender gap in seven blocks. Gender gap against the girls is found to exist only in three blocks, viz., Uppiliapuram (1 per cent), Marungapuri (0.70 per cent) and Pullambadi (0.45 per cent). So, gender gap issues with regard to both genders need to be addressed with suitable policy interventions.

Table 5.5(b) Transition Rate from Upper Primary to Secondary

Sl. No	Blocks/District	Upper Primary to Secondary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-14	2011-12	2012-13	2013-14	2011-12	2012-13	2013-14
1	Andanallur	98.00	99.00	99.00	100.00	100.00	100.00	99.00	99.50	99.50
2	Lalgudi	98.00	99.00	99.00	98.00	99.00	99.00	98.00	99.00	99.00
3	Manachanallur	99.00	99.50	99.50	99.00	100.00	100.00	99.00	99.75	99.75
4	Manigandam	98.00	99.00	99.00	99.00	100.00	99.50	98.50	99.50	99.25
5	Manapparai	99.70	99.70	99.70	99.00	100.00	99.55	99.35	99.85	99.63
6	Marungapuri	99.90	99.90	99.90	99.00	100.00	99.75	99.45	99.95	99.83
7	Musiri	99.30	99.30	99.30	99.00	100.00	99.81	99.15	99.65	99.56
8	Pullambadi	98.50	99.40	99.40	99.00	100.00	99.74	98.75	99.70	99.57
9	Thiruverumbur	98.60	99.30	99.00	99.50	100.00	99.58	99.05	99.65	99.29
10	Thottiyam	98.70	99.35	99.35	99.50	100.00	99.85	99.10	99.68	99.60
11	Thuraiyur	99.00	100.00	100.00	99.50	100.00	99.90	99.25	100.00	99.95
12	T.Pet	98.60	99.65	99.65	99.00	99.00	96.50	98.80	99.33	98.08
13	Uppliapuram	99.00	100.00	100.00	99.00	100.00	99.70	99.00	100.00	99.85
14	Vaiyampatti	97.50	98.00	98.00	98.50	100.00	99.30	98.00	99.00	98.65
15	Tiruchirappalli Corporation	98.50	99.15	99.00	99.00	100.00	99.58	98.75	99.58	99.29
	District	98.69	99.35	99.32	99.07	99.87	99.45	98.88	99.61	99.61

Source: Education Department, Tiruchirappalli

Table 5.5(b) provides the gender-wise transition rates from upper primary to secondary in the various blocks of Tiruchirappalli district. The district transition rates of boys, girls and combined categories were 99.32 per cent, 99.45 per cent and 99.61 per cent respectively in the year 2013-14 and do not show much variation between boys and girls. However, there are some variations among the blocks in the district. The highest rate of 100 per cent is recorded in two blocks, viz., Thuraiyur and Uppliapuram while the

lowest rate is recorded in Vaiyampatti with 98 per cent. Except Vaiyampatti, all other blocks has rates near the district level. In the transition rate from upper primary to secondary level for girls, two blocks, viz., Andanallur and Manachanallur achieved the 100 per cent mark in the year 2013-14, while T.Pet (96.50 per cent) is the only block, which perform much lower than the district level. Thuraiyur registered the highest combined transition rate from upper primary to secondary with 99.95 per cent, followed in Uppliapuram with 99.85, while the lowest rate in this regard is recorded by T.Pet with 98.08 per cent followed by Vaiyampatti (98.65 per cent). In the combined transition rate from upper primary to secondary level, five blocks are above district average.

In terms of the gender gap in transition rate from upper primary to secondary level, T.Pet recorded the highest gap of 3.15 per cent against the girls. Lalgudi is the only block with no gender gap in terms of transition rate from upper primary to secondary. All other blocks had gender gap either against girls or boys. So, gender gap issues with regard to both gender needs to be addressed with suitable policy interventions.

Thanks to initiatives of the Government for motivating the girls to enroll and retain in schools at the 99 per cent level. Several Studies have shown that the boys drop out occurs due to school or push factors, say attitude of the teachers or lack of interest in studies, scolding and punishment given in school, unattractive curriculum design, the peer influence, inferiority complex and other disturbances. Whereas, the girls dropout are due to home related or push factors say household duties, taking care of younger siblings, social perception about girls' education, etc.

The reasons for dropout and lower transition rate, particularly more among boys in the current context indicates certain facts, such as, i) there is a change in the perception among parents about the education of girls, ii) the State and institutions' initiatives to improve girls' education, and iii) the boys are performing the same as earlier, while the girls are better in utilizing the available initiatives.

Access to Schools

Access to school is the major determinant of enrolment and transition. In the early 1990s, the enrolments in rates were poor mainly due to lack of access to school. The policy initiatives priorities such that access to school were emphasized and had contributed to improve GER at all levels of schooling. Table 5.6 provides the access to schools in terms of the availability of primary and upper primary schools in relation to the number of habitations in the respective blocks of Tiruchirappalli district in the year 2013-14.

Table 5.6 Availability of School

Sl. No	Blocks/District	Number of Habitations	Number of Primary School	Number of Upper Primary /Middle School
1	Andanallur	115	73	37
2	Lalgudi	126	94	38
3	Manachanallur	169	108	43
4	Manigandam	146	72	32
5	Mannapparai	233	108	43
6	Marungapuri	322	136	59
7	Musiri	164	90	42
8	Pullambadi	95	61	34
9	Thiruverumbur	106	93	51
10	Thottiyam	179	95	29
11	Thuraiyur	161	102	43
12	T.pet	127	64	26
13	Uppliapuram	79	64	26
14	Vaiyampatti	272	88	30
15	Tiruchirappalli Corporation	65	100	78
	District	2,359	1,348	611
Source: Education Department, Tiruchirappalli (2013-14)				

The total number of habitations in Tiruchirappalli district is 2,359 in 2013-14 and the total number of primary schools is 1,348 and total number of upper primary schools was 611, which roughly works out to one primary school for every two habitations and one upper primary school for every four habitations. This is a good record in terms of access to schools in Tiruchirappalli district. Among the various blocks of the district

other than Tiruchirappalli corporation, Marungapuri had the highest number of habitations (322) and the highest number of schools (primary – 136, upper primary – 59). Tiruchirappalli corporation with 65 habitations (wards) had 100 primary schools and 78 upper primary schools, i.e., it had more than one school per habitation in both the categories of schools. This is due to its urban character and similar trend was reflected in some other blocks, i.e., blocks with greater urban characteristics had more number of schools and blocks with higher rural characteristics had lower number of schools in relation to the number of habitations, with the exception of Uppiliapuram, which is situated in a hilly terrain.

Pupil-Teacher Ratio in Primary and Upper Primary

Table 5.7 Pupil Teacher Ratio

Sl.No	Blocks/District	Primary School		Upper Primary School	
		Pupil Teacher Raito	Pupil School Ratio	Pupil Teacher Raito	Pupil School Ratio
1	Andanallur	24	187	18	224
2	Lalgudi	24	116	20	157
3	Manachanallur	23	143	20	263
4	Manigandam	27	205	20	238
5	Manapparai	28	126	21	244
6	Marungapuri	32	88	21	198
7	Musiri	23	115	22	163
8	Pullambadi	21	129	21	137
9	Thiruverumbur	22	307	28	466
10	Thottiyam	24	96	33	136
11	Thuraiyur	22	203	25	208
12	T.Pet	22	204	19	111
13	Uppliapuram	26	106	31	111
14	Vaiyampatti	20	89	22	115
15	Tiruchirappalli Corporation	20	341	16	438
	District	24	166	23	220
Source: Education Department, Tiruchirappalli (2013-14)					

Next to availability of schools, Pupil – Teacher Ratio (PTR), necessary infrastructure, etc., will help in better performance in educational indicators. Right and required PTR is a major factor in determining the enrolment, arresting dropout and improving completion rate. More than the availability of the teachers, the quality of teachers in terms of access, quality of time devoted, individual attention paid, etc., are significant determinants of enrolment.

PTR is also one of the determinants of quality of education. Several studies have reported that there are schools with only one teacher taking care of all the five classes at primary levels in tribal areas. Now it has changed and sufficient teachers have been appointed by the Government. In Tiruchirappalli district, blockwise PTR for the year 2013-14 at the primary level revealed that Vaiyampatti (20) and Tiruchirappalli Corporation (20) had the lowest teacher pupil ratio where one teacher catered to 20 students. The highest PTR at the primary level was recorded in Marungapuri (32), followed by Manapparai 28 in 2013-14. Out of the 15 blocks in the district, eight blocks had better PTR than the district level of 24. At the upper primary level, the least PTR was in Tiruchirappalli Corporation with 16 followed by Andanallur with 18. The highest PTR was recorded in Thottiam with 33, followed by Uppliapuram with 31.

In terms of Pupil School Ratio (PSR) at the primary level, Marugnapuri registered the lowest PSR with 88, followed by Vaiyampatti with 89 and Thottiyam with 96, while all other blocks recorded more than 100 PSR. The highest PSR was recorded in Tiruchirappalli Corporation with 341, followed by Thiruverumbur with 307. Out of the 15 blocks, nine blocks performed better than the district level of 166. For the upper primary level, the least PSR was found in Uppliapuram and T.Pet with 111, while the highest PSR was found in Thiruverumbur with 466, followed by Tiruchirapalli Corporation 438.

Secondary Education

Primary and upper primary level education only imparts basic knowledge. To understand the society, science, technology, etc., the students need to move further to high school. Secondary school has been kept at 10thstandard, which indicates that one should have completed atleast upto this level.

Table 5.8 Enrolment in Secondary Education

Sl. No	Blocks/District	Secondary			
		No.	Boys	Girls	Total
1	Andanallur	14	100.00	98.00	99.00
2	Lalgudi	14	102.00	100.00	101.00
3	Manachanallur	19	102.00	100.00	101.00
4	Manigandam	11	99.00	99.00	99.00
5	Manapparai	13	100.00	100.00	100.00
6	Marungapuri	15	100.00	100.00	100.00
7	Musiri	12	102.00	102.00	102.00
8	Pullambadi	11	102.00	102.00	102.00
9	Thiruverumbur	27	100.00	101.00	100.50
10	Thottiam	15	100.00	101.00	100.50
11	Thuraiyur	12	102.00	100.00	101.00
12	T.Pet	11	102.00	100.00	101.00
13	Uppliapuram	10	100.00	99.00	99.50
14	Vaiyampatti	8	99.00	99.00	99.00
15	Tiruchirappalli Corporation	32	100.00	99.00	99.50
	District	224	100.67	100.00	100.47
Source: Education Department, Tiruchirappalli (2013-14)					

The enrolment in secondary education for various blocks in Tiruchirappalli district for the year 2013-14 presented in Table 5.8 reveals that the district has the enrolment rate ranging from 99 per cent to 102 per cent in various blocks, with the district level of 100.67 per cent for boys and 100 per cent for girls. Manikandam (99 per cent) and Vaiyampatti (99 per cent) had relatively lower enrolment rates compared to the other blocks and the district level for boys. For girls, Andanallur recorded the lowest GER at the secondary level with 98 per cent followed by Manigandam, Uppilapuram, Vaiyampatti and Tiruchirappalli Corporation (all with 99 per cent), while the remaining blocks registered 100 per cent or above. There is not much variation between the boys

and girls at the district level. Out of 15 blocks, in six blocks there was no gender gap in terms of secondary GER. In the remaining nine blocks, seven blocks had gender gap against girls, while Thiruverumbur and Thottiam are the only two blocks with gender gap against boys. So, the reasons for the gender gap as discussed earlier needs to be understood and appropriate policy measures needs to be adopted.

Regarding the secondary level enrolment, quantitative measures alone should not be seen. Qualitative measures such as the availability of proper infrastructure need to be ensured at the secondary schools and higher secondary schools. Once the students cross the primary and upper primary levels, enrolment in secondary education is encouraged to complete one stage of school education. However, there have been several hurdles to complete 10th standard. Secondary education has been kept as the essential qualification for employment or doing diploma or other courses. Given the perception of parents particularly rural parents on education and returns on education, it is highly challenging to address the secondary dropout.

Dropouts in Secondary Education

In Table 5.9, the blockwise dropouts in secondary education for the period of 2013-14 has been figured out. At the district level the dropout rates for boys, girls and overall was 1.29 per cent, 1.17 per cent and 1.87 per cent respectively. The girls dropout rates were better than boys dropout rates. The least dropout for boys among the blocks is found in Andanallur with 0.20 per cent. The highest dropout was found in Thottiyam with 2.25 per cent, followed by Manachanallur with 2.10 per cent, Manigandam (2.10 percent) and Marungapuri (2.00 per cent). All other blocks registered one per cent or above dropout rates. In the girls category, the lowest dropout rate was recorded in T.Pet with 0.40 per cent, followed by Lalgudi with 0.42 per cent and Manapparai with 0.49 per cent. The highest dropout rate for girls is was found in Thiruverumbur with 2.10 per cent, followed by Thottiyam with 2.05 per cent. In combined dropout rate, the least rateis registered in Andanallur with 0.95 per cent followed by Vaiyampatti with 1.10 per cent. The highest rate is recorded in Manachanallur with 3.35 per cent, followed by Thottiyam with 3.28 per cent. It can be noticed that Thiruverumbur block stands second lowest with 0.49 per cent in the dropout rate for boys, whereas for girls it has the highest dropout rate of 2.10 per cent.

Table 5.9 Dropouts in Secondary Education

Sl. No	Blocks/District	Dropout Rate		
		Boys	Girls	Total
1	Andanallur	0.20	1.50	0.95
2	Lalgudi	1.22	0.42	1.43
3	Manachanallur	2.10	2.50	3.35
4	Manigandam	2.10	0.82	2.51
5	Manapparai	1.00	0.49	1.25
6	Marungapuri	2.00	1.35	2.68
7	Musiri	1.02	0.55	1.30
8	Pullambadi	1.22	0.51	1.48
9	Thiruverumbur	0.49	2.10	1.54
10	Thottiyam	2.25	2.05	3.28
11	Thuraiyur	1.90	1.20	2.50
12	T.pet	1.00	0.40	1.20
13	Uppliapuram	1.00	1.20	1.60
14	Vaiyampatti	0.60	1.00	1.10
15	Tiruchirappalli Corporation	1.21	1.30	1.86
	District	1.29	1.17	1.87
Source: Education Department, Tiruchirappalli (2013-14)				

Dropout occurs among both boys and girls at different levels. At the secondary level, the dropout is attributed to both school and home factors which are gendered. The boys dropout occurs at the secondary level due to economic pressure from the family to join the labour market or the disinterest of the boys in education. For girls it is totally for different reasons, the dropout occurs due to social demand for care giving at home or the distance and lack of access to school, where the girls after menarche, are not encouraged to travel outside the village to have their education beyond the upper primary level. Above all, the society and parents do not have belief in girls' education as the returns from girls' education does not reach the parents.

Box 5.1 Initiatives for Improvement in Quality of Education

Several innovative methods of teaching and learning have been introduced in school education system in Tiruchirappalli district. Students are encouraged to learn reading and writing by an interactive and participatory system of leaning environment. Training programmes for teachers are conducted on the basis of specific content Activity Based Learning (ABL) in order to improve the teacher's performance in implementing the ABL methodology in classroom environment. Besides, in recent years, the district Education Department has been conducting advanced training programmes at Government Girls Higher Secondary School, Mannachanallur, for SSLC and HSC students-both boys and girls who scored top marks in their schools in mid-term examinations. On an average 35 students were selected from different schools from all over the district for such programmes every year. These students practiced rigorously and secured excellent scores in the public examinations; many of them secured places in engineering colleges with sponsorship from corporates. Many schools in the district mobilised sponsorships locally and conducted special events to bring out and promote the talents of the students. In addition, students are encouraged to participate in cultural and science competitions organised at the State and National levels. The programmes are: State Level Students Talent Scheme, Science Exhibition and Kala Utsav organised by the union Human Resource Development Ministry. Students enthusiastically participated in these events and secured top ranks and trophies.

Box 5.2 ReadingWriting Skills among Primary and Upper Primary School Children

Inculcating reading and writing skills among primary and upper primary children is an important component of Activity Based Learning (ABL) system. Flash cards, low level boards, posters, dictionaries and puppets are used to promote communicative practices by serving prompts to develop speaking and writing skills. Particularly flash cards are used to ensure language practice through games and fun that impart words, numbers, spelling and pronunciation through pictures. Teachers in the district have become creative facilitators who are empowered through two major institutions such as Cluster Resource Centres (CRCs) and Block Resource Centres (BRCs). The BRCs act as resource centres for teachers and Block Resource Teacher Educators (BRTEs). BRTEs provide training and monitor the progress of all the SSA initiatives including ABL. There are 16 BRCs in Tiruchirappalli district which enrich teachers' knowledge in order to provide quality education through various programmes. Currently, a total of 183 CRCs work in the district. Special programmes such as 'Simply English' are conducted for teachers at the primary level, which in turn has an positive effect on the learning outcomes of the students. The district also has three Residential School Teaching Centres (RSTC) and 34 Non-Residential School Teaching Centres catering to the dropouts, who are identified by local teachers and enrolled in these centres. These centres take special care in imparting reading and writing skills to such students, and later mainstream them.

Access to Higher Secondary Schools

The students who complete 10th standard, considerably dropout to either look for vocation or learn some vocational skills. However, these have increased awareness coupled with easy access to higher secondary schools. The blockwise availability of high schools would give some understanding about the access to secondary education. There are totally 224 high schools during 2013-14, i.e, one high school would cover roughly 11 habitations. Tiruchirappalli Corporation and Thiruverumbur block had the maximum number of high schools (32 and 27 respectively). But this may not reflect the true picture of the district as these two regions are highly urbanized compared to the remaining blocks. Among the remaining blocks M.Nallur block had the highest number of high schools (19). In terms of the ratio of schools to habitations (access ratio), Tiruchirappalli Corporation and Thiruverumbur block stand out in Tiruchirappalli district with two and four respectively. Other than this, Andanallur, Lalgudi, M.Nallur, Pullambadi and Uppiliapuram recorded with one secondary school catering to 10 habitations. The highest number of habitations covered by one school is in Vaiyampatti (34) followed by Marungapuri (22). These blocks also have the lowest number of secondary schools. Overall, the access ratio of secondary schools had been very low in the district except some of the blocks mentioned above. The access ratio needs to be increased in order to check the dropouts in the secondary and higher secondary levels.

Basic Infrastructure

The Table 5.10 provides the blockwise details of infrastructure facilities in terms of number of class rooms, drinking water, desk and chair, toilets and girls toilets in schools in the district for the year 2013-14. Infrastructure facilities in schools are very important for the students in the teaching-learning process. It can be observed that nearly 70 per cent of the schools were functioning with three class rooms, while around 30 per cent of the schools had more than three class rooms. This is nothing to be alarmed about as the number of primary schools are always much higher than any other category of schools. Around 83 per cent of the schools had toilet facilities in the district, while the percentage of schools provided with girls toilet was 93 per cent. The schools without electricity in the district were just 3.55 per cent. Lalgudi and Manigandam blocks achieved 100 per cent with respect to provision of electricity to schools. Around 30 per cent of the schools had no compound walls, but these schools may be small primary

schools. It was good to notice that around 95 per cent of schools had drinking water facility and desk and chair in the district. Among the blocks, the variation in the number of schools with above discussed infrastructural facilities depended upon the number of schools in the blocks. In terms of the provision of infrastructural facilities in schools in the district; achievement has not been upto the level compared to the achievement in terms of enrolment rates. Hence, sufficient attention should be made to increase basic amenities in all the schools, which badly require them.

Table 5.10 Infrastructure

Sl.No	Blocks/District	Total No. of Schools	With 3 Class Rooms	more than 3 Class Rooms	WithoutToilet	WithoutGirls Toilet	Without Electricity	Without Compound Wall	Without Drinking Water	Without Desk and Chair
1	Andanallur	113	75	38	12	11	2	22	5	0
2	Lalgudi	130	84	46	15	13	0	55	4	2
3	Manachanallur	152	110	42	16	12	11	42	4	0
4	Manigandam	109	77	32	15	9	0	32	4	0
5	Manapparai	150	114	36	22	12	13	46	7	3
6	Marungapuri	194	142	52	18	11	12	52	7	8
7	Musiri	133	89	44	22	10	2	46	5	9
8	Pullambadi	96	70	26	21	8	5	42	6	4
9	Thiruverumbur	124	91	33	28	12	2	34	7	3
10	Thottiyam	145	111	34	23	12	5	36	5	4
11	Thuraiyur	119	83	36	28	11	9	32	6	7
12	T.pet	66	30	36	27	8	1	22	5	4
13	Uppliapuram	88	56	32	27	9	2	26	7	3
14	Vaiyampatti	117	73	44	26	12	4	42	6	5
15	Tiruchirappalli Corporation	235	159	76	38	19	2	75	13	2
	District	1,971	1,364	607	338	169	70	604	91	54
	Source: Education Department, Tiruchirappalli (2013-14)									

Hostel Facilities

Hostel facilities are essential for students from other places to pursue education which is their right. The State Government has provided such hostel facilities in various schools to enable students to empower themselves with education. Table 5.11 provides the details of hostel facilities in the various blocks of Tiruchirappalli district.

Table 5.11 Hostels

Sl. No	Blocks/District	No. of Schools	Total Number of Students	No. of Students in Hostels
1	Andanallur	116	24,344	226
2	Lalgudi	138	17,899	385
3	Manachanallur	161	28,065	484
4	Manigandam	124	25,628	177
5	Mannapparai	140	24,031	364
6	Marungapuri	168	20,039	306
7	Musiri	125	17,230	926
8	Pullambadi	90	14,468	364
9	Thiruverumbur	172	50,120	561
10	Thottium	131	16,133	415
11	Thuraiyur	138	21,822	601
12	Tattayyangarpettai	88	12,695	436
13	Uppliapuram	92	12,493	224
14	Vaiyampatti	107	12,703	166
15	Tiruchirappalli Corporation	224	76,086	1,804
	District	2,014	3,73,756	7,439
Source: Education and Social Welfare Departments, Tiruchirappalli (2013-14)				

Hostel facility is a necessary condition for the rural boys and girls who are in remote areas, including tribal population, to improve their transition ratio as already pointed out. There were totally 2,014 schools with 3,73,756 students in which 7,439 were utilizing hostel facilities. Among the blocks, Tiruchirappalli Corporation recorded a high number of 1,804 students, which is followed by Musiri (926). Vaiyampatti and Manigandam blocks registered with the lowest number of students in hostels with 166 and 177 respectively. Here also it can be observed that blocks with larger urban areas had more students in hostels compared to the blocks with rural areas. This is quite natural as students would prefer to study in urban areas, which may offer them much more intangible benefits like more exposure to resources. So, what needs to be done is that urban infrastructure should be provided in rural areas.

Box 5.3 Technology initiatives in School Education

Technology has become one of the effective tools of learning activities. In this regard, audio-visual technology is a lively and quick means to propagate subject content to the large number of students. The district utilizes this technology in all the schools effectively. To ensure the spread of technology in teaching, SSA has set up Computer Aided Learning (CAL) centres in primary and upper primary schools. The main goal of CAL is to incorporate latest technologies that enhance teaching-learning process. In order to achieve this, 326 CAL centres are functioning in Tiruchirappalli district. Hard spots in the content are taught through puzzles, games and other activities. CAL plays a major role in easy understanding of the subject matter which ensures better level of learning with interest. Subjects like English, Mathematics and Science are joyfully learnt through computer aid. It also helps reduce dropout rate in recent years. A number of activities are made under CAL in the district. They are: Microsoft Training, Project Based Learning, Capacity-building Training, Science and Mathematics Workshop and Competition in text based content for the Classes I-VIII. With initiatives in the district from the teachers' side, smart classrooms have been created in select schools in Tiruchirappalli Corporation, aimed at imparting technology oriented education. To further develop the level of computer aided learning, the district has adopted ICT oriented education in many schools, both urban and rural. In this direction, internet connection has been provided to several schools in the district. As part of enhancing technology in teaching in the district, Bharathidasan University conducts training programmes for teachers at all levels through its Teacher Oriented Televised Education (TOTE) studio. It also develops computer aided study materials, harnessing the latest technology, for teachers who are engaged in educating differently-abled children.

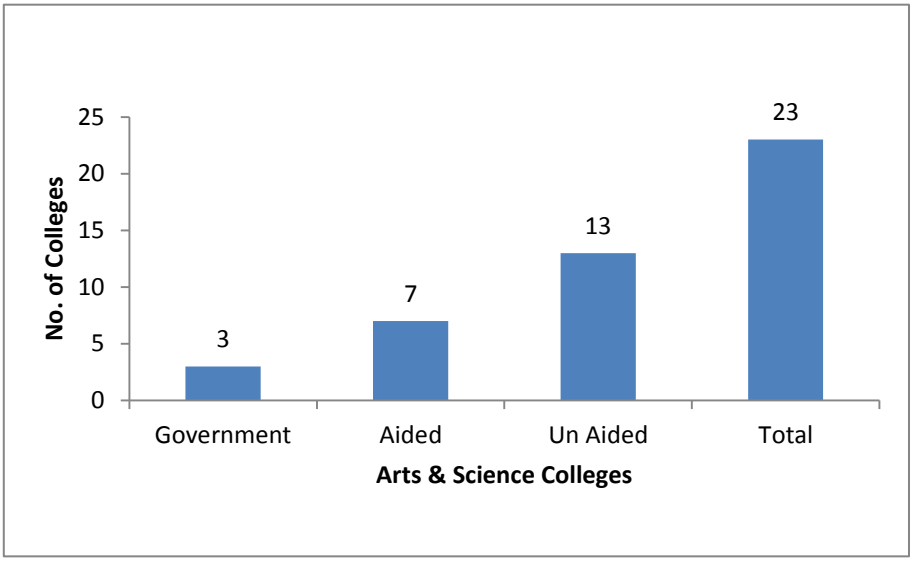
Higher Education

Arts and Science Colleges

The Figure 5.2 provides the details of the number of Arts and Science colleges in Tiruchirappalli district (see Appendix Table 5.2). In total, there are 23 Arts and Science colleges in the district, out of which there are three government colleges, seven aided colleges and 13 unaided private colleges.

In the district, seven blocks, viz., Manapparai, Marungapuri, Pullambadi, Thottiyam, T.pet, Uppiliyapuram and Vaiyampatti blocks had no Arts and Science colleges. Thiruchirappalli Corporation had the maximum of five colleges with 13,776 students. Both Manachanallur and Manigandam had four Engineering colleges, but Manachanallur block had 3,586 students higher than Manigandam block.

Figure 5.2 Arts and Science Colleges (in no.)

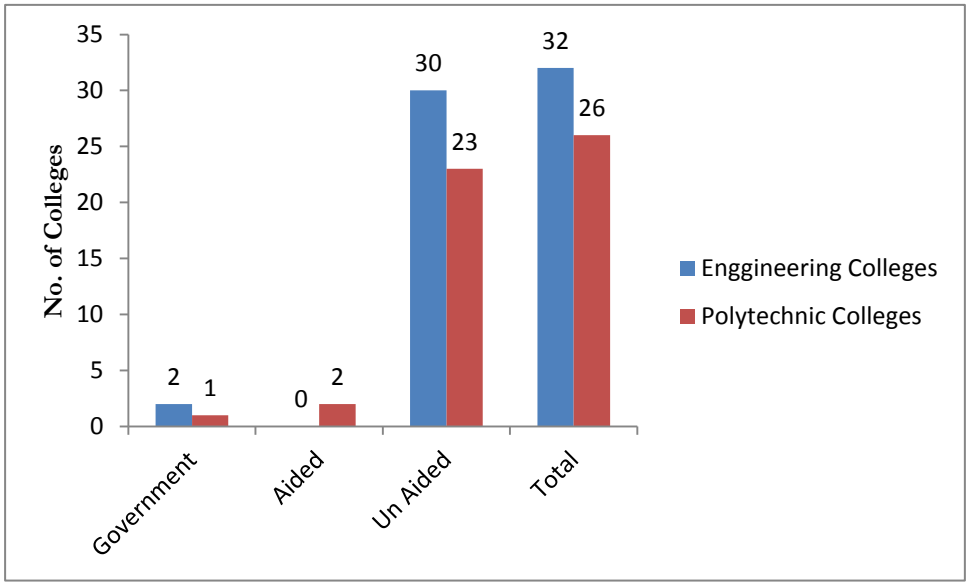


Source: District Statistical Handbook, 2013-14

Technical Education

The figure 5.3 provides the details of the Engineering colleges and Polytechnics in Tiruchirappalli district (see Appendix Tables 5.3). There are 32 Engineering colleges and 26 Polytechnics in the district, out of which two Engineering colleges are government colleges, the remaining 30 are unaided private colleges. In the Polytechnics, one is government, two Polytechnics are aided and the remaining 23 are unaided private institutions. In terms of technical education, Tiruchirappalli district has more than sufficient number of institutions catering not only to the districts' population, but also to the populations of other nearby district and rural areas. Four blocks, viz., Lalgudi, Marungapuri, Pullambadi, Uppiliapuram and Vaiyampatti and Tiruchirappalli Corporation had no Engineering colleges. Likewise six blocks, viz., Anthanallur, Manapparai, Marungapuri, Pullambadi, Uppiliapuram and Vaiyampatti blocks and Tiruchirappalli Corporation had no Polytechnics. The total number of students studying in Polytechnics are 11,086. Apart from Arts and Science colleges, Engineering colleges and Polytechnics, there are 37 other institutions, such as Teacher Training Institute, in which 6,536 students are studying. It is very unfortunate that three blocks, viz., Marungapuri, Uppiliyapuram and Vaiyampatti blocks had no higher education institution.

Figure 5.3 Engineering Colleges and Polytechnics (in no.)



Source: District Statistical Handbook, 2013-14

Conclusion

Chapter 5 provides details of the literacy and educational details of the various blocks in Tiruchirappalli district. The district literacy rate was 83.22 per cent in the year 2011, which had increased from 77.90 per cent in 2001. This is better than the State level of 73.47 per cent and 80.33 per cent for the years 2001 and 2011 respectively. In 2011, the difference between male and female literacy rates has been reduced by 4.4 per cent, but still the male and female literacy gap is in double digit in the district and all blocks except Tiruchirappalli Corporation and Tiruverumbur, which needs to be taken care of. The GERs at the primary, upper primary and secondary levels in the various blocks of Tiruchirappalli district are quite high and the variations among the blocks are also not much except for some exceptions. The completion rates also exhibit similar trends, but what can be noticed is that the completion rates tend to drop a few points moving up the education ladder. The same is said for the transition rates and the dropout rates. Some aspects can be noted about the dropout rates, the dropout rate in secondary education has been 1.87 per cent in the district, the highest dropout rate in secondary education has been recorded in Manachanallur with 3.35 per cent followed by Thottiam with 3.28 per cent. The highest difference in the dropout against girls was found in Tiruverumbur with 1.61 per cent.

The blockwise PTR for the year 2013-14 at the primary level revealed that Vaiyampatti (20) and Tiruchirappalli Corporation (20) had the lowest PTR where one teacher catered to 20 students, while Marungapuri (32) and Manapparai (28) had the highest PTR, followed by Andanallur, Lalgudi, Manigandam, Thottiam and Uppiliapuram, which needs to be brought down. Tiruchirappalli Corporation recorded the lowest PTR of 16 at the upper primary level, while the highest was observed in Thottium with 33 and Uppiliapuram with 31, followed by Thiruverumbur and Thuraiyur. In terms of infrastructure facilities, Lalgudi and Manigandam blocks achieved 100 per cent with respect to provision of electricity in schools. It is good to notice that around 95 per cent of schools had drinking water facility and desk and chairs in the district. Transport and other improved infrastructural facilities from remote villages to block headquarters will be a solution to reduce the number of dropouts at the higher levels of schooling.

Thanks to active SSA team in the school education department that Tiruchirappalli district performed at the highest level in terms of enrolment of students, completion, and dropout and transition rates. Still there are areas where adequate attention was needed to improve the transition rate, attention is also needed to improve the sanitation facilities, hostel facilities, etc., which must be addressed by the district administration. It could attain better results if a sincere effort was followed with the consent of people which would be community based and it would sustain better if the ownership is rested with the communities.

CHAPTER 6

GENDER

Chapter

Gender

6

"Woman is the companion of man, gifted with equal mental capacities. She has the right to participate in the minutest details of the activities of man and she has the same right of freedom and liberty as he. She is entitled to a supreme place in her own sphere of activity as man is in his."

Mahatma Gandhi

Status of Women

Status of women is a significant indicator of development. The socio cultural impositions and conditioning and social expectations from men and women primarily determine the role and contributions of women in the society. The policies of the State favour the participation of women in public life and contribute to the society. But, often such policies go in contradiction to social norms, where the State often remains silent taking the sensitivity of such issues and social instability. However, since 1980s, gender as a concept got recognized and was well discussed. It was since 1995, that UNDP HDR reports became inclusive introducing gender as a component and measuring the status of women through Gender Related Development Index. Now it has been measured with Gender Inequality Index (GII). It is a negative variable with an inverse relationship. Higher the GII, lower the equality in achievement between men and women. Gender as a category of analysis has emerged only recently and hence, all the data available with development indicators are not gender disaggregated.

Numerous gender studies indicate that economic analysis with the awareness on and sensitivity of gendered relationship in the society may provide a better understanding

of the development process and better understanding of policies required to eliminate gender inequality. Number of research studies focused on gender asymmetry in intra-household activities like distribution of food, health, education, etc. Gender studies are especially note worthy in analyzing women's role in agriculture. They examined how the division of labour by task, field and product, as well as how different people's access to land and to each other's labour, affected choices of crop and technology and where intern defined the gender role. (Meier and Rauch, 2002.) In the same perspective, the District Human Development Report (DHDR) also tried to attempt an analysis based on gender. This chapter is devoted to the purpose of making an analysis with regard to gender and women development. The following section presents the gender analysis of the human development indices for Tiruchirappalli district.

Table 6.1 Comparative Status of Women

Sl.No		District
1	Female Population (no.)	13,70,006
2	Percentage in Total Population	50.33
3	Sex-Ratio	1,013
4	Female Literacy Rate	77.24
5	School Enrolment(GER Primary)*	102.32
6	MMR*	89
7	Per cent of Women Worker in Agriculture Sector	53.33
8	Per cent of Women in Non-Agri. Sector	46.67
Source: Census 2011, *Education Department, Tamil Nadu.		

The status of women in Tiruchirappalli district had been analysed taking the percentage of female to the total population and their achievements in terms of sex ratio, literacy rate, school enrolment, MMR, percentage of women workers in agriculture sector and percentage of women workers in non-agriculture sector. According to the Table 6.1, the female population of the district was 13,70,006, which was 50.33 per cent of the total population. As the percentage of female population was more than 50, the sex ratio inclined towards female at 1,013, which was a good trend. The female literacy rate was 77.24 per cent and was 12.5 per cent lower than male and 3 per cent greater than State female literacy rate as per the Census 2011. The female gross enrolment at primary level of the district was 102.32 per cent in the year 2013-14, which was marginally lower than the district male enrolment rate of 102.56 per cent in the same year. The MMR of the district was 89, which was far higher than the State level rate of 68 in the year 2013-14.

The percentage of women in the non-agricultural sector was 46.67 per cent, which was 6.66 percentage points lower than the agricultural sector.

The participation of women workers in the agricultural sector as per the data reported for Tiruchirappalli district was far above and almost more than double the State and National levels. Tiruchirappalli being a developing district and still constituting the agricultural characteristics with delta irrigation, provides more agricultural opportunities for women. Unlike other districts, where the women's participation in agriculture was less than one third, Tiruchirappalli needed appreciation in accounting for more women in agriculture. The percentage of women in non-agricultural sector was found to be higher than both the State and National levels. In fact, Tiruchirappalli had divided the entire workforce into agriculture and non-agriculture, which was one of the reasons why the percentage of women in farm and non-farm were higher than the State levels. Distribution of the women workers to other categories like allied activities, animal husbandry, fisheries, etc., might have showed a different trend. The economic participation of women needs to be improved to reduce the gender gap. Only when women are employed in paid employment, it would prepare them to participate in decision making process, thereby empowering women. Hence, development schemes aiming to empower women need to concentrate on increasing the economic participation of women and recognition of such contribution in National Income Accounting. The distribution of more women in agriculture still continued which again indicated the lower status of women. Self-employment and entrepreneurial attitudes are yet to reach the rural women, though there had been grassroots movement among SHG women.

Access and Control over Resources

"When a woman moves forward, the family moves, the society moves and the nation moves."

Swami Vivekananda

Women's equal access and control over economic and financial resources is critical for the achievement of gender equality and empowerment of women. It paves the way for equitable and sustainable economic growth and development. Gender equality in the distribution of economic and financial resources, has positive multiplier effects for a range of key development goals, including poverty reduction and the welfare of children. Microlevel efficiency results through increased household productivity and macroefficiency results through positive synergies between indicators of gender equality and economic growth which have been recorded. Development rationale for enhancing women's access to economic and financial resources includewomen's role as "safety net of last resort" in economic downturns.But, women's access to major economic and financial resources such as land and capital, and other productive resources such as extension services, inputs including fertilizers and seeds remained very much limited, although policies and schemes aiming at enabling women in the mainstream of economic

affairs had been Implemented by the Government of India in general and the Government of Tamil Nadu in particular. One such policy has been the development of the SHG movement. The SHG movement has been welcomed all over the world including India. The performance of the SHGs in the district has been discussed in the box.

Box 6.1 Self Help Groups

Self Help Groups (SHGs) among women have been proving as a significant strategy to bring the women to public life on the one hand and make them self-reliant through micro credit operations on the other. Women in groups came together, engaged in periodical saving and practice internal lending, which had considerably driven the traditional money lenders away. SHGs had created a silent revolution at the grass roots and proved that poor were bankable. Women, given the opportunity and support systems to positively contribute, would have successfully transacted with banking and proved as good bankers to transact with formal credit.

Access to formal credit was a dream, but now millions of women directly transacted with banks and served as models to other women. Banks were willing to support the SHG women on the basis of the performance of the internal lending and other indicators while doing the credit rating. Thanks to such a remarkable record, this had driven the State to institutionalize the SHGs through Women Development Corporation in Tamil Nadu. In Tiruchirappalli district, Tiruchirappalli Corporation had the maximum number of SHGs (6,898) followed by Lalgudi (1,290), while T.Pet block had the lowest number of SHGs (648) (see Appendix Table 6.1). Out of the 15 blocks in Tiruchirappalli district, seven blocks had more than 1,000 SHGs. In terms of the number of members, Tiruchirappalli Corporation topped the chart with 1,03,230 members. None of the other blocks were even close to Tiruchirappalli Corporation in this regard. The block with the lowest number of members was Tiruverumbur (9,196). T.Pet had the least number of groups, but had more number of members per group on an average (21). Tiruchirappalli Corporation again topped the chart with highest amount of loans being availed by SHG members with an outstanding loan amount of Rs.6,157.69 lakhs followed by Andanallur with an outstanding loan amount of Rs.1,353.04 lakhs, while the block with lowest outstanding loan amount was Marungapuri (Rs.184.93 lakhs), closely followed by Vaiyampatti (Rs.185.09 lakhs). It can be noticed that blocks with higher number of SHGs did not necessarily exhibit maximum record with access to credit. Not all the SHGs in blocks with higher number of SHGs were fully active and linked with banks. Several groups probably remained confined to internal lending alone or failed to qualify in the credit rating done by the Mahalir Thittam and banks, and failed to avail formal credit from the bank.

There were several issues in dealing with formation, sustenance of SHGs. The SHG concept had gained momentum and got spread to other areas by overlooking some of the processes laid down by the Women Development Corporation. Such deviations by Micro Finance Institutions may not have taken the SHG women to capacity building. Mere credit operations alone may not have ensured empowerment unless the money saved was invested in enterprise development. Access to credit was one step forward and proved that women were bankable. But, real empowerment lies in converting such capacity and capability into enterprise development, which would have brought economic independence and created employment opportunities for women in the local area.

Employment

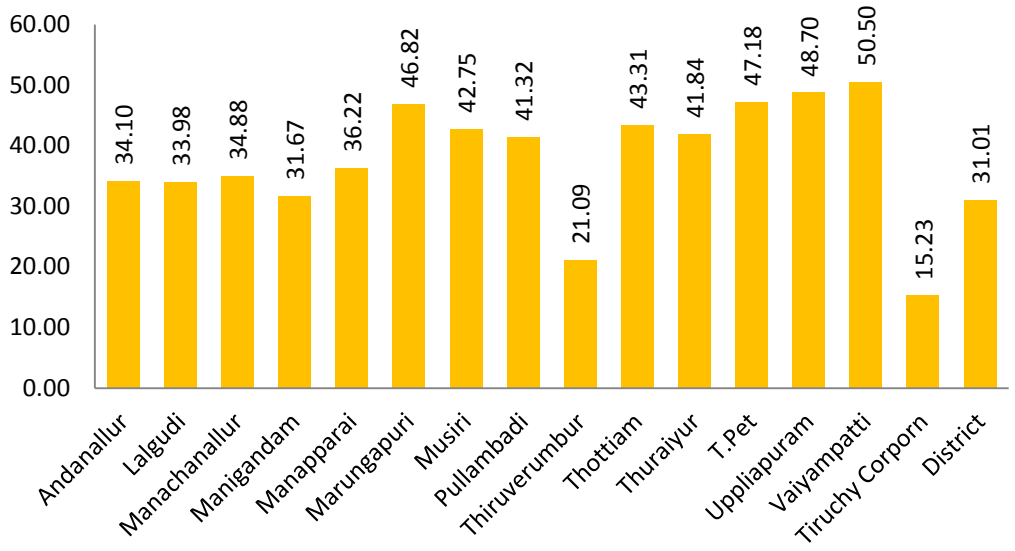
"If you want me to tell you what a nation is like, or what a social organization is like, tell me the position of women in that country."

Pandit Jawaharlal Nehru

Another major indicator of development of women is employment, which ensures economic independence. Women in the developing world, and particularly those who are poor, invariably work hard at a variety of tasks, with little time for leisure and little control over productive resources or even over their own income or labour. Yet they often must assume a large share of the responsibility for the survival of their families, through direct production for consumption, income earning, providing health care, etc. Women constitute a substantial part in some regions the majority of the agricultural labour force, including workers on plantations; they are engaged in home-based production of modern as well as traditional products, sometimes working for a contractor under the putting-out system; and many migrate from impoverished rural areas to work in the urban informal sector as traders, or in export processing zones as industrial workers. In this section, the employment status of women has been analysed based on the work participation rate (WPR) of women in the agricultural sector.

The female WPR in Tiruchirappalli district ranged from 15.23 per cent to 50.50 per cent (see Appendix Table 6.2). Vaiyampatti block had the highest female WPR and Tiruchirappalli Corporation recorded the lowest female WPR out of the 15 blocks in the district. Seven blocks, viz., Uppliapuram (48.70 per cent), T.pet (47.18 per cent), Marungapuri (46.82 per cent), Thottium (43.31 per cent), Musiri (42.75 per cent), Thuraiyur (41.84 per cent) and Pullambadi (41.32 per cent) had more than 40 per cent female WPR and the other seven blocks had below 40 per cent female WPR. Among the blocks, Thiruverumbur (21.09 per cent) and Tiruchirappalli Corporation (15.23 per cent) had the lowest female WPR, as these two blocks were urban based compared to the other blocks. The female WPR was high in rural based blocks for two reasons: (i) In rural areas, agriculture was the main stay where majorty of the women were involved in agricultural activities and (ii) MGNREGA, scheme where more than 80 per cent of the workers were female. The WPR might hence have been influenced by these factors.

Figure 6.1 Female Work Participation



Source: Census 2011

Employment in informal sector, private and public enterprises both in blue and white collar jobs attract more and more women. In fact, there has been feminization of labour. In Tiruchirappalli District, female participation in Private companies in 2011-12 is 9.59 per cent compared to men. What can be said is that private companies normally offer more employment to women but primarily engage women in temporary and adhoc positions. Given the capabilities and the kind of delivery, the women must be given positions in permanent employment ensuring social security and personal safety.

Trends in Political Participation

"Just as a bird could not fly with one wing only, a nation would not march forward if the women are left behind."

Swami Vivekananda

It is true that political participation of women directly empowers women and contributes to women empowerment unlike employment where the economic freedom through earnings, may not enable or ensure them to spend on their own. The social expectation is that the women cannot manage the financial budget effectively and as it has been the domain of men. On the other hand, participation of women in politics will take them to share positions with power and accordingly would contribute to the empowerment directly. But, it has to be handled independently by the women involving themselves in decision making.

Table 6.2 Membership in Assembly, Local Bodies

Sl. No	Member ship of Women in State Assembly and local Body	Number of Male	Number of Female	Per cent of Female Participation
1	Andanallur	172	78	31.20
2	Lalgudi	267	137	33.90
3	M.Nallur	238	120	33.51
4	Manigandam	126	64	33.68
5	Manapparai	157	81	34.00
6	Marungapuri	256	128	33.00
7	Musiri	176	90	33.83
8	Pullambadi	206	102	33.12
9	Thiruverumbur	176	88	33.33
10	Thottium	186	93	33.33
11	Thuraiyur	208	107	33.96
12	T.Pet	168	84	33.33
13	Uppliapuram	142	72	33.64
14	Vaiyampatti	131	66	33.50
15	Tiruchirappalli Corporn.	43	22	33.84
	District	2,652	1,332	33.43
	State	7	2	22.22
Source: PAPD, Trichirappalli				

It was observed that in Tiruchirappalli district, the district average women's participation in local bodies for the year 2011 for both urban and rural local bodies was 33.43 per cent. It was slightly above the reservation of 33 per cent and is better than the State average of 22.22 per cent. Thanks to the reservation in local bodies for women, the participation of women was made mandatory to 33 per cent. Blockwise representation of women in local bodies illustrates that Mannapparai tops with 34 per cent and the least is Andanallur with a share of 31.20 per cent. Here, it is to be noted that in none of the blocks, women representation is higher than the reserved percentage. So, real empowerment of women seemed to be much far away as far as Tiruchirappalli district is concerned. Similarly, reservation in Assembly and Parliament alone would ensure more women to enter into politics.

Conclusion

The Chapter 6 gives the achievements of women in various fields. Women Participation in both agriculture and non-agricultural sector has been encouraging in the district. The MMR in the district is 89, which should be addressed with upgradation of PHCs with blood bank, advanced surgical units and rectifying dilapidated PHCs in the district. Tiruchirappalli Corporation had the maximum number of SHGs (6,898) followed by Lalgudi (1,290), while T.Pet block had the lowest number of SHGs (648). Out of the 15 blocks in Tiruchirappalli District, seven blocks had more than 1,000 SHGs. Tiruchirappalli Corporation again topped the chart with highest amount of loans being availed by SHG members with an outstanding loan amount of Rs.6,157.69 lakhs followed by Andanallur with an outstanding loan amount of Rs.1,353.04 lakhs, while the block with lowest outstanding loan amount is Marungapuri (Rs.184.93 lakhs), closely followed by Vaiyampatti (Rs.185.09 lakhs). Tiruchirappalli Corporation and Thiruverumbur had registered the lowest female work participation and seven blocks had below 40 per cent female WPR. So, this ostensibly puts forth the gender issues like proxying women empowerment in work participation, political participation, women entrepreneurship and the process of independent decision making.

Blockwise representation of women in local bodies illustrates that Mannapparai topped with 34 per cent share of female representatives in RLBs and ULBs, while the lowest performance was shown by Andanallur with a share of 31.20 per cent in this regard. All the remaining blocks score just above or below the district average and it is because of mandatory framework that has led to such shares. Tiruchirappalli is an educationally forward district with relatively more number of schools, colleges, technical institutions, professional institutions, etc. But, in terms of gender equality, expected achievements were not observed. The reason is not just infrastructure or the administration and implementation of the program, but is related to the social and cultural barriers at every level that the girls and women face. Lack of response by social institutions such as caste, religion, creed, etc., factors have been responsible for relatively lower achievements of women and girls in education, health, employment, participation in public, grass root movements like SHGs, etc. Hence, policy needs to be framed to address the above factors and sensitize on regressive norms of such institutions

CHAPTER 7

SOCIAL SECURITY

Chapter

Social Security

7

Introduction

Social security is that Government, which is the symbol and representation of society, is responsible for fixing a minimum standard of living for all its citizens. All social security measures aim at social transformation and progress. Contrary to the belief that it would be an impediment to economic growth, it creates a society free from anxiety of life sustenance, thereby increasing the productivity of the households. The UN resolution on Universal Declaration of Human Rights has stated that "every member of the society has a right to social security" which exemplifies its importance. Tracing the evolution of social security, it started as a protective measure against hazards of nature and gradually evolved to protect during unemployment periods, to provision of minimal standard of living to all citizens.

India, being a rural based economy, has been subjected to fluctuations in agricultural productivity owing to vagaries of monsoon. The marginalized population, who for their sustenance solely depend on agriculture and its allied activities, and face loss of work leading to poverty. Modernization and industrialization has not been successful in providing jobs to all those who seek employment. Social security measures gain importance in this context as basic needs like food; health and education are supported to tide over the crisis. Implementation of these measures in a systematic way so that they cover the target people is important. But, infrastructure available to distribute cash or kind is inadequate and there are lags in cent per cent coverage of the

target groups. After independence, social security measures were promoted in India and it was mostly concerned with people working in the organized sector. In a huge country, where 90 per cent of the workforce falls under unorganized sector, the need for social security is imperative. There are myriad social security schemes, however, it is relevant to discuss schemes under implementation both by the Centre and the State, and include, inter alia, employment guarantee, old age security, disability aid, protection of widows and destitute, provision of education, health, insurance against risks, prevention of starvation.

Historically, after French Revolution ILO (International Labour Organisation) framed few benefit schemes for labourers- medical care, sickness benefit, unemployment benefit, old age benefit, invalidity benefit, employment injury compensation, family benefit, maternity benefit and survivor benefit. These measures started for the protection of the labourers, slowly encompassed all citizens of a country and other parameters were introduced to broaden the social security net. Housing, education, safe drinking water, sanitation, health provision, cultural facility and minimum guaranteed wages are the main aspects in the current scenario. In India many schemes have been introduced continuously over the years starting from 1925 till date, which are Employment Provident Fund Scheme, 1925, Coal mines Provident Fund Bonus Scheme, 1948, Employees Provident Fund Act, 1952, Employees Family Pension Scheme, 1971, The Assam Tea Plantation Provident Fund Act, 1965, The Seamen Provident Fund, The Safety and Health of Dock workers, Regulation act 1948, The Survivors Pension Scheme, 1971, The Lay-off and Retrenchment Compensation (Industrial Dispute Act, 1947 with Amendment in 1953), The Old Age Pension Scheme, (The Family Pension Scheme, 1964), Gratuity Trust Funds, Unemployment Insurance, Integrated Social Security Scheme for the welfare of the people.

Most of these schemes cover the workers of the organized sector- the people working in factories, offices, government institutions and companies. As stated earlier, in India, employees under unorganized sector form a huge chunk and their social security needs must be reckoned. Newer schemes proposed, cover all the population, especially, the marginalized, irrespective of their employment status. Every State Government in India has its own schemes tailored to meet the needs of its citizens, in addition to the Central Government Schemes. Tamil Nadu Government has its own welfare schemes to bring equity among its citizens and improve their standard of living. On the financial side the current schemes are the following: Indira Gandhi National Old Age Pension Scheme,

Indira Gandhi National Widow Pension, Indira Gandhi Differently Abled Pension, Destitute, Widow Pension Scheme, Destitute Differently Abled Pension, Destitute and Deserted Women Pension, Destitute Agricultural Laborers Pension, Unmarried Women Pension, Marriage Assistance Scheme, Maternity Assistance Scheme, MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme).

Another important scheme to be reckoned is PDS (Public Distribution System), in which, the presence and function in Tamil Nadu has been the best, and due to its universal nature has helped reduce the number of people living below poverty line. No gainsaying the fact that there are modifications in quality and quantity of PDS according to the Government in power, the staple food for the people – rice – is always distributed at a subsidized rate or free of cost ensuring freedom from hunger and starvation.

The demographic profile of Tiruchirappalli District given in Table 7.1 shows the population above 60 years was 3,01,977 of which male were 1,46,324 and female were 1,55,653. In terms of percentage share, the population above 60 years of age was 11.09 per cent of the total Tiruchirappalli District population. The proportions of male and female populations of above 60 years are 48.46 per cent and 51.54 per cent respectively. Comparing the district figures with the State figures reveals that the district's above 60 years population figures were in line with the State's figures.

Table 7.1 Demographic Profile (in no.)

Sl. No	District/State	Total Population	Population Aged Above 60*		
			Male	Female	Total
1	District	27,22,290	1,46,324	1,55,653	3,01,977
2	State	7,21,47,030	36,61,226	38,48,532	75,09,758
Source: Census 2011					

The agenda central to the evaluation of this data is to explore the target population that may need assistance in their old age. The Central Government and the Government of Tamil Nadu have initiated Old Age Pension (OAP) scheme to assist the needy aged persons as a part of the social security measures. Identification of the population in need of money for sustenance, disbursal of funds monthly at their residence and monitoring such tasks might look difficult, but has been successfully implemented in the State for long years.

Financial Security

Table 7.2 brings out the financial assistance given to the people of Tiruchirappalli district under various categories. The maximum beneficiaries receiving pension under OAP scheme is 54,366 during the year 2013-14, compared to 42,986 in the year 2011-12. The number of beneficiaries under the Indira Gandhi National Differently Abled Pension scheme increased by nearly 54 times during the period 2011-12 to 2013-14, while the number of beneficiaries under the Differently Abled Pension scheme declined by four times during the same period. The Indira Gandhi National Widow Pension Scheme extended to 13,321 in the year 2011-12 increased to 16,374 in the year 2013-14, while under the Destitute Widow Pension Scheme the number of beneficiaries declined from 18,051 to 6,096 during the reference period. The number of beneficiaries under the OAP for Agricultural Labourers declined from 7,290 in the year 2011-12 to 2,164 in the year 2013-14. The number of beneficiaries under the OAP for Deserted wives reduced to nil from 1,744, but the number of beneficiaries under the OAP for Unmarried increased from 1,098 to 1,370 during the period 2011-12 to 2013-14. A total of 89,694 people received pension in Tiruchirappalli district in the year 2011-12, which increased to 1,16,513 in the year 2013-14. It can be seen that out of the total population of Tiruchirappalli district, a proportion of 3.2 per cent received some form of financial assistance in the year 2011-12, which increased to 4.3 per cent in the year 2013-14. Improvement in the living standard of the marginalized population of the district has been achieved through financial assistances given through various schemes.

Table 7.2 Financial Assistance to Old Age People

Sl. No	Category	Number of People Assisted	
		2011-12	2013-14
1	OAP for Aged	42,968	54,366
2	Indira Gandhi National Differently Abled Pension Scheme	656	34,872
3	Differently Abled Pension Scheme	4,566	1,271
4	Indira Gandhi National Widow Pension Scheme	13,321	16,374
5	Destitute Widow Pension Scheme	18,051	6,096
6	OAP for Agricultural Labourers	7,290	2,164
7	OAP for Deserted Wives	1,744	0
8	OAP for Unmarried	1,098	1,370
	Total	87,587	1,16,513
Source: District Revenue Department, District Statistical Handbook 2011-12 & 2013-14			

Differently Abled

One of the major social security measures is pension to differently abled and this is brought out in Table 7.3. Inclusive development of differently abled, a compelling need of any society could be achieved through such assistance given to all categories of special people, blind, deaf, lame, mental retardation etc. Tiruchirappalli district data on assistance to differently abled shows various categories of differently abled persons getting financial assistance such as persons with locomotor disability (2,872), hearing impaired (909), mentally retarded (6,291), cerebral palsy (98), visually impaired (1,174), multiple disorder (1,455), leprosy (392), mental illness (107) and Autiism (194). More male persons were able to get such benefit compared to female persons. It should be taken care that all the female persons should be benefitted.

Table 7.3 Assistance to Differently Abled (in no.)

Sl.No	Categories	Male	Female	Total
1	Locomotor	1,764	1,108	2,872
2	Hearing Impaired	522	387	909
3	Mental Retardation	3,773	2,518	6,291
4	Cerebral Palsy	54	44	98
5	Visual Impaired	629	545	1,174
6	Multiple Disorders	873	582	1,455
7	Leprosy	88	54	392
8	Mental Illness	55	52	107
9	Autism	116	78	194
	Total	7,874	5,368	13,492

Source: Differently Abled Welfare Department, Tiruchirappalli

Case Study: Widows, Destitute Widows and Disabled

The widows, destitute widows and disabled persons should be addressed with care as such persons are easily sidelined in mainstream policies. The Government has framed many schemes to assist such destitute persons, yet many deserving people are not able to claim benefits due to the technical intricacies involved in such schemes. Case studies made in Ghandhi market in Tiruchirappalli Corporation and Keelatheru village in Valadi panchayat, Lalgudi block, reveal the existence of many such people, mostly women, who have to face intormentable conditions and situations every day. This reality is not understood by many or people simply refuse to accept the existence of such people. Their life condition is deplorable, particularly the status of widows and disabled persons. Illiteracy could be one of the causes besides lack of awareness about the state sponsored social welfare programmes. For instance, a woman deserted by her husband cannot avail a ration card as her name would not have been deleted from the ration card, which is held by her deserter husband. A woman abandoned by her sons cannot avail old age pension on technical grounds. A woman taking care of her grandchildren as her destitute daughter has expired would not be able to include their name in her ration card. The level of disability prevents disabled persons to get assistance from the Governments schemes. Such destitute persons should be included in the mainstream empathetically through some suitable policy measures. Social welfare programmes need to be revamped in such a way that the needs, should be identified and they become the real beneficiaries.

Box 7.1 Marriage and Maternity Assistance Programme

The Government of Tamil Nadu provides several marriage and maternity assistance programmes for the benefit and upliftment of the persons, especially women in dire needs of such assistance like, Moovalur Ramamirtham Ammaiyar Marriage Assistance Scheme provides Rs.25,000 and four gram gold coin to support the marriage related expenses of poor families; E.V.R. Maniammaiyar Ninaivu Poor Widow's Daughter's Marriage Assistance Scheme provides a similar financial assistance to help the poor mothers who are widows for the marriage of their daughters; Dr. Muthulakshmi Reddy Ninaivu Intercaste Scheme provides similar assistance to a person belonging to a Forward Community and marrying a person belonging to BC/MBC/SC/ST; Annai Teresa Ninaivu Orphan Girls Marriage Assistance Scheme provides similar to financially help Orphan Girls for their marriage; Dr. Dharmambal Ammaiyar Ninaivu Widow Remarriage Scheme provides similar assistance to encourage widow remarriage and to rehabilitate widows; Marriage Assistance to Normal Person Marrying Orthopaedically Handicapped Person provides similar assistance; Marriage Assistance to Normal Person Marrying Speech and Hearing Impaired Person provides similar assistance; and Dr. Muthulakshmi Reddy Memorial Maternity Assistance Scheme provides maternity assistance grant of Rs.6,000 at the rate of Rs.1,000 per month, to pregnant women to compensate for the loss of income and to ensure adequate nutrition for them. The financial assistance for marriage is given with certain conditions related to the beneficiary's socio-economic and educational background such as studying 10 Standard. It may be noted that in order to promote higher education among the girls, enhanced assistance of Rs.50,000 is provided to girls with Degree or Diploma. Maternity benefits consider only the economic background and this bears a positive impact on the nutritional status of the mothers.

In Tiruchirappalli district, a total of 6,014 women received marriage assistance in the year 2013-14, while the number of women who received maternity assistance was 53,459 in the same year. Marriage and maternity assistance received by women is spread out over all blocks in Tiruchirappalli District with maximum number of 945 beneficiaries (26.22 per cent) from Tiruchirappalli Corporation, followed by M.Nallur (573) (see Appendix Table 7.1). The block with the highest beneficiaries is Thuraiyur followed by Lalgudi. The least number of beneficiaries were found in Thiruverumbur (172) followed by Vaiyampatti (218). In terms of maternity assistance, Tiruchirappalli Corporation had the largest number of beneficiaries (9,454), which was 17.69 per cent of the total beneficiaries in the district. Other blocks with higher than district levels beneficiaries in this category were M.Nallur (4,343), Marungapuri (3,798) and Thiruverumbur (3,708). The blocks with the lowest number of beneficiaries were Vaiyampatti (2,310) and T.Pet (2,416). The effect of such social security measures is profound on health and standard of living of the people. So, such programmes are welcome to be continued in the long run for the improvement in the intangible benefits they provide.

Crime Against Women

Data set out in Table 7.4 records the crime against women for the years 2011-12 and 2013-14. This record is a major indicator of social security as women's safety and security are of prime importance. The data may be only a tip of the iceberg as only registered cases will be tabulated, while unregistered crime against women would show a higher value if documented.

Table 7.4 Crime Against Women

Sl.No.	Crime Against Women (2011)	No. of Cases	
	Category	2011-12	2013-14
1	Rape	14	28
2	Molestation	42	48
3	Kidnapping Female and girl	54	26
4	Cruelty by husband	47	63
5	Child Marriage Act	0	1
6	Dowry Death	2	3
7	Dowry Prohibition Act	0	5
8	POCSO Act	4	8
9	Women Harassment	5	12
Total		168	194
Source: SP Office, City Commissioner, Tiruchirappalli			

Totally, 168 cases were registered in the year 2011-12, which increased to 194 in 2013-14. The highest number of cases in Tiruchirappalli District were registered under the Cruelty by husband category (63) in the year 2013-14, which was 47 in the 2011-12. The lowest number of cases are registered under the Child Marriage Act category (1). The cases registered under the category Rape witnessed an increase from 14 in 2011-12 to 28 in 2013-14. Other than this, except the cases registered under the Kidnapping Female and Girl category, all other categories record increase in the number of cases registered between 2011-12 and 2013-14. This indicator is one of the important components to identify and provide security to women who form nearly half the population.

Conclusion

The Chapter 7 provides social security measures of the State and Central Governments. Social security schemes of any Government form the flag ship of all measures taken to improve the standard of living of the citizens. In our country where more than half the population need assistance in some form or the other, the Government initiatives go a long way in satisfying the needs as they are sustainable where compared to private NGOs' aids. Demographic pattern of the modern economy shows an increase in percentage of old age population that Government through its OAP is able to share this burden to some extent, as citizens who crossed the age of 60 could lead a respectable life. Tiruchirappalli District has performed well in this regard with a good number of beneficiaries of OAP, IGNDAPS, and IGNWPS. Effective implementation of DAPS, DWPS, OAP for AL, OAP for DW should be geared up to reach the deserted widows, deserted wires and differently abled and diseased.

The maximum number of marriage assistance was provided by Tiruchirappalli Corporation (945 beneficiaries; 26.22 per cent), followed by M.Nallur (573). Other than this, Thuraiyur and Lalgudi were the blocks with beneficiaries higher than the district average of 401. The least number of beneficiaries were found in Thiruverumbur (172) followed by Vaiyampatti (218). In terms of maternity assistance, Tiruchirappalli Corporation has the largest number of beneficiaries (9,454), which is 17.69 per cent of the total beneficiaries in the district. Other blocks with higher than district level beneficiaries in this category were M.Nallur (4,343), Marungapuri (3,798) and Thiruverumbur (3,708). The blocks with the lowest number of beneficiaries are Vaiyampatti (2,310) and T.Pet (2,416). The financial assistance received by the women is not up to the mark and the number of cases of claims against women has increased in the district, which need immediate care. With regard to crime against women in the district, 168 cases were registered in the year 2011-12, which increased to 194 in 2013-14. The number of rape cases witnessed an increase from 14 in 2011-12 to 28 in 2013-14. The lowest numbers of cases are registered under the Child Marriage Act category (1) in 2013-14. Security to women who form half of the total poputation is as much important as providing financial assistance. So, crime against women needs to be addressed through education and penal action.

Special schemes to improve the health and socio-economic status of the female population are in vogue. Such assistance could be expanded to cover more in need so as to give financial security to the women. This in turn would empower women to make

free choices in every aspect of life and fight against crimes related to them. On the whole, Tiruchirappalli District's social security measures are complete and wide spread leaving only a very few outside its purview. In years to come, all marginalized people in need of assistance could be brought under this net leading to equitable development and still higher human development.

CHAPTER 8

INFRASTRUCTURE

Chapter

Infrastructure

8

Introduction

Infrastructure investment partly provides goods and services directly, and at the same time makes other forms of investment more productive. Infrastructure refers to the underlying capital of the society involving basic amenities for economic development, often called social overhead capital. Transport, communication, power and basic public service facilities form the major components of infrastructure. Transport includes roadways, railways, airways and waterways with all necessary basic structures with public utility vehicles, its management and maintenance. Telecommunication network, telephone lines, exchanges, post office, satellite communication infrastructure are a few components that constitute communication. Power production, transmission, supply and maintenance and electricity distribution comprise the power sector. Other basic public utilities include rivers, tanks, irrigation canals, drinking water supply, housing, sewage and sanitation, educational institutions, public buildings and maintenance. Most infrastructure facilities construction and maintenance is implemented by the concerned government by itself or public private partnership or outsourced to private companies.

Infrastructure encompasses wide range of components that vary in accordance with geographical, economic, social and cultural behaviours and the service provider's capacity. In this context, rural economy or urban economy, traditional versus modern, gray as against green, economic and social background are some major criteria influencing the content of infrastructure facilities. To cite an example the roads laid in rural areas are different from the roads laid in metropolitan cities, maintenance of traditional tanks are different from construction of modern reservoirs, deforestation for construction is gray while conservation of biodiversity is green.

Road Transport Facilities

Tiruchirappalli district, being central to Tamil Nadu, is well endowed with all modes of transport facilities. All major roads originating from Tiruchirappalli are highways leading to better connectivity. NH 45, 45B, 67, 210 and 227 runs through Tiruchirappalli linking all major towns around the district. There are two main bus stands with adequate facilities one in Chatram and the other in Central bus stand.

Table 8.1 Distribution of Total Road Length (in km)

Sl. NO	Blocks /District/State	Mud	WBM	BT	CC	Total
1	Andanallur	4.300	5.185	138.302	10.957	153.740
2	Lalgudi	35.412	4.853	226.186	4.799	271.250
3	Manachanallur	291.610	37.720	372.586	43.405	745.321
4	Manigandam	89.080	16.950	238.350	1.700	346.080
5	Manapparai	98.200	48.180	346.020	11.850	504.250
6	Marungapuri	255.200	184.773	478.995	10.660	929.628
7	Musiri	164.880	21.550	380.550	7.751	574.731
8	Pullambadi	103.832	31.484	225.562	4.025	364.903
9	Thiruverumbur	27.269	14.450	202.300	14.435	258.455
10	Thottiyam	56.263	47.009	360.602	5.665	469.539
11	Thuraiyur	120.103	27.255	336.115	10.181	493.654
12	T.Pet	77.846	16.595	309.183	7.652	411.296
13	Uppliapuram	215.083	22.443	213.047	7.215	440.750
14	Vaiyampatti	73.410	64.700	167.880	0.000	305.930
15	Tiruchirappalli Corporation	279.280	33.110	732.060	196.620	1,241.070
	District	1,891.768	576.257	4,727.738	336.915	7,510.597
	State*	55,900.242	17,957.110	1,88,835.092	9,560.168	2,72,252.612

Source: PDOs, AD (TP), Corporation, Municipality; *Statistical Handbook of Tamil Nadu 2013

Analysing the infrastructure development data for Tiruchirappalli District, Table 8.1 provides details on the road length and the type of road in various blocks for the year 2013-14. The roads have been classified into Mud, WBM, BT and CC roads. The total road length of Tiruchirappalli District accounts to 7,510.597 km, which was 2.76 per cent of the total road length of Tamil Nadu. In terms of the type of roads, Tiruchirappalli district had 25.19 per cent Mud-road, 7.67 per cent WBM road, 62.95 per cent BT road and 4.49 per cent CC road. Despite the fact that the district had 62.95 per cent BT road, it was lesser than the State average of 69.36 per cent. Therefore, more BT roads need to be laid down in the district, which was lagging behind the State average.

In the blockwise variations, it can be observed that Tiruchirappalli Corporation has highest proportion of roads in the district with 16.52 per cent followed by Marungapuri (12.38 per cent), while the lowest share was found in Andanallur (2.05 per cent) followed by Thiruverumbur (3.44 per cent). In terms of Mud-road M.Nallur recorded the largest percentage share in the district with 15.41 per cent, closely followed by Tiruchirappalli Corporation (14.76 per cent). Other blocks with double digit Mud-road are Marungapuri (13.49 per cent) and Uppiliapuram (11.37 per cent).The least share of Mud -road in the district is recorded in Andanallur (0.23 per cent) followed by Thiruverumbur (1.44 per cent). Much Mud-road can be seen in the above mentioned blocks and steps should be taken to lay BT roads for better connectivity.

In terms of WBM roads, Marungapuri recorded the highest share of 32.06 per cent followed by Vaiyampatti (11.23 per cent), while Lalgudi recorded the lowest share in the district with 0.84 per cent followed by Andanallur (0.90 per cent). Moving to BT road, Tiruchirappalli Corporation has the highest percentage share in the district with 15.48 followed by Marungapuri (10.13 per cent), while Andanallur has the lowest share in this regard with 2.93 per cent followed by Vaiyampatti (3.55 per cent). In terms of CC roads, Tiruchirappalli Corporation recorded the highest share of 58.36 per cent, which shows the construction of CC road is given preference to urban areas. Rural road connectivity is as much important as the urban side and so, road connectivity in rural areas needs to be focused.

Other Transport Facilities

Other than road connectivity, the district is well connected by the Indian Railways with a total route length of 85 km. Tiruchirappalli District is the headquarters of the Tiruchirappalli Division of the Southern Railways and also houses the Tiruchirappalli Junction, which is one of the most prominent landmarks of the city of Tiruchirappalli. Itt is one of the major junctions in the Southern Railway zone with trains plying throughout the day to places all over India. Five rail lines branch separately from the Tiruchirappalli Junction, which are: towards North for Vriddhachalam, Chennai, Tirupati, Nellore, etc.; towards East for Thanjavur, Nagapattinam, Karaikal Port, Karaikal, etc.; towards South-East for Pudukkottai, Karaikudi, Manamadurai, Rameswaram; towards South of Madurai, Tirunelveli, Kanyakumari, Thiruvananthapuram, Quilon, etc.; and towards west for Karur, Erode, Bangalore, Coimbatore, Palakkad, etc.

Another important feature in terms of transportation sector is the Tiruchirappalli Airport. Tiruchirappalli International Airport is one of the major airports in South India, second biggest in Tamil Nadu after Chennai. Both National and International destinations are well connected with Tiruchirappalli along with International cargo facility since 2011. In terms of services, the Airport sports domestic services to Chennai alone, but in terms of international services it has services to many countries such as Srilianka, Singapore, Malaysia and UAE. Presently, the Tiruchirappalli Airport is in expansion mode with increase in services.

Electricity

Electricity is another major service by itself other than being an enabler to many other services. So, it is critical that electricity is made available to all. In this regard it is pertinent to note that there is no power station within the district. Table 8.2 presents the details of electrification in the various blocks of Tiruchirappalli District for the year 2013-14. A total of 486 revenue villages, 2,013 hamlets, 28 towns with a total population of 27,22,290 were covered with electricity in the year 2013-14. There were more than 1.17 lakh street lights spread out all over the district.

Table 8.2 Status of Electrification (in no.)

Sl.No	Blocks/District	Revenue Village	Hamlets	Towns	Population Covered*	No. of Street Lights
1	Andanallur	33	122	1	99,968	5,694
2	Lalgudi	46	78	2	1,45,492	7,152
3	Manachanallur	46	110	2	1,92,869	11,096
4	Manigandam	27	134	6	1,07,526	6,587
5	Manapparai	28	311	1	1,46,961	5,704
6	Marungapuri	44	311	1	1,31,923	7,908
7	Musiri	34	158	1	1,28,693	13,998
8	Pullambadi	36	60	2	1,09,373	7,481
9	Thiruverumbur	49	92	3	2,25,517	11,235
10	Thottium	28	139	2	1,35,120	4,559
11	Thuraiyur	30	116	1	1,46,659	6,479
12	T.Pet	28	86	3	1,02,962	6,917
13	Uppliapuram	34	54	2	1,02,668	3,623
14	Vaiyampatti	23	242	0	96,486	4,042
15	Tiruchirappalli Corporation	0	64	1	8,50,073	14,694
	District	486	2,013	28	27,22,290	1,17,169

Source: TNEB, Tiruchirappalli, *Census 2011

In terms of the blockwise distribution of the number of street lights, they are in direct correlation with population in the block, i.e., higher the population, higher is the number of street lights in the block. Tiruchirappalli Corporation has the highest number of street lights (14,694) followed by Musiri block (13,998). The lowest number of street lights per hamlet was found in Vaiyampatti (17) and Manapparai (18).

Communication System

In the world of Information Technology revolution, communication has become even more significant. Table 8.3 presents the data on telecommunication sector in the various blocks of Tiruchirappalli district for the year 2013-14, which is a major component of infrastructure facility.

Table 8.3 Telecommunication System

Sl. No	Blocks/ District	No. of Tel. exchange	No. of PCO	No. of Land Line	Number of Mobile Phone Towers	Pop.Covered
1	Andanallur	9	630	9117	18	99,968
2	Lalgudi	3	120	1,390	4	1,45,492
3	Manachanallur	7	403	3,961	10	1,92,869
4	Manigandam	3	50	624	3	1,07,526
5	Manapparai	5	147	1,655	5	1,46,961
6	Marungapuri	1	63	273	2	1,31,923
7	Musiri	8	250	3,454	8	1,28,693
8	Pullambadi	3	85	696	3	1,09,373
9	Thiruverumbur	11	623	11,488	19	2,25,517
10	Thottium	6	148	1700	7	1,35,120
11	Thuraiyur	8	296	5,222	7	1,46,659
12	T.Pet	3	57	813	2	1,02,962
13	Uppliapuram	4	132	1743	3	1,02,668
14	Vaiyampatti	3	84	634	3	96,486
15	Tiruchirappalli Corporation	21	3,019	43,713	32	8,50,073
	District	95	6,107	86,483	126	27,22,290
Source: Bharat Sanchar Nigam Limited, Tiruchirappalli						

Telecommunications development is on par with the current scenario of shifting towards mobile connectivity and Tiruchirappalli district data is commensurate with this change. It is interesting to note a considerable change from conventional landline phones to mobile phones depicted by the presence of many mobile towers all over the district. There are 95 telephone exchanges, 6,107 PCOs, 86,483 landline connections and 126 mobile towers covering a population of 27,22,290. Among the blocks,Tiruchirappalli Corporation has the maximum values in all parameters with 21 telephone exchanges, 3,019 PCOs, 43,713 landlines, 32 mobile towers covering a population of 8,50,073. Marungapuri block is the least covered with 1 telephone exchange, 63 PCOs, 273 landlines, and 2 mobile towers though the population was moderately high at 1,31,923. Next to Tiruchirappalli Corporation, Thiruverumbur has the highest number of mobile towers 19, telephone exchanges 11, with 11,488 landline connections. Another block worth mentioning is Andanallur with a lesser population of 99,968 has 630 PCOs and 18

mobile towers. The upshot in rapid privatization of telecommunication sector over a period has led to improved connectivity.

Financial Institutions

Moving on to the next essential service which is of paramount importance is banking. Data set out in Table 8.4 lists the financial institutions like co-operative societies and commercial banks spread over Tiruchirappalli district in the year 2013-14.

Table 8.4 Commercial and Cooperative Banks

Sl. No	Blocks/District	Number of Co-operative Societies	Number of Members	Commercial Banks	Number of Account Holders
1	Andanallur	11	35,102	14	1,33,430
2	Lalgudi	26	62,547	11	1,01,200
3	M.Nallur	10	23,910	19	1,65,366
4	Manigandam	6	25,636	8	67,600
5	Manapparai	20	59,582	7	67,318
6	Marungapuri	8	24,358	7	46,700
7	Musiri	17	59,989	11	76,350
8	Pullambadi	17	24,499	10	79,420
9	Thiruverumbur	17	48,563	18	1,53,000
10	Thottiyam	13	39,401	11	89,115
11	Thuraiyur	18	62,609	10	98,300
12	T.Pet	14	31,325	10	59,250
13	Uppliapuram	12	36,397	6	64,800
14	Vaiyampatti	10	18,982	4	32,625
15	Tiruchirappalli Corporation	68	85,597	154	27,72,000
	District	267	6,38,497	300	40,06,474

Source: Lead Bank, JD Cooperative, Tiruchirappalli

The total number of co-operative institutions is 267, of this Tiruchirappalli corporation has the maximum number of 68 co-operative societies followed by Lalgudi with 26, while the least number of Co-operative societies were found in Manigandam (6)

and Marungapuri (8). A total of 6,38,497 persons are enrolled as members in the co-operative societies in the district during 2013-14. In terms of the number of members in co-operative societies, Tiruchirappalli Corporation has the largest number with 85,597 followed by Thuraiyur block (62,609), while the lowest number of members are found in Vaiyampatti (18,982) and Manachanallur (23,910). In terms of commercial banks, Tiruchirappalli Corporation (154) has the highest number and percentage share (51). None of the blocks have so many commercial banks. Among the other blocks, M.Nallur has 19 banks followed by Thiruverumbur (18) and Andanallur (14), while others have range between 4 and 11.

The number of bank account holders in Tiruchirappalli district is 40,06,474 of which Tiruchirappalli Corporation (27,72,000) has the highest share of around 70 per cent. Next is Manachanallur with 1,65,366 bank account holders followed by Thiruverumbur (1,53,000), while Vaiyampatti (32,625) has the minimum number of account holders (0.81 per cent). It can be noticed that both in terms of co-operative societies and commercial banks, the urban blocks have more number of such institutions and members or account holders.

Insurance

Table 8.5 Insurance Companies

Sl. No	Name of the Companies	No. of Branches	Polices Issued
1	LIC of India	7	93,875
Source: Life Insurance Corporation of India, Tiruchirappalli			

The phenomenon of 'risk' as calculable and insurable as uncertainty pervades economic and social life everywhere. Now-a-days, risk of deal this much higher, viewing the rapid changes in lifestyle, particularly the changes after the economic reforms are ushered inhave transformed the lifestyle of the people. As the people are moving in tandem with the western philosophy of nuclear families, income dependency, and wealth acquirement, it has put them more at stress leading to high risk. In this circumstance, insurance forms a crucial weapon providing security against risk and uncertainty. In this context, Table 8.5 provides some details about the life insurance in Tiruchirappalli district. There were seven branches of the LIC of India in the district with 93,875 life insurance policies issued during the year 2013-14 against a population of 27,22,290. So,

life insurance coverage is only 3.45 per cent in the district. Life insurance is a must for all and with the advent of the Central Government's insurance schemes, hopefully the coverage would be increased in the district in the future. Awareness campaigns are essential to educate the people about life insurance.

Conclusion

Infrastructure facilities include roads, electricity, telecommunications, financial institutions and transport, whose development has a positive effect on the living standard of the citizens. An overview of all these pertaining to Tiruchirappalli district is discussed in Chapter 8 and revel a good record in all parameters during 2013-14. But, the development still remained skewed with major improvements in Tiruchirappalli Corporation, with less development in other blocks. Tiruchirappalli Corporation had the highest percentage share of roads (Total) in the district with 16.52 per cent followed by Marungapuri (12.38 per cent), while the lowest share is found in Andanallur (2.05 per cent followed by Thiruverumbur (3.44 per cent). In terms of Mud-road Manachanallur recorded the largest percentage share in the district with 15.41 per cent, closely followed by Tiruchirappalli Corporation (14.76 per cent). Other blocks with double digit Mud-road are Marungapuri (13.49 per cent) and Uppiliapuram (11.37 per cent). Tiruchirappalli Corporation recorded the highest share of 58.36 per cent CC road, while Vaiyampatti had no CC road, which showed the urban bias in CC road construction. Tiruchirappalli Corporation had the highest number of street lights (14,694) followed by Musiri block (13,998). Other blocks with more than 10,000 street lights were Thiruverumbur and Manachanallur. The blocks with lowest number of street lights are Uppiliapuram (3,623) and Vaiyampatti (4,042). With regard to telecommunications, Tiruchirappalli Corporation had the maximum values in all parameters with 21 telephone exchanges, 3,019 PCOs, 43,713 landlines, 32 mobile towers covering a population of 8,50,073. Marungapuri block is the least covered with one telephone exchange, 63 PCOs, 273 landlines and 2 mobile towers though the population was moderately high at 1,31,923. In terms of the number of members in co-operative societies, Tiruchirappalli Corporation had the largest number with 85,597 followed by Thuraiyur block (62,609), while the lowest number of members are found to be in Vaiyampatti (18,982) and Manachanallur (23,910). Life insurance coverage is only at 3.45 per cent in the district and needed much expansion in cevrage.

Though it is natural for fast pace development in the district headquarters, inequality of high order needed to be corrected as it may lead to over-crowding in big cities. Scaling up of infrastructure in all blocks would create hubs of industrial and agricultural activities all over the district, providing employment to local people. With good transport, uninterrupted electricity, fast communication and loan facilities every block could become self-sufficient. Most blocks of Tiruchirappalli district like Marungapuri, Pullambadi, Vaiyampatti, T.Pet, Thuraiyur, Manigandam, Mannaparai have very low infrastructural facilities compared to Tiruchirappalli Corporation. This inequity could be rectified through provision of all parameters of infrastructure in the under-developed blocks.

CHAPTER 9

SUMMARY AND WAY FORWARD

Chapter

9

Summary and Way Forward

Introduction

Tiruchirappalli district has been divided into three revenue divisions, viz., Tiruchirappalli, Musiri and Lalgudi. It is further classified into 14 blocks, viz., Andanallur, Lalgudi, MannacheNallur, Manigandam, Manapparai, Marungapuri, Musiri, Pullambadi, Thiruvarumbur, Thottiyam, Thruraiyur, T.Pet, Uppiliyapuram, and Vaiyampatti. Further, the district has 507 revenue villages, 17 town panchayts, three municipalities and one corporation. The Tiruchirappalli Corporation is the fourth largest Municipal Corporation in Tamil Nadu.

- The population of Tiruchirappalli district was 23.8 lakh in 2001, which increased to 27.2 lakh in 2011. The decennial growth was 8.76 per cent in 2001 which increased to 12.57 per cent in 2011.
- The density of population per sq. km. in 2001 was 542 which increased to 618 in 2011, which shows the increase in urbanization. The urban population is 47.11 per cent in 2001, which increased to 49.15 per cent in 2011.
- The sex ratio was 1003 females per 1000 males in 2001 which increased to 1013 females per 1000 males in 2011.
- The district has 31,920 Government Canals, 6,337 Tanks, 10,281 Tube Wells and 43,011 Other Wells, which irrigation 91,549 ha. of land.

- The total GDDP of the district was Rs.19,42,192 lakh in the year 2011-12. The contribution of the primary sector was Rs.1,12,452 lakh, while the contributions of the secondary and tertiary sectors were Rs.4,08,255 lakh and Rs.14,21,485 lakh respectively during 2011-12.
- The district seems to perform better than the State level in terms of the absolute per capita income and the growth rate of per capita income. The reason is the higher level of urbanization and the presence of various industries in and around Tiruchirappalli city.
- The Crude Birth Rate (CBR) stood at 15 in 2014, while that of Tamil Nadu was 15.9 in the same year and the IMR in Tiruchirappalli district was 12 in 2014.
- The female literacy rate was 76.87 per cent, which was much lower than the male literacy rate of 89.72 per cent.
- The rural literacy rate was 76.69 per cent in which the rural male literacy rate was 85.44 per cent and the rural female literacy rate was only 68.11 per cent; there was a gap of 17.33 per cent between the rural male and female literacy rates.
- The urban literacy was 89.92 per cent, in which the male literacy rate was 94.11 per cent and the female literacy rate was 85.81 per cent. Here, the gender gap in literacy was 8.3 per cent.

Human Development Status

Human Development Index

- In terms of HDI, Tiruchirappalli Corporation, Thiruverumbur, T.Pet, Uppiliapuram and Thuraiyur blocks were placed in the top five positions with index values of 0.878, 0.770, 0.658, 0.629 and 0.609 respectively, while Vaiyampatti, Manigandam, Manapparai, Marungapuri and Andanallur blocks were placed at bottom five with the index values of 0.417, 0.444, 0.446, 0.475 and 0.484 respectively.
- Tiruchirappalli Corporation stands first as it tops the chart in seven indicators viz., Access to Toilet Facility (62.18 per cent), Access to Drinking Water (100 per cent), Access to Electricity (97.66 per cent), IMR (0.8), U5MR (4.04), Literacy Rate (91.38 per cent) and GER Primary (108.50 per cent).

- Thiruverumbur block stands second in terms of HDI ranking as it tops the chart in IMR (0.4) and stands second in four indicators, viz., Access to Electricity (97.45 per cent), U5MR (11.21), literacy Rate (89.16 per cent) and GER Secondary (101 per cent)
- Vaiyampatti block stands last in terms of HDI ranking as it performs lowest among the blocks in terms of five indicators viz., Access to Cooking Fuel (19.55 per cent), Access to Toilet Facility (35.41 per cent), Access to Electricity (87.47 per cent), Literacy Rate (70.47 per cent) and GER Secondary (99 per cent).
- Manikandam block stands second last in terms of HDI ranking as performs lowest among the blocks in GER Secondary (99 per cent), and performs poorly, i.e., below (positive indicator) or above (negative indicator) district level in eight indicators, viz; Access to Drinking Water (55.10 per cent), Access to Electricity (90.01 per cent), Access to Pucca House (62.84 per cent), IMR (18.6), MMR (120), U5MR (23.56), Literacy Rate (80.68 per cent) and GER Primary (99.50 per cent).
- Six blocks had HDI Values below 0.500; viz., Vaiyampatti, Manigandam, Manapparai, Marungapuri, Andanallur and Pullambadi. These blocks perform very poorly in the standard of living and health parameters. Basic infrastructural facilities need to be strengthened in these blocks so that they can also develop along with other blocks in the district.

Gender Inequality Index

- In terms of GII, the top five blocks are Andanallur (0.110), Uppliapuram (0.110), Marungapuri (0.024), Thiruverumbur (0.027) and Tiruchirappalli Corportation (0.034) indicating lower gender gap in achievements.
- Blocks with wider gender gap are Musiri (0.132), Vaiyampatti (0.106), Manapparai (0.089), Thuraiyur (0.089) and Thottiyam(0.706).
- Andanallur block secures the first rank in GII as it performs first in three indicators, viz., MMR (zero), Share of Institutional Delivery (99.72 per cent) and Share of Ante Natal Coverage (100 per cent), and has above average Share of Female Children (0-6) years (48.88 per cent), above average Female WPR (34.10 per cent) and low wage gap between male and female (Rs.100).

- Uppilapuram block secures the second rank in GII as it has zero MMR and performs better than the district level in terms of the Share of Institutional Delivery (100 per cent), Share of Female Elected Representatives in RLBs and ULBs (33.64 per cent), Female WPR (48.70 per cent) and wage gap between male and female (Rs.125).
- Musiri block comes last in terms of GII ranking as it has second highest MMR (160), below average Female Literacy Rate (69.35 per cent), huge gender gap in Literacy (16.61 per cent), below average Share of Female Children (0-6) years (48.21 per cent), low Female WPR in Non-Agricultural Sector (22.81 per cent), lowest Female Wage Rate (Rs.100), high gender gap in Wage Rate (Rs.200).
- Vaiyampatti block stands second from the bottom in terms of GII ranking as it has high MMR (130), below average Share of Institutional Delivery (99.51 per cent), below average Share of Ante Natal Coverage (97 per cent), second lowest Female Literacy Rate (60.35 per cent), highest gender gap in Literacy (20.5 per cent), very low Female WPR in Non-Agricultural Sector (12.21 per cent), very low Female Wage Rate (Rs.100) and high gender gap in Wage Rate (Rs.190).
- Some blocks like, Musiri, Vaiyampatti, Manapparai, Thuraiyur, Thottiyam and Manachanallur perform poorly in terms of MMR combined with lower level of female literacy rate and higher gender gap in literacy rate, which pushes them to lower ranks. These blocks require a strong dose of gender sensitization, which would lead to improvement in the achievement levels of females.

Child Development Index

- Tiruchirappalli Corporation, Manachanallur, Musiri, Marungapuri and Manpparai blocks secure the top five ranks in terms of CDI with index values of 0.731, 0.696, 0.530, 0.499 and 0.497 respectively.
- Vaiyampatti, Uppilapuram, Thuraiyur, Thottiam and Lalgudi blocks are pushed to the last five positions with CDI values of 0.252, 0.332, 0.335, 0.405 and 0.413 respectively.
- Tiruchirappalli Corporation stands first in terms CDI ranking as it performs best with regard to five indicators, viz., U5MR (4.04), Child Sex Ratio (960), Malnourished Children (9.10 per cent), GER in Primary (108.50 per cent) and Transition Rate from Primary to Upper Primary (100per cent).

- Manachanallur block stands second in terms of CDI ranking as it has the best figures for two indicators, viz., Children Never Enrolled in Schools (0.03 per cent) and Transition Rate from Upper Primary to Secondary (100 per cent).
- Vaiyampatti block comes last in terms of CDI ranking as it has the lowest GER Secondary (99 per cent) and Transition rate from Upper Primary to Secondary (99 per cent), and has above average U5MR (24.36), below average Child Sex Ratio (948), above average Malnourished Children (24.19 per cent) and below average GER Primary (99.85 per cent).
- Uppiliapuram blocks stands second from the bottom as it has the lowest Transition Rate from Primary to Upper Primary (98.50 per cent), second lowest Child Sex Ratio (928), second highest Malnourished Children (24.87 per cent) and below average GER Primary (99.39 per cent).
- Three blocks, viz., Vaiyampatti, Uppliapuram and Thuraiyur have performed very poorly in most of the indicators used to compute CDI and get very low values. In terms of the education indicators, they perform well, but in terms of the health indicators such as U5MR, Child Sex Ratio and proportion of Malnourished Children, they have performed very poorly compared to other blocks in the district. All the other blocks that perform poorly with regard to CDI are weak in terms of health indicators, which need to be strengthened.

Multidimensional Poverty Index

- The top five blocks in terms of MPI are Tiruchirappalli Corporation (0.178), Thiruverumbur (0.312), Thuraiyur (0.358), Uppiliapuram (0.388), and Lalgudi (0.439) index values respectively secure the top five positions.
- Manachanallur, Marungapuri, Manigandam, Vaiyampatti and Manapparai with 0.683, 0.672, 0.654, 0.548 and 0.536 index values respectively secure the bottom five positions.
- Tiruchirappalli Corporation stands first in terms of MPI ranking as it tops in five out of 10 indicators used to complete MPI, viz., High Order Birth Rate (6), Malnourished Children (9.10 per cent), Access to Toilet Facility (62.18 per cent), Access to Drinking Water (100 per cent) and Access to Electricity (97.66 per cent). It also has very low IMR (0.5), Dropout Primary (0.53 per cent), average Dropout Secondary (1.86 per cent) and Access to Cooking Fuel (51.75 per cent).

- Thiruverumbur block stands second in terms of MPI ranking as it has very low IMR (0.4), low High Order Birth Rate (8), below average Dropout Primary (0.40 per cent), below average Dropout Secondary (1.54 per cent), average Access to Toilet Facility (48.18 per cent), high Access to Drinking Water (95.02 per cent) and above average (97.45 per cent).
- Manachanallurblock stands last in terms of MPI ranking as it has high IMR (13.2), high Dropout Primary (1 per cent), highest Dropout Secondary (3.35 per cent), below average Access to Toilet Facility (39.73 per cent), lowest Access to Drinking Water (46.56 per cent) and below average Access to Electricity (91.09 per cent).
- Marungapuri block stands second from the bottom in terms of MPI as it has the highest High Order Birth Rate (17), highest Malnourished Children (27.48 per cent), above average Dropout Primary (0.63 per cent), high Dropout Secondary (2.68 per cent), lowest Access to Cooking Fuel (18.26 per cent), second lowest Access to Toilet Facility (36.23 per cent) and very low Access to Electricity (87.89 per cent).
- Blocks that had very high MPI values are Manachanallur, Marungapuri and Manigandam. Two of these blocks, (last two) also figure in the bottom five list in the HDI analysis. As observed earlier these performance of these blocks are poor in standard of living and health parameters and hence, the basic infrastructural facilities in these blocks need to strengthened.

Employment, Income and Poverty

- The urban work participation rates have increased to 37.1 per cent in, whereas in the rural areas, it has reduced to 51.9 per cent.
- In the case of rural females, the ratio had gone down from 45.3 per cent (2001) to 43.8 per cent (2011) while the urban female work participation rates were much smaller compared to the rural rates, but it had gone up from 15.2 per cent in 2001 to 17.8 per cent in 2011.
- The total female WPR, i.e., the combined rural and urban female WPR is negative. So, the gap between the percentage change in population and the percentage change in WPR is higher for female (12 per cent) compared to male (8.1 per cent) and both combined (10.2 per cent).

- In Marungapuri, Vaiyampatti, Pullambadi and T.Pet, a large proportion of workers have reported to be cultivators. Obviously this was very low in urban centres like Thiruverambur and Tiruchirappalli Corporation.
- The number of male and female cultivators were high in Marungapuri block followed by Thuraiyur
- Thuraiyur block recorded the highest percentage of households being provided employment under MGNREGA with 86 per cent followed by Vaiyampatti block with 85 per cent. While the least performing blocks in this regard was Thiruverumbur (60 per cent) and Manigandam (68 per cent).
- The lowest poverty level can be seen in Tiruchirappalli corporation per cent in terms of BPL HHs followed by Thiruverambur. The highest poverty level can be seen in Thottiyam, Marungapuri, Thuraiyur and Pullambadi.
- In terms of the coverage of family cards, Tiruchirappalli corporation had 2,06,955 family card holders.
- The maximum increase in the gross cropped area was found in Pullambadi block over the reference period (2,254 ha.) and the maximum decline during the same period has been found in Marungapuri block (6,473 ha.).
- All the blocks registered a decline in the net irrigated area, the maximum decline in gross and net irrigated areas were found in Thuraiyur block over the reference period (4,508 ha. and 4,852 ha. respectively).
- Increases in the number of different kinds of workers alone cannot be expected to bring down the incidence of poverty or to bring up the standard of living of the people. Higher wage rates and jobs for large number of days (not long hours) need to be given to the people, without which the development would be just meaningless to the people.
- The very low WPR for female could be due to various reasons. Higher income for urban male members may push the female out of market work; hence, their WPR is very low.
- The urban female may (i) find it difficult to get jobs in nearby places; (ii) jobs maybe available far away from their respective homes and may be unfamiliar to them; (iii) the worker relationship may be quite different in urban areas than in the rural areas.

- In villages, (i) the workers are known to each other; (ii) their dwelling places are nearby and they are related or known to each other. Similar congenial work places cannot be found in urban areas. Thus, the income and crime effects may restrict the urban women coming out of home for market based jobs.
- The primary sector registers the lowest growth rate. It can also be observed that the percentage share of both the primary and secondary sectors' shares had slightly decreased between the two periods, which had been compensated by a slight increase in the share of the tertiary sector.
- In terms of the percentage share, the tertiary sector forms the largest chunk (73.19 per cent). This shows that the service sector, which flourished during the early 2000s, had substantially evolved in the district. Certainly, the agriculture sector seems to be in pathetic condition in the district, and needs urgent attention.
- The per capita income of Tiruchirappalli district is Rs.75,393 in 2011-12, which is higher than the State per capita income of Rs.63,996.
- It is to be noted that the persons who got employed through the District Employment office are placed at very low level jobs, as higher level jobs are filled through competitive examinations. So, the District Employment office should act as an agent to make the job seeking candidates competitive and employable.
- Blockwise poverty figures show the spread of backwardness of the district and lack of reach of development initiatives in the district in many blocks. A quick look at the work participation of the various blocks reveals that the blocks with larger main workers are less poor, while blocks having more marginal workers and non-workers are at high poverty level.
- Overall, what can be said about the economy of Tiruchirappalli is that the big-push initiated through large public sector investments have not been adequately supported by private initiatives and a large dose of private investment will surely lead to further the development process assisted by the already blossomed public sector indiustries, in and around Tiruchirappalli.

Demography Health and Nutrition

- Most of the blocks revealed CBR in a range of 13 to 19 during 2009, which increased to the range 12 to 25 in 2014.

- Compared to 2009, all blocks registered a marginal decline in 2014 except Manapparai and Marungapuri. The lowest CBR in was recorded in Uppiliapuram block during 2009 and 2014 with 13 and 12.1 respectively.
- Highest sex ratio among general category was in Uppliapuram (1029) followed by Lalgudi (1028) in the year 2011, and were higher than State level of 996. Thiruverumbur and T.Pet blocks' sex ratio declined from 987 and 994 during 2001 to 965 and 980 during 2011 respectively. The sex ratio of eight blocks were higher than the district sex ratio of 1022.
- Tiruchirappalli Corporation had the highest child sex ratio of 960 in the district. The lowest child sex ratio was 927 in Thuraiyur block.
- Among the blocks, 11 blocks including Tiruchirappalli Corporation has lower IMR compared to the district level. The lowest IMR of zero is recorded in Uppiliapuram closely followed by Tiruverambur and Marungapuri blocks with 0.4 IMR, whereas Manigandam (18.6), Lalgudi (16.2) and Manachanallur (13.2) have high IMR.
- Among the blocks, seven blocks, viz., Mannapparai (290), Musiri (160), Thottiam (160), Thuraiyur (130), Vaiyampatti (130), Manigandam (120) and Manachanallur (110) have higher MMR. Andanallur and Uppiliapuram recorded the lowest MMR of zero in the year 2013-14.
- The highest SBR was registered in Pullambadi (33) in 2007, while in 2014, Lalgudi registered the highest SBR of 21.1, followed by Pullambadi (18.4). The lowest SBR was recorded by Tiruchirappalli Corporation (2.3) in 2007 followed by Thuraiyur (13.55), while the lowest still birth rate in the year 2014 is recorded in Tiruchirappalli Corporation (3.8) followed by Manapparai (8.8).
- Tiruchirappalli Corporation registered the lowest percentage of immunization with 95.2 per cent and Lalgudi, Thuraiyur, T.Pet and Vaiyampatti registered immunization percentages below the district level.
- Tiruchirappalli Corporation, Thottiam, Pullambadi, Musiri, Manachanallur and Andanallur recorded low rates of malnourishment among children in the age group 0 -5 years, while the remaining nine blocks registered high rates. Marungapuri had registered malnutrition level of 27.48 per cent, which is quite high when compared to other blocks in the district.

- In terms Access to Drinking Water, blocks with lower access are Manachanallur (46.56 per cent), Andanallur (54.71 per cent) and Manigandam (58.10 per cent). It is surprising that even though Manachanallur and Andanallur fall near river Cauvery and are covered by the Cauvery canal system, the percentage of habitations with drinking water facility is quite lower compared to the district level.
- Tiruchirappalli Corporation stood first in terms of households with toilet facilities at 62.18 per cent followed by Thuraiyur at 58.67 per cent. The least percentage of households provided with toilets is recorded in Vaiyampatti block with 35.41.
- The lower level of child sex ratio in certain blocks might reflect low girl preference in the blocks and increased level of private medical practices where the chances of female feticide exist, which could not be rejected. Also the natural decline in the birth of female children could be responsible for the decline in child sex ratio because of female infanticide.
- The quality of ante-natal and post-natal care influences the survival of infants. This was reflected in the high incidence of pre-mature births as being the significant cause of infant mortality. Low birth weight including premature birth are one of the major causes for infant mortality as this increased their receptiveness towards infection.
- Respiratory infections, water-borne diseases, poor immunity of neo-nates and infants, unclassified conditions peculiar to infancy, anemia and unspecified fevers are the major causes of infant mortality, reflecting poor nutritional and hygiene standards.
- Other causes providing stimulus to infant deaths are cord infection, congenital malformation and birth injuries. Thus, a combination of poor nutrition, and inadequately treated infections caused preventable mortality during early childhood in the district.
- Early marriages in several rural parts of Tiruchirappalli district are also responsible for the high IMR in those parts. Young people are relevant to get informed and seek sexual and reproductive health services that would enable them to make the right health decisions needs emphasis.

- The provision of IFA tablets to children seems to be much lower than women and adolescent girls. Children also importantly need nutritional supplements that would determine the learning outcomes and their overall development. So, the lacuna in the provision of IFA tablets should be addressed appropriately and awareness campaigns regarding the same, in line with immunization campaigns, should make in order to achieve better results.

Literacy & Education

- The primary level enrolment in Tiruchirappalli district during the period 2011-12 to 2013-14 increased by 1.93 per cent for boys and 2.78 per cent for girls.
- Tiruchirappalli Corporation out-performed all the other blocks in terms of both boys' and girls' enrolment at the primary level with GERs of 112 per cent and 105 per cent respectively in 2013-14. The lowest enrolment in the district was recorded by Lalgudi for boys and Andanallur for girls with GERs at the primary level of 97 per cent and 96.80 per cent respectively in the same year.
- The completion rate of boys is 97 per cent in 2011-12, which increased to 98.37 per cent in 2013-14 and the completion rate of girls is 96.80 per cent in 2011-12, which increased to 99.05 per cent in 2013-14 at primary levels.
- The lowest dropout rate for boys was recorded in T.Pet (0.25 per cent) followed by Vaiyampatti (0.30 per cent), while the highest rate is witnessed in Tiruchirappalli Corporation and Manigandam (0.50 per cent each) during the year 2013-14 at primary levels.
- Tiruchirappalli Corporation has the highest GER for boys in the district with 112.65 per cent, while the least was registered in Manpparai with 93.60 per cent at upper primary levels.
- The highest completion rate of boys is recorded in Manigandam (99.15 per cent) followed by Andanallur (99.10 per cent), while the least is recorded in Thottiam (97.50 per cent) followed by Thiruverambur (97.75 per cent) during the same year at upper primary levels.
- The lowest dropout rate for boys at upper primary levels is observed in Andanallur (0.20 per cent) followed by Uppiliapuram (0.60 per cent), while the highest rate is witnessed in Thiruverambur (2.25 per cent) followed by M.Nallur and Manigandam (2.10 per cent each) during the year 2013-14.

- The highest transition rate from primary to upper primary of 100 per cent is recorded in five blocks, viz., Manachanallur, Manigandam, Manapparai, Thiruverambur and Tiruchirappalli Corporation, while the lowest rate is recorded in Uppilapuram with 98.50 per cent, followed by Thuraiyur (98.75 per cent).
- In the transition rate from upper primary to secondary, the highest rate of 100 per cent is recorded in two blocks, viz., Thuraiyur and Uppliapuram while the lowest rate is recorded in Vaiyampatti with 98 per cent. Except Vaiyampatti, all other blocks have rates near the district level.
- Tiruchirappalli Corporation, Marungapuri has the highest number of habitations (322) and the highest number of schools, so the distribution of schools is appropriate.
- In Tiruchirappalli district, blockwise PTR for the year 2013-14 at the primary level revealed that Vaiyampatti (20) and Tiruchirappalli Corporation (20) has the lowest teacher pupil ratio where one teacher catere to 20 students. The highest PTR at the primary level was recorded in Marungapuri (32), followed by Manapparai (28) in 2013-14.
- In terms of Pupil School Ratio (PSR) at the primary level, Marugnapuri registered the lowest PSR with 88.30, followed by Vaiyampatti with 89.36 and Thottiyam with 95.53, while all other blocks recorded more than 100 PSR.
- The least dropout secondary education for the period of 2013-14 for boys among the blocks is found in Andanallur with 0.20 per cent followed by Thiruverambur with 0.49 per cent and Vaiyampatti with 0.60 per cent. The highest dropout is found in Thottiyam with 2.25 per cent, followed by M. Nallur with 2.10 per cent, Manigandam (2.10 per cent) and Marungapuri (2.00 per cent).
- The total literacy mission has certainly contributed to improve the status of literacy achievement in the district, yet it needs to further continue to achieve full literacy.
- Any attempt to improve the GER may need to concentrate on reducing the gender gap and also improve the least performing GER blocks by identifying the blocks specific social barriers for girls and boys at the upper primary level education.
- It can be understood as there would be more failures and dropouts at higher levels. But, efforts should be made in all the blocks of the district to improve the completion rates of the boys and girls at the upper primary level education.

- The gender gap against boys suggests that many boys would have discontinued their education for several reasons, like getting employment to make an addition to their family income, getting influenced towards anti-social activities, etc. Such situations should be overcome through proper education and counseling. In this regard, suitable measures such as counseling for students at all levels is necessary.
- Thanks to active SSA team in the school education department that Tiruchirappalli District performed at the highest level in terms of enrolment of students, completion, dropout and transition rates.
- Still there are areas where adequate attention is needed to improve the transition rate, attentionis also needed to improve the sanitation facilities, hostel facilities, etc., which must be addressed by the district administration. It could receive better results if sincere effort is followed with the consent of people which would be community based and sustain better with the ownership resting with communities.
- Regarding the secondary level enrolment, quantitative measures alone should not be seen. Qualitative measures such as the availability of proper infrastructure need to be ensured at the secondary schools and higher secondary schools. Once the students cross the primary and upper primary levels, enrolment in secondary education is encouraged to complete one stage of school education.
- However, there have been several hurdles to complete 10^{th} standard. Secondary education has been kept as the essential qualification for employment or doing diploma or other courses. Given the perception of parents particularly rural parents on education and returns on education, it is highly challenging to address the secondary dropout.
- Dropout occurs among both boys and girls at different levels. At the secondary level, the dropout is attributed to both school and home factors which are gendered. The boys dropout occurs at the secondary level due to economic pressure from the family to join the labour market or the disinterest of the boys in education.
- For girls it is totally for different reasons, the dropout occurs due to social demand for care giving at home or the distance and lack of access to school, where the girls after menarche, are not encouraged to travel outside the village to have their education beyond the upper primary level. Above all, the society and

parents do not have belief in girls' education as the returns from girls' education do not reach the parents.

- The access ratio of secondary schools had been very low in the district except in some of the blocks mentioned above. The access ratio needs to be increased in order to check the dropouts in the secondary and higher secondary levels.
- In terms of the provision of infrastructural facilities in schools in the district, achievement has not been upto the level compared to the achievement in terms of enrolment rates. Hence, sufficient attention should be made to increase basic amenities in all the schools, which badly require them.
- It can be observed that blocks with much urban areas had more students in hostels compared to the blocks with rural areas. This is quite natural as students would prefer to study in urban areas, which may offer them much more intangible benefits like more exposure to resources. So, what needs to be done is that urban infrastructure should be provided in rural areas.

Gender

- Seven blocks, viz., Uppliapuram (48.70 per cent), T.pet (47.18 per cent), Marungapuri (46.82 per cent), Thottium (43.31 per cent), Musiri (42.75 per cent), Thuraiyur (41.84 per cent) and Pullambadi (41.32 per cent) had more than 40 per cent female WPR and the other seven blocks had below 40 per cent female WPR. Among the blocks Thiruverumbur (21.09 per cent) and Tiruchirappalli Corporation (15.23 per cent) had the lowest female WPR (much lower than the district level), as these two blocks were urban based compared to the other blocks.
- In terms of women's participation in local bodies for the year 2011, Mannapparai topped with 34 per cent and the lowest performance was shown by Andanallur with a share of 31.20 per cent.
- The economic participation of women needed to be improved to reduce the gender gap. Only when women were employed in paid employment, it would prepare them to participate in decision making process, thereby empowering women.

- Hence, development schemes aiming to empower women needed to concentrate on increasing the economic participation of women and recognition of such contribution in National Income Accounting. The distribution of more women in agriculture still continued which again indicated the lower status of women.
- Self-employment and entrepreneurial attitudes are yet to reach the rural women, though there had been grassroots movement among SHG women.
- Tiruchirappalli is an educationally forward district with relatively more number of schools, colleges, technical institutions, professional institutions, etc. But, in terms gender equality, the expected achievements were not observed. In terms of gender inequality, expected achievements have not been observed.
- The reason is not just infrastructure or the administration and implementation of the program, but is related to the social and cultural barriers at every level that the girls and women faced. They are obvious, but lack responses by social institutions such as caste, religion, creed, etc. and these factors have been responsible for relatively lower achievements of women and girls in education, health, employment, participation in public, grass root movements like SHGs, etc.
- Hence, any policy in this direction needs to enfold and sensitize on regressive norms of such institutions to promote and sustain gender equality.
- Mere credit operations alone may not have ensured empowerment unless the money saved was invested in enterprise development. Access to credit was one step forward and proved that women were bankable.
- But, real empowerment lies in converting such capacity and capability into enterprise development, which would have brought economic independence and created employment opportunities for women in the local area.
- It is to be noted here is that in none of the blocks, women representation was higher than the reserved percentage.

Social Security

- The maximum beneficiaries fell under OAP beneficiaries (Old Age Pension) with 54,366 receiving this pension in the year 2013-14, which had increased from 42,986 in the year 2011-12. The number of beneficiaries under the Indira Gandhi National Differently Abled Pension scheme increased by nearly 54 times during the period 2011-12 to 2013-14.

- A total of 89,694 people received pension in Tiruchirappalli district in the year 2011-12, which increased to 1,16,513 in the year 2013-14.
- In the district, getting financial assistance for the year 2013-14, persons with locomotor disability was 2,872, hearing impaired was 909, mentally retarded was 6,291, cerebral palsy was 98, visually impaired was 1,174, multiple disorder was1,455, leprosy was 392, mental illness was 107 and Autiism was 194.
- Women received marriage assistance in the year 2013-14, the maximum number of 945 beneficiaries (26.22 per cent) from Tiruchirappalli Corporation, followed by M.Nallur (573). The least number of beneficiaries were found in Thiruverumbur (172) followed by Vaiyampatti (218).
- Women who received maternity assistance in the year 2013-14, Tiruchirappalli Corporation had the largest number of beneficiaries (9,454), which was 17.69 per cent of the total beneficiaries in the district. Other blocks with higher than district level beneficiaries in this category were M.Nallur (4,343), Marungapuri (3,798) and Thiruverumbur (3,708). The blocks with the lowest number of beneficiaries were Vaiyampatti (2,310) and T.Pet (2,416).
- The highest number of cases in Tiruchirappalli district are registered under the Cruelty by husband category (63) in the year 2013-14, which was 47 in the 2011-12. The lowest number of cases are registered under the Child Marriage Act category (1).
- Social welfare programmes need to be revamped in such a way that the needs, should be identified and they become the real beneficiaries.
- Special schemes to improve the health and socio-economic status of the female population are in vogue. Such assistance could be expanded to cover more in need so as to give financial security to the women.
- This in turn would empower women to make free choices in every aspect of life and fight against crimes related to them.
- On the whole, in Tiruchirappalli District social security measures are complete and wide spread leaving only a very few outside its purview. In years to come, all marginalized people in need of assistance could be brought under this net leading to equitable development and still higher human development.

Infrastructure

- Tiruchirappalli Corporation had highest percentage share of roads (Total) in the district with 16.52 per cent followed by Marungapuri (12.38 per cent), while the lowest share is found in Andanallur (2.05 per cent followed by Thiruverumbur (3.44 per cent).
- Tiruchirappalli Corporation had about 230 street lights per hamlet (ward), which was the highest in this regard, followed by Pullambadi (125). Other blocks with more than 100 street lights per hamlet were M.Nallur and Thiruverumbur. The lowest number of street lights per hamlet is found in Vaiyampatti (17) and Manapparai (18).
- Tiruchirappalli Corporation had the maximum values in all parameters with 21 telephone exchanges, 3,019 PCOs, 43,713 landlines, 32 mobile towers covering a population of 8,50,073. Marungapuri block is the least covered with 1 telephone exchange, 63 PCOs, 273 landlines, and 2 mobile towers though the population is moderately high at 1,31,923.
- In terms of the number of members per co-operative society, Manigandam (4,273) is at the top among blocks followed by Musiri (3,529).
- In terms of commercial banks, Tiruchirappalli Corporation (154) has the highest number and percentage share (51).
- Among the other blocks, M.Nallur has 19 banks followed by Thiruverumbur (18) and Andanallur (14), while others has 4 to 11.
- The number of bank account holders in Tiruchirappalli district was 40,06,474 in which Tiruchirappalli corporation (27,72,000) has the highest share of around 70 per cent. Next was Manachanallur with 1,65,366 bank account holders followed by Thiruverumbur (1,53,000), while Vaiyampatti (32,625) has the minimum number of account holders (0.81 per cent).
- There are seven branches of the LIC of India in the district with 93,875 life insurance policies issued during the year 2013-14 against a population of 27,22,290. So, life insurance coverage was only 3.45 per cent in the district. Life insurance coverage is only 3.45 per cent in the district. Life insurance is a must for all and with the advent of the Central Government's insurance schemes, hopefully the coverage would be increased in the district in the future. Awareness campaigns are essential to educate the people about life insurance.

- It can be noticed that both in terms of Co-operative societies and commercial banks, the urban oriented blocks has more number of such institutions and members or account holders. So, the urban bias is evident and particularly Tiruchirappalli Corporation is in a different league altogether in this respect.
- Though it was natural for fast pace in development in the district headquarters, inequality of high order needed to be corrected as it may lead to over-crowding in big cities. Scaling up of infrastructure in all blocks would create hubs of industrial and agricultural activities all over the district, providing employment to local people.
- With good transport, uninterrupted electricity, fast and advance communication communication networkand loan facilities every block could become self-sufficient.
- Most blocks of Tiruchirappalli district like Marungapuri, Pullambadi, Vaiyampatti, T.Pet, Thuraiyur, Manigandam, Mannaparai have very low infrastructural facilities compared to Tiruchirappalli Corporation. This marked inequity could be remedied through provision of all parameters of infrastructure in all blocks.

Conclusion

The District Human Development Report of Tiruchirappalli district has made a comprehensive analysis of the various aspects of development activities and outcomes in the district keeping in line with Human Development indicators. The district performed better than the State in terms of the Per Capita Income in absolute terms. Likewise, in terms of Literacy Rate also the district performed better than the State level. The GDDP from the years 2004-05 to 2011-12 showed an increasing trend in absolute terms for all the three sectors, viz., Primary, Secondary and Teritary, while the share of Primary and Secondary sectors in the GDDP was continuouly decreasing. Transformation of the economy is an indication of the development process, but the Primary and Secondary sectors should also be strengthened. The analysis of Tiruchirappalli district's block rankings in terms of HDI, GII, CDI and MPI reveals that more urbanized regions have been able to perform better and were also better resource endowed than the other blocks in the district. The indicators that influence the ranking of the various indices were the ones that come under Standard of Living and Health parameters. Indicators such as

Access to cooking Fuel, Access to Drinking Water, Access to Pucca Houses, IMR, MMR, U5MR, Child Sex Ratio, Female WPR, Female and male WPR in Non-Agricultural Sector and Female and Male Agricultural Wage Rate exhibit significant variations among the blocks, which implies wide range of inequality among the blocks that needs to be addressed and is the need of hour. Overall, what can be said about the economy of Tiruchirappalli is that the big-push initiated through large public sector investments have not been adequately supported by private initiatives and a large dose of private investment will surely lead to further the development process assisted by the already blossomed public sector indiustries, in and around Tiruchirappalli.

ANNEXURES

Table 2.1 Human Development Index

Sl.No.	Data											
	Blocks	Standard of Living					Health			Education		
	Indicators	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
	Year	2011	2013-14	2013-14	2011	2011	20013-14	2013-14	2013-14	2011	2013-14	2013-14
	Source	Census	NBA	NBA	Census	Census	Health Dept.	Health Dept.	Health Dept.	Census	Educ. Dept.	Educ. Dept.
	Unit	%	%	%	%	%	Rate	Ratio	Rate	%	%	%
	Type	Positive	Positive	Positive	Positive	Positive	Negative	Negative	Negative	Positive	Positive	Positive
1	Andhanallur	59.24	48.01	54.71	89.75	84.61	18.6	10	20.94	81.26	98.40	99.00
2	Lalgudi	40.55	48.50	86.56	91.91	77.42	16.2	50	17.61	87.09	98.50	101.00
3	M.Nallur	45.30	39.73	46.56	91.09	74.49	13.2	110	14.39	82.05	100.50	101.00
4	Manigandam	72.43	48.73	58.10	90.01	62.84	18.6	120	23.57	80.68	99.50	99.00
5	Mannapparai	20.84	50.87	75.81	87.71	91.75	2.9	290	22.81	78.16	102.50	100.00
6	Marungapuri	18.26	36.23	88.03	87.89	78.09	0.4	40	17.26	71.15	100.35	100.00
7	Musiri	34.92	45.00	83.08	88.96	52.11	1.6	160	14.64	77.54	100.50	102.00
8	Pullambadi	39.60	41.18	82.31	91.92	56.14	0.7	70	30.75	77.14	100.68	102.00
9	Thiruverumbur	40.84	48.18	95.02	97.45	70.01	0.4	40	11.21	89.16	101.60	100.50
10	Thottium	46.73	46.12	93.90	89.66	65.43	1.6	160	20.49	74.83	100.58	100.50
11	Thuraiyur	50.43	58.67	89.47	94.28	84.34	1.3	130	30.03	78.59	101.50	101.00
12	T.Pet	32.58	57.92	96.02	90.04	82.74	0.8	80	19.74	75.35	101.00	101.00
13	Uppliapuram	53.37	45.45	100.00	94.51	52.31	0.0	10	15.81	76.92	99.39	99.50
14	Vaiyampatti	19.55	35.41	69.91	87.47	89.84	1.3	130	24.36	70.47	99.85	99.00
15	Trichy Corpn.	51.75	62.18	100.00	97.66	66.00	0.5	50	4.04	91.38	108.50	99.50

Table 2.2 Human Development Index

Sl.No.	Blocks	Indices										
		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	Andhanallur	0.764	0.533	0.220	0.582	0.841	0.091	1.000	0.433	0.638	0.493	0.767
2	Lalgudi	0.431	0.549	0.769	0.696	0.680	0.208	0.871	0.544	0.847	0.498	0.922
3	M.Nallur	0.515	0.259	0.080	0.653	0.615	0.355	0.676	0.652	0.666	0.599	0.922
4	Manigandam	1.000	0.556	0.279	0.596	0.355	0.091	0.644	0.344	0.617	0.549	0.767
5	Mannapparai	0.079	0.627	0.584	0.475	1.000	0.858	0.094	0.370	0.527	0.699	0.845
6	Marungapuri	0.033	0.144	0.794	0.484	0.695	0.980	0.903	0.556	0.277	0.591	0.845
7	Musiri	0.330	0.433	0.709	0.540	0.116	0.922	0.515	0.644	0.505	0.599	1.000
8	Pullambadi	0.414	0.307	0.696	0.697	0.206	0.966	0.806	0.103	0.491	0.608	1.000
9	Thiruverumbur	0.436	0.538	0.914	0.989	0.515	0.980	0.903	0.759	0.921	0.654	0.884
10	Thottium	0.541	0.470	0.895	0.577	0.413	0.922	0.515	0.448	0.408	0.603	0.884
11	Thuraiyur	0.607	0.884	0.819	0.822	0.835	0.936	0.612	0.127	0.543	0.649	0.922
12	T.Pet	0.288	0.859	0.931	0.598	0.799	0.961	0.773	0.473	0.427	0.624	0.922
13	Uppliapuram	0.660	0.448	1.000	0.833	0.121	1.000	1.000	0.605	0.483	0.543	0.806
14	Vaiyampatti	0.056	0.117	0.482	0.462	0.957	0.936	0.612	0.318	0.252	0.566	0.767
15	Trichy Corpn.	0.631	1.000	1.000	1.000	0.426	0.976	0.871	1.000	1.000	1.000	0.806

Table 2.3 Human Development Index

Sl.No.	Blocks	Standard of Living Index	Health Index	Education Index	Overall Index	Rank
1	Andhanallur	0.535	0.340	0.623	0.484	11
2	Lalgudi	0.612	0.462	0.730	0.591	6
3	Manachanallur	0.336	0.539	0.717	0.506	9
4	Manigandam	0.505	0.272	0.638	0.444	14
5	Mannapparai	0.424	0.310	0.678	0.446	13
6	Marungapuri	0.263	0.790	0.517	0.475	12
7	Musiri	0.364	0.673	0.671	0.548	8
8	Pullambadi	0.418	0.432	0.668	0.494	10
9	Thiruverumbur	0.642	0.876	0.810	0.770	2
10	Thottium	0.558	0.597	0.601	0.585	7
11	Thuraiyur	0.787	0.418	0.687	0.609	5
12	T.Pet	0.643	0.706	0.626	0.658	3
13	Uppliapuram	0.495	0.846	0.596	0.629	4
14	Vaiyampatti	0.268	0.567	0.478	0.417	15
15	Trichy Corpn.	0.769	0.947	0.931	0.878	1

Table 2.4 Gender Inequality Index

Sl. No.	Data																
	Blocks	Health			Empowerment						Labour						
	Indicators	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 Representativies in RLBs and ULBs	Share of Male Elected Representativies 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
	Year	2013-14	2013-14	2013-14	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2013-14	2013-14
	Source	Health Department			Census				RD&PR Department		Census				DOES	
	Unit	Ratio	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	Type	-ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve	+ve
1	Andhanallur	10	99.72	100.00	73.95	88.59	48.88	51.12	31.20	68.80	34.10	59.29	28.62	50.53	200	300
2	Lalgudi	50	99.76	101.00	81.36	93.04	48.41	51.59	33.91	66.09	33.98	58.35	29.02	50.01	125	350
3	Manachanallur	110	99.82	99.00	75.07	89.12	48.69	51.31	33.52	66.48	34.88	57.50	39.66	59.17	125	300
4	Manigandam	120	99.94	98.00	72.91	88.64	48.87	51.13	33.68	66.32	31.67	58.66	41.16	62.69	190	300
5	Mannapparai	290	100.00	97.00	69.37	87.01	48.65	51.35	34.03	65.97	36.22	57.21	32.85	58.26	125	250
6	Marungapuri	40	100.00	99.00	59.94	82.54	48.65	51.35	33.33	66.67	46.82	59.27	11.40	28.32	150	250
7	Musiri	160	99.89	100.00	69.35	85.96	48.21	51.79	33.83	66.17	42.75	60.83	22.81	43.21	100	300
8	Pullambadi	70	99.93	99.00	69.29	85.50	48.40	51.60	33.12	66.88	41.32	58.81	19.48	36.34	125	300
9	Thiruverumbur	40	99.92	98.00	84.28	93.89	48.67	51.33	33.33	66.67	21.09	56.87	72.91	86.75	200	300
10	Thottium	160	100.00	96.00	65.81	84.03	48.15	51.85	33.33	66.67	43.31	61.31	19.70	34.72	110	250
11	Thuraiyur	130	99.27	98.00	71.45	85.93	48.12	51.88	33.97	66.03	41.84	60.02	21.04	48.48	125	300
12	T.Pet	80	99.85	97.00	66.45	84.13	48.20	51.80	33.33	66.67	47.18	61.79	18.05	38.93	110	250
13	Uppliapuram	10	100.00	95.00	68.89	85.26	48.12	51.88	33.64	66.36	48.70	60.50	11.80	30.00	125	250
14	Vaiyampatti	130	99.51	97.00	60.35	80.85	48.65	51.35	33.50	66.50	50.50	61.08	12.21	29.94	110	300
15	Trichy Corpn.	50	99.98	99.00	88.01	94.86	48.98	51.02	33.85	66.15	15.23	56.70	95.23	97.62	200	300

Table 2.5 Gender Inequality Index

Sl. No.	Blocks	Indices														
		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
1	Andhanallur	1.000	0.997	1.000	0.740	0.886	0.489	0.511	0.312	0.688	0.341	0.593	0.286	0.505	1.000	0.600
2	Lalgudi	0.200	0.998	1.010	0.814	0.930	0.484	0.516	0.339	0.661	0.340	0.583	0.290	0.500	0.318	1.000
3	Manachanallur	0.091	0.998	0.990	0.751	0.891	0.487	0.513	0.335	0.665	0.349	0.575	0.397	0.592	0.318	0.600
4	Manigandam	0.083	0.999	0.980	0.729	0.886	0.489	0.511	0.337	0.663	0.317	0.587	0.412	0.627	0.909	0.600
5	Mannapparai	0.034	1.000	0.970	0.694	0.870	0.486	0.514	0.340	0.660	0.362	0.572	0.329	0.583	0.318	0.200
6	Marungapuri	0.250	1.000	0.990	0.599	0.825	0.487	0.513	0.333	0.667	0.468	0.593	0.114	0.283	0.545	0.200
7	Musiri	0.063	0.999	1.000	0.694	0.860	0.482	0.518	0.338	0.662	0.428	0.608	0.228	0.432	0.091	0.600
8	Pullambadi	0.143	0.999	0.990	0.693	0.855	0.484	0.516	0.331	0.669	0.413	0.588	0.195	0.363	0.318	0.600
9	Thiruverumbur	0.250	0.999	0.980	0.843	0.939	0.487	0.513	0.333	0.667	0.211	0.569	0.729	0.867	1.000	0.600
10	Thottium	0.063	1.000	0.960	0.658	0.840	0.482	0.518	0.333	0.667	0.433	0.613	0.197	0.347	0.182	0.200
11	Thuraiyur	0.077	0.993	0.980	0.714	0.859	0.481	0.519	0.340	0.660	0.418	0.600	0.210	0.485	0.318	0.600
12	T.Pet	0.125	0.999	0.970	0.665	0.841	0.482	0.518	0.333	0.667	0.472	0.618	0.180	0.389	0.182	0.200
13	Uppliapuram	1.000	1.000	0.950	0.689	0.853	0.481	0.519	0.336	0.664	0.487	0.605	0.118	0.300	0.318	0.200
14	Vaiyampatti	0.077	0.995	0.970	0.603	0.809	0.487	0.513	0.335	0.665	0.505	0.611	0.122	0.299	0.182	0.600
15	Trichy Corpn.	0.200	1.000	0.990	0.880	0.949	0.490	0.510	0.338	0.662	0.152	0.567	0.952	0.976	1.000	0.600

Table 2.6 Gender Inequality Index

Sl. No.	Blocks	Female Health Index	Male Health Index	Female Emp Index	Male Emp Index	Female LF Index	Male LF Index	GF	GM	GFM	Health Bar	Emp Bar	LF Bar	GFM Bar	GII	Rank
1	Andhanallur	0.999	1.000	0.483	0.678	0.460	0.564	0.606	0.726	0.660	1.000	0.581	0.512	0.667	0.011	1
2	Lalgudi	0.586	1.000	0.511	0.682	0.315	0.663	0.456	0.768	0.572	0.793	0.597	0.489	0.614	0.069	9
3	Manachanallur	0.448	1.000	0.497	0.672	0.353	0.589	0.428	0.734	0.541	0.724	0.585	0.471	0.584	0.074	10
4	Manigandam	0.434	1.000	0.493	0.670	0.491	0.604	0.472	0.740	0.576	0.717	0.582	0.548	0.611	0.057	7
5	Mannapparai	0.322	1.000	0.486	0.666	0.336	0.405	0.375	0.646	0.474	0.661	0.576	0.371	0.521	0.089	13
6	Marungapuri	0.628	1.000	0.460	0.656	0.308	0.323	0.446	0.596	0.510	0.814	0.558	0.315	0.523	0.024	3
7	Musiri	0.397	1.000	0.484	0.665	0.207	0.540	0.341	0.711	0.461	0.698	0.575	0.374	0.531	0.132	15
8	Pullambadi	0.521	1.000	0.481	0.666	0.295	0.504	0.419	0.695	0.523	0.760	0.573	0.400	0.558	0.063	8
9	Thiruverumbur	0.626	1.000	0.515	0.685	0.536	0.666	0.557	0.770	0.646	0.813	0.600	0.601	0.664	0.027	4
10	Thottium	0.391	1.000	0.473	0.662	0.249	0.349	0.359	0.614	0.453	0.696	0.567	0.299	0.491	0.077	11
11	Thuraiyur	0.421	1.000	0.489	0.665	0.304	0.559	0.397	0.719	0.512	0.711	0.577	0.431	0.561	0.089	12
12	T.Pet	0.495	1.000	0.474	0.662	0.249	0.364	0.388	0.622	0.478	0.747	0.568	0.306	0.507	0.057	6
13	Uppliapuram	0.983	1.000	0.481	0.665	0.263	0.331	0.500	0.604	0.547	0.992	0.573	0.297	0.553	0.011	2
14	Vaiyampatti	0.420	1.000	0.462	0.651	0.224	0.479	0.351	0.678	0.463	0.710	0.556	0.351	0.518	0.106	14
15	Trichy Corpn.	0.583	1.000	0.526	0.684	0.525	0.692	0.544	0.780	0.641	0.791	0.605	0.609	0.663	0.034	5

Table 2.7 Child Development Index

Data									
Sl.No.	Blocks	Health			Education				
	Indicators	U5MR	Child Sex Ratio (0-6)	Percentage of Malnourished Children	Enrolment in Primary	Enrolment in Secondary	Children Never Enrolled in School	Transition Rate from Primary to Upper Primary	Transition Rate from Upper Primary to Secondary
	Year	2013-14	2011	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14
	Source	Health Dept.	Census	ICDS	Education Dept.	Education Dept.	Education Dept.	Education Dept.	Education Dept.
	Unit	Rate	Ratio	%	%	%	%	%	%
	Type	Negative	Positive	Negative	Positive	Positive	Negative	Positive	Positive
1	Andhanallur	20.94	956	11.93	98.40	99.00	0.18	98.98	101.00
2	Lalgudi	17.61	938	19.93	98.50	101.00	0.24	99.33	100.98
3	Manachanallur	14.39	949	15.36	100.50	101.00	0.03	100.00	101.50
4	Manigandam	23.57	956	21.54	99.50	99.00	0.20	100.00	100.99
5	Mannapparai	22.81	947	22.68	102.50	100.00	0.28	100.00	101.69
6	Marungapuri	17.26	947	27.48	100.35	100.00	0.15	99.65	101.90
7	Musiri	14.64	931	18.93	100.50	102.00	0.22	99.70	101.30
8	Pullambadi	30.75	938	14.05	100.68	102.00	0.29	99.23	101.39
9	Thiruverumbur	11.21	948	22.55	101.60	100.50	0.35	100.00	100.99
10	Thottium	20.49	929	16.96	100.58	100.50	0.25	99.30	101.35
11	Thuraiyur	30.03	927	24.93	101.50	101.00	0.23	98.75	102.00
12	T.Pet	19.74	931	22.42	101.00	101.00	0.15	99.00	101.58
13	Uppliapuram	15.81	928	24.87	99.39	99.50	0.13	98.50	101.99
14	Vaiyampatti	24.36	948	24.19	99.85	99.00	0.19	99.00	99.99
15	Trichy Corpn.	4.04	960	9.10	108.50	99.50	0.29	100.00	100.99

Table 2.8 Child Development Index

Sl.No.	Blocks	Indices								Child Develeopment Index	Rank
		Health			Education						
		U5MR	Child Sex Ratio (0-6)	Percentage of Malnourished Children	Enrolment in Primary	Enrolment in Secondary	Children Never Enrolled in School	Transition Rate from Primary to Upper Primary	Transition Rate from Upper Primary to Secondary		
1	Andhanallur	0.367	0.884	0.846	0.000	0.000	0.530	0.320	0.502	0.431	10
2	Lalgudi	0.492	0.333	0.411	0.010	0.667	0.343	0.553	0.493	0.413	11
3	Manachanallur	0.612	0.668	0.660	0.208	0.667	1.000	1.000	0.751	0.696	2
4	Manigandam	0.269	0.876	0.324	0.109	0.000	0.467	1.000	0.498	0.443	8
5	Mannapparai	0.297	0.616	0.261	0.406	0.333	0.218	1.000	0.846	0.497	5
6	Marungapuri	0.505	0.620	0.000	0.193	0.333	0.623	0.767	0.950	0.499	4
7	Musiri	0.603	0.104	0.465	0.208	1.000	0.405	0.800	0.652	0.530	3
8	Pullambadi	0.000	0.327	0.731	0.226	1.000	0.187	0.487	0.697	0.457	7
9	Thiruverumbur	0.731	0.637	0.268	0.317	0.500	0.000	1.000	0.498	0.494	6
10	Thottium	0.384	0.043	0.573	0.216	0.500	0.312	0.533	0.677	0.405	12
11	Thuraiyur	0.027	0.000	0.139	0.307	0.667	0.374	0.167	1.000	0.335	13
12	T.Pet	0.412	0.101	0.276	0.257	0.667	0.623	0.333	0.791	0.433	9
13	Uppliapuram	0.559	0.006	0.142	0.098	0.167	0.685	0.000	0.995	0.332	14
14	Vaiyampatti	0.239	0.620	0.179	0.144	0.000	0.498	0.333	0.000	0.252	15
15	Trichy Corpn.	1.000	1.000	1.000	1.000	0.167	0.187	1.000	0.498	0.731	1

Table 2.9 Multidimentional Poverty Index

Sl.No.	Data										
	Blocks	Health			Education		Living Standard				
	Indicators	IMR	High Order Birth Rate	Malnourshied Children	Dropout in Primary	Dropout in Secondary	Access to Cooking Fuel	Access to Toilet Facilities	Access to Drinking Water	Pucca House	Electricity
	Year	2013-14	2013-14	2013-14	2013-14	2013-14	2011	2013-14	2013-14	2011	2011
	Source	Health Dept.	Health Dept.	ICDS	Educ. Dept.	Educ. Dept.	Census	NBA	NBA	Census	Census
	Unit	Rate	Rate	%	%	%	%	%	%	%	%
	Type	Negative	Negative	Negative	Negative	Negative	Positive	Positive	Positive	Positive	Positive
1	Andhanallur	18.6	13.00	11.93	0.73	0.95	59.24	48.01	54.71	84.61	89.75
2	Lalgudi	16.2	11.00	19.93	0.28	1.43	40.55	48.50	86.56	77.42	91.91
3	Manachanallur	13.2	10.00	15.36	1.00	3.35	45.30	39.73	46.56	74.49	91.09
4	Manigandam	18.6	14.00	21.54	0.80	2.51	72.43	48.73	58.10	62.84	90.01
5	Mannapparai	2.9	16.00	22.68	0.73	1.25	20.84	50.87	75.81	91.75	87.71
6	Marungapuri	0.4	17.00	27.48	0.63	2.68	18.26	36.23	88.03	78.09	87.89
7	Musiri	1.6	11.00	18.93	0.50	1.30	34.92	45.00	83.08	52.11	88.96
8	Pullambadi	0.7	12.00	14.05	0.80	1.48	39.60	41.18	82.31	56.14	91.92
9	Thiruverumbur	0.4	8.00	22.55	0.40	1.54	40.84	48.18	95.02	70.01	97.45
10	Thottium	1.6	13.00	16.96	0.50	3.28	46.73	46.12	93.90	65.43	89.66
11	Thuraiyur	1.3	12.00	24.93	0.43	2.50	50.43	58.67	89.47	84.34	94.28
12	T.Pet	0.8	15.00	22.42	0.88	1.20	32.58	57.92	96.02	82.74	90.04
13	Uppliapuram	0.0	9.00	24.87	0.42	1.60	53.37	45.45	100.00	52.31	94.51
14	Vaiyampatti	1.3	16.00	24.19	0.30	1.10	19.55	35.41	69.91	89.84	87.47
15	Trichy Corpn.	0.5	6.00	9.10	0.53	1.86	51.75	62.18	100.00	66.00	97.66

Table 2.10 Multidimentional Poverty Index

Sl. No.	Blocks	Indices											
		Health			Education		Living Standard					Mulidimensional Poverty Index	Rank
		IMR	High Order Birth Rate	Malnourshied Children	Drop out in Primary	Drop out in Secondary	Access to cooking Fuel	Access to Toilet facilities	Access to drinking water	Pucca House	Electricity		
												(1-AVG)	
1	Andhanallur	0.000	0.364	0.846	0.375	1.000	0.756	0.471	0.153	0.820	0.223	0.499	8
2	Lalgudi	0.129	0.545	0.411	1.000	0.800	0.411	0.489	0.749	0.638	0.435	0.439	5
3	Manachanallur	0.290	0.636	0.660	0.000	0.000	0.499	0.161	0.000	0.565	0.355	0.683	15
4	Manigandam	0.000	0.273	0.324	0.278	0.350	1.000	0.498	0.216	0.271	0.249	0.654	13
5	Mannapparai	0.844	0.091	0.261	0.375	0.877	0.048	0.578	0.547	1.000	0.023	0.536	11
6	Marungapuri	0.978	0.000	0.000	0.514	0.281	0.000	0.031	0.776	0.655	0.041	0.672	14
7	Musiri	0.914	0.545	0.465	0.694	0.856	0.308	0.358	0.683	0.000	0.146	0.503	9
8	Pullambadi	0.962	0.455	0.731	0.278	0.781	0.394	0.216	0.669	0.102	0.437	0.498	7
9	Thiruverumbur	0.978	0.818	0.268	0.833	0.754	0.417	0.477	0.907	0.452	0.979	0.312	2
10	Thottium	0.914	0.364	0.573	0.694	0.031	0.525	0.400	0.886	0.336	0.215	0.506	10
11	Thuraiyur	0.930	0.455	0.139	0.792	0.354	0.594	0.869	0.803	0.813	0.668	0.358	3
12	T.Pet	0.957	0.182	0.276	0.167	0.896	0.264	0.841	0.926	0.773	0.252	0.447	6
13	Uppliapuram	1.000	0.727	0.142	0.806	0.729	0.648	0.375	1.000	0.005	0.691	0.388	4
14	Vaiyampatti	0.930	0.091	0.179	0.972	0.938	0.024	0.000	0.437	0.952	0.000	0.548	12
15	Trichy Corpn.	0.973	1.000	1.000	0.653	0.621	0.618	1.000	1.000	0.350	1.000	0.178	1

Table 3.1 Percentage of HH Provided Employment under MGNREGA

Sl. No.	Blocks/District	Total No.of HH Registered	HH Provided Jobs Under	Percentage of HH Provided with Jobs
1	Andanallur	20032	14613	73
2	Lalgudi	28139	23433	83
3	Manachanallur	29627	21632	73
4	Manigandam	18963	12860	68
5	Manapparai	23847	19058	80
6	Marungapuri	27227	22610	83
7	Musiri	23430	18723	80
8	Pullambadi	21292	17032	80
9	Thiruverumbur	15986	9631	60
10	Thottiam	25195	17989	71
11	Thuraiyur	27054	23349	86
12	T.Pet	17874	12968	73
13	Uppliapuram	18117	14901	82
14	Vaiyampatti	21774	18435	85
15	Trichy Corpn.	0	0	0
	District	**318557**	**247234**	**78**
Source: DRDA, Tiruchirappalli				

Table 3.2 Land Utilization Pattern (in ha.)

Category	Forest	Barren& Uncultivable Land	Land Put Non Agri Purpose	Cultivable Waste	Parmt Pasture and Grazing Land	Land misc Tree Crops	Current Fallow	Other Fallow	Net Area Sown	Area Sown More than Once	Gross Area Sown	Total Geographical Area
Trichy District	17161.470	12598.205	85216.990	10652.350	658.995	3223.840	24305.770	116942.545	150011.110	15299.455	165310.565	420777.275
Thiruverumbur	234.030	1318.895	17056.295	1750.450	0.000	154.300	351.410	4929.305	8193.350	583.240	8776.590	33988.035
Andanallur	45.000	87.000	2577.470	19.140	15.825	65.150	959.440	3985.825	6646.150	2360.720	9006.870	14401.000
Manigandam	0.000	560.070	7149.090	3.870	2.525	83.345	1066.815	6874.695	5626.590	1278.830	6905.420	21367.000
Manapparai	3.000	449.620	5247.740	88.060	17.400	94.210	4671.460	11739.535	5450.155	0.000	5450.155	27761.180
Marungapuri	7742.000	311.690	4769.000	367.890	178.000	1046.095	1682.670	18478.680	9940.975	0.000	9940.975	44517.000
Vaiampat	566.965	519.370	1661.500	1149.860	15.000	524.950	1000.540	13993.760	7309.660	6.665	7316.325	26741.605
Lalgudi	594.070	94.610	4795.930	148.755	61.905	97.830	308.525	2174.585	11811.300	6606.195	18417.495	20087.510
Pullambadi	459.930	2156.225	7921.620	2076.670	6.650	449.960	282.685	5147.450	20341.540	331.935	20673.475	38842.730
Manachanallur	1555.000	589.425	5850.585	286.860	0.000	86.725	2951.990	13111.065	12805.490	885.140	13690.630	37237.140
Musiri	1034.000	842.135	5313.420	964.850	49.000	99.250	3324.380	10565.210	12710.755	687.080	13397.835	34903.000
T.Pet	626.000	1523.400	4910.580	801.995	98.000	73.730	1295.520	11028.150	11008.625	341.965	11350.590	31366.000
Thottiam	77.000	174.645	7423.800	186.065	80.000	119.230	933.745	5261.010	13546.505	76.065	13622.570	27802.000
Thuraiyur	3097.915	3689.220	6760.715	2132.585	117.935	209.135	1286.185	6206.255	14081.960	955.750	15037.710	37581.905
Uppiliapuram	1132.560	281.900	3779.245	675.300	16.755	119.930	4190.405	3447.020	10538.055	1185.870	11723.925	24181.170
Trichy Corpn.	Not Applicable											

Source: Department of Economics and Statistics (2013-14)

Table 3.3 Cropping Intensity

Sl.No.	Blocks	Gross Area Sown (in Ha)	Net Area Sown (in Ha)	Cropping Intencity
1	Thiruverumbur	8777	8193	1.07
2	Andhanallur	9007	6646	1.36
3	Manikandam	6905	5627	1.23
4	Manapparai	5450	5450	1.00
5	Marungapuri	9941	9941	1.00
6	Vaiyampatti	7316	7310	1.00
7	Lalgudi	18418	11811	1.56
8	Pullambadi	20674	20342	1.02
9	Mannachanallur	13691	12806	1.07
10	Musiri	13398	12711	1.05
11	T.Pet	11351	11009	1.03
12	Thottiyam	13623	13547	1.01
13	Thuraiyur	15038	14082	1.07
14	Uppiliyapuram	11724	10538	1.11
15	Trichy Corpn.	0	0	0
	TOTAL	**165313**	**150013**	1.10
Source: District Irrigation Profile 2013-14, Tiruchirappalli				

Table 3.4 Irrigation Intensity

S.No.	Blocks	Gross Area Irrigated (in Ha)	Net Area Irrigated (in Ha)	Irrigation Intencity
1	Thiruverumbur	8328	8076	1.03
2	Andhanallur	6188	5739	1.08
3	Manikandam	6026	5112	1.18
4	Manapparai	2585	2585	1.00
5	Marungapuri	6462	6462	1.00
6	Vaiyampatti	3120	3123	1.00
7	Lalgudi	16147	11009	1.47
8	Pullambadi	6026	5694	1.06
9	Mannachanallur	5060	4175	1.21
10	Musiri	5829	5142	1.13
11	T.Pet	4725	4383	1.08
12	Thottiyam	6553	6477	1.01
13	Thuraiyur	4925	4306	1.14
14	Uppiliyapuram	7567	6381	1.19
15	Trichy Corpn.	0	0	#DIV/0!
	TOTAL	89541	78664	1.14
Source: District Irrigation Profile 2013-14, Tiruchirappalli				

Table 4.1 CBR and CDR

S.No.	Blocks/District	CBR		CDR	
		2009	2014	2009	2014
1	Andanallur	14.50	14.4	4.90	8.6
2	Lalgudi	13.80	13.3	5.00	1.3
3	Manachanallur	14.90	14.0	4.60	3.8
4	Manigandam	15.90	15.2	5.00	1.9
5	Manapparai	17.80	24.8	5.80	0.9
6	Marungapuri	17.60	17.9	5.40	1.8
7	Musiri	15.70	14.5	4.00	6.8
8	Pullambadi	14.00	13.1	7.00	5.7
9	Thiruverumbur	13.80	13.4	3.30	3.8
10	Thottiam	14.80	14.0	6.20	4.9
11	Thuraiyur	14.50	12.8	6.70	5.2
12	T.Pet	14.60	13.2	7.00	6.7
13	Uppliapuram	13.00	12.1	4.90	10.1
14	Vaiyampatti	19.10	17.3	6.10	5.4
15	Trichy Corporation	16.30	14.9	2.60	3.1
	District	**15.70**	**15.0**	**4.20**	**4.1**
Source: Health Department, Tiruchirappalli					

Table 4.2 Infant Mortality Rate

S.No.	Blocks/District	2013-14
1	Andanallur	18.6
2	Lalgudi	16.2
3	Manachanallur	13.2
4	Manigandam	18.6
5	Manapparai	2.9
6	Marungapuri	0.4
7	Musiri	1.6
8	Pullambadi	0.7
9	Thiruverumbur	0.4
10	Thottiam	1.6
11	Thuraiyur	1.3
12	T.Pet	0.8
13	Uppliapuram	0.0
14	Vaiyampatti	1.3
15	Trichy Corporation	0.5
	District	12.0
Source: Health Department, Tiruchirappalli		

Table 4.3 Percentage of Institutional Deliveries

S.No.	Blocks/District	Home	H.S.C	PHC	GH	Private Hospital
1	Andanallur	0.28	0.00	30.02	37.39	32.31
2	Lalgudi	0.24	0.00	28.26	37.54	33.96
3	Manachanallur	0.18	0.04	21.26	44.89	33.64
4	Manigandam	0.06	0.00	29.78	34.28	35.88
5	Manapparai	0.00	0.00	9.97	71.67	18.36
6	Marungapuri	0.00	0.04	26.08	42.05	31.82
7	Musiri	0.11	0.38	33.33	39.12	27.06
8	Pullambadi	0.07	0.00	35.26	32.78	31.89
9	Thiruverumbur	0.08	0.04	31.38	36.29	32.22
10	Thottiam	0.00	0.05	38.78	31.70	29.47
11	Thuraiyur	0.73	0.00	42.78	22.73	33.75
12	T.Pet	0.15	0.00	31.49	37.10	31.26
13	Uppliapuram	0.00	0.00	46.90	28.38	24.72
14	Vaiyampatti	0.49	0.06	33.89	32.22	33.33
15	Trichy Corporation	0.02	0.00	9.31	46.40	44.28
	District	0.11	0.03	22.87	42.45	34.54
Source: Health Department, Tiruchirappalli						

Table 4.4 Immunization

S.No.	Name of the Block	Target (no.)	Achivement (no.)	Percentage
1	Andanallur	1404	1380	100.8
2	Lalgudi	2045	2005	98.0
3	Manachanallur	2691	2714	100.9
4	Manigandam	1534	1543	100.6
5	Manapparai	2439	2513	103.0
6	Marungapuri	2241	2265	101.1
7	Musiri	1843	1892	102.7
8	Pullambadi	1475	1452	98.4
9	Thiruverumbur	2633	2654	100.8
10	Thottiam	1951	1973	101.1
11	Thuraiyur	2047	1973	96.4
12	T.Pet	1429	1367	95.7
13	Uppliapuram	1402	1407	100.4
14	Vaiyampatti	1664	1622	97.5
15	Trichy Corporation	13235	12601	95.2
	District	**40033**	**39361**	**98.3**
Source: Health Department, Tiruchirappalli				

Table 4.5 Nutritional Status (0-5)

S.No.	Blocks/District	Total Children (no.)	Nutritional Status (no.)				
			SUW	MUW	OW	Normal	% of Malnourished
1	Andanallur	6167	0	736	0	5431	11.93
2	Lalgudi	9299	8	1845	0	7446	19.93
3	Manachanallur	11644	5	1783	0	9856	15.36
4	Manigandam	8622	10	1847	0	6765	21.54
5	Manapparai	10302	3	2334	0	7965	22.68
6	Marungapuri	10373	20	2831	0	7522	27.48
7	Musiri	8355	3	1579	0	6773	18.93
8	Pullambadi	7608	7	1062	0	6539	14.05
9	Thiruverumbur	10430	6	2346	0	8078	22.55
10	Thottiam	9097	4	1539	0	7554	16.96
11	Thuraiyur	7759	11	1923	0	5825	24.93
12	T.Pet	6597	8	1449	22	5118	22.42
13	Uppliapuram	6329	13	1561	0	4755	24.87
14	Vaiyampatti	8110	2	1960	0	6148	24.19
15	Trichy Corpn.	20484	10	1849	6	18619	9.10
	District	**141176**	**110**	**26644**	**28**	**114394**	18.97
Source: ICDS, Tiruchirappalli							

Table 4.6 Access to Drinking Water

S.No.	Blocks/District	Total No.of Habitation	No. of Habitation with Drinking Water Facilities	% Habitation with Drinking Water Facilities
1	Andanallur	170	93	54.71
2	Lalgudi	186	161	86.56
3	Manachanallur	247	115	46.56
4	Manigandam	179	104	58.10
5	Manapparai	434	329	75.81
6	Marungapuri	451	397	88.03
7	Musiri	201	167	83.08
8	Pullambadi	147	121	82.31
9	Thiruverumbur	181	172	95.02
10	Thottiam	246	231	93.90
11	Thuraiyur	228	204	89.47
12	T.Pet	176	169	96.02
13	Uppliapuram	132	132	100.00
14	Vaiyampatti	329	230	69.91
15	Trichy Corporation	60	60	100.00
	District	**3367**	**2685**	**77.47**
Source: NBA Report 2013-14				

Table 5.1 Literacy Rate

Sl.No.	Literacy Rate	2001			2011		
		Male	Female	Total	Male	Female	Total
1	**District**	86.54	69.30	77.90	89.73	76.86	83.23
2	**State**	82.33	64.55	73.47	86.81	73.86	80.33
Source: Census 2001 and 2011							

Table 5.2 Arts and Science colleges

Colleges	No. of Arts and Science Colleges
Government	3
Aided	7
Private	13
Total	23
Source: District Statistical Handbook, Tiruchirappalli, 2013-14	

Table 5.3 Engineering colleges and Polytechnic colleges

Colleges	No. of Enggineering Colleges	No. of Polytechnic Colleges
Government	2	1
Aided	0	2
Private	30	23
Total	32	26
Source: District Statistical Handbook, Tiruchirappalli, 2013-14		

Table 6.1 Self Help Groups

Sl. No	Blocks/District (Including Taluk Area)	2013-14		
		No. of Self Help Groups	No. of Members	Credit Availed (in Rs)
1	Andhanallur	1046	14343	1353.044
2	Lalgudi	1290	19555	721.710
3	Manachanallur	1191	13913	1184.656
4	Manigandam	1028	15474	195.850
5	Mannapparai	878	17741	303.670
6	Marungapuri	1052	15481	184.930
7	Musiri	1047	14932	349.340
8	Pullambadi	881	13262	405.514
9	Thiruverumbur	955	9196	309.930
10	Thottiyam	1056	15952	447.905
11	Thuraiyur	929	13344	362.730
12	T.Pet	648	13451	291.191
13	Uppliapuram	734	10386	250.570
14	Vaiyampatti	900	13424	185.090
15	Trichy Corporation	6898	103230	6157.690
District		**20513**	**303684**	**12703.820**
Source: Project Officer, Mahalir Thittam, Tiruchirappalli				

Table 6.2 Female Work Participation

Sl. No.	Blocks/District	Female Worker Participation Rate
1	Andhanallur	34.10
2	Lalgudi	33.98
3	M.Nallur	34.88
4	Manigandam	31.67
5	Mannapparai	36.22
6	Marungapuri	46.82
7	Musiri	42.75
8	Pullambadi	41.32
9	Thiruverumbur	21.09
10	Thottiyam	43.31
11	Thuraiyur	41.84
12	T.Pet	47.18
13	Uppliapuram	48.70
14	Vaiyampatti	50.50
15	Tiruchirappalli Corporation	15.23
	District	31.01
Source: Census 2011		

Table 7.1 Marriage and Maternity Assistance Programme

Sl. No	Blocks/District	No.of Women Maternity Assistance Benefited	No.of Women-Marriage Assistance Benefited
1	Andhanallur	2482	248
2	Lalgudi	3551	429
3	M.Nallur	4313	573
4	Manigandam	2493	264
5	Mannapparai	3458	347
6	Marungapuri	3798	287
7	Musiri	3412	262
8	Pullambadi	2446	313
9	Thiruverumbur	3708	172
10	Thottiyam	3521	297
11	Thuraiyur	3243	448
12	T.Pet	2416	252
13	Uppliapuram	2554	327
14	Vaiyampatti	2310	218
15	Tiruchy corpn	9454	1577
	District	**53459**	**6014**
Source: Social Welfare Deprtment, Tiruchirappalli (2013-14)			

Technical Notes

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 may be used for deriving HDI at the block level are as follows:

Indicators for measuring HDI

Dimensions	Indicators
Living standards	Percentage of HHs having access to Cooking fuel
	Percentage of HHs having access to Toilet
	Percentage of habitations having access to Drinking Water
	Percentage of HHs having access to Electricity
	Percentage of HHs having access to Pucca house
Health	Infant Mortality rate
	Maternal Mortality Ratio
	Under 5 Mortality Rate
Education	Literacy Rate
	Gross Enrolment Ratio (Primary And Gross Enrolment in secondary) Schools

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

Method of Estimating HDI

For the estimation of the HDI, the following steps may be 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)

   .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 = $(I_1 \times . I_2 \times \ldots . I_n)^{(1/n)}$.

4. 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.

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.

Indicators considered for measuring GII

Dimensions	Indicators
Health	Maternal Mortality Rate (MMR)
	Share of Institutional deliveries (ID)
	Ante-natal coverage
Empowerment	Share of female and male elected representatives in Urban and Rural Local Bodies (PR_F and PR_M)
	Share of female and male literacy (LIT_F, LIT_M)
	Share of Female and Male Children (0-6) years
Labour market	Share of female and male Work Participation Rate (WPR_F, WPR_M)
	Share of female and male workers in the non agricultural sector (NAG_F, NAG_M)
	Female and male Agricultural wage rate ($WAGE_F$, $WAGE_M$)

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

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

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)

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

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.

Indicators for Child Development

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

Dimension	Indicator
Health	U5MR
	Child Sex Ratio(0-6)
Nutrition	Percentage of Malnourished Children
	Enrolment in Primary and Secondary
Education	Children never enrolled in schools
	Transition rate from Primary to Upper Primary and Upper Primary to Secondary

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 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

  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)

- 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.

Construction of Multidimensional Poverty Index (MPI)

Indicators

Dimension	Indicator
Health	IMR
	Higher order Birth
	Malnourished Children
Education	Drop out in primary and secondary
Living Standards	Access to cooking fuel
	Access to toilet facilities
	Access to drinking water
	Access to Electricity
	Pucca house

Computation of Multidimensional Poverty 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 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
- 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)
- 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 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.

Abbreviations

AAY- **A**ntyodaya **A**nna **Y**ojana

AIDS- **A**cquired **I**mmune **D**eficiency **S**yndrome

AVG- **A**verage

BPL- **B**elow **P**overty **L**ine

BRTE- **B**lock **R**esource **T**eacher **E**ducator

BT- **B**ituminous **R**oad

CBR- **C**rude **B**irth **R**ate

CC- **C**ement **C**oncrete **R**oad

CDI- **C**hild **D**evelopment **I**ndex

CDR- **C**rude **D**eath **R**ate

DHDR- **D**istrict **H**uman **D**evelopment **R**eport

EMP- **E**mployment

GER- **G**ross **E**nrolment **R**atio

GII- **Ge**nder **I**nequality **I**ndex

HDI- **H**uman **D**evelopment **I**ndex

HHs- **H**ouse**h**old**s**

ICDS- **I**ntegrated **C**hild **D**evelopment **S**cheme

IFA- **I**ron **F**olic **A**cid

ILO- **I**nternational **L**abour **O**rganisation

IMR- **I**nfant **M**ortality **R**ate

LF- **L**abour **F**orce

MGNERGP- **M**ahatma **G**andhi **N**ational **R**ural **E**mployment **P**rogramme

MGNREGA- **M**ahatma **G**andhi **N**ational **R**ural **E**mployment **A**ct

MMR- **M**aternal **M**ortality **R**atio

MPI- **M**ultidimensional **P**overty **I**ndex

NBA- **N**irmal **B**harath **A**bhiyan

NDDP- **N**et **D**istrict **D**omestic **P**roduct

OAP- **O**ld **A**ge **P**ension

OBC- **O**ther **B**ackward **C**astes

PB-**P**anchayat **B**oard

PCI- **P**er **C**apita **I**ncome

PCO- **P**ublic **C**all **O**ffice

PDS- **P**ublic **D**istribution **S**ystem

PSR- **P**upil **Sc**hool **R**atio

PTR- **P**upil **T**eacher **R**atio

RLB- **R**ural **L**ocal **B**odies

SC-**S**cheduled **C**aste

SHSs- **S**elf **H**elp **G**roup

SSA- **S**arva **S**iksha **A**biyan

ST- **S**cheduled **T**ribes

TB- **T**uberculosis

TNEB- **T**amil **N**adu **E**lectricity **B**oard

ULB- **U**rban **L**ocal **B**odies

UNDP- **U**nited **N**ations **D**evelopment **P**rogramme

UNFPA- **U**nited **N**ations **P**opulation **F**und

UNICEF- **U**nited **N**ations **C**hildren's **F**und

WBM- **W**ater **B**ounded **M**ud roads

WHO- **W**orld **H**ealth **O**rganisation

WPR- **W**ork **P**articipation **R**ate

Select Reference

Amartya Sen http://hdr.undp.org/en/humandev accessed on 03.08.2014

Bina Agarwal, Jane Humphries and Ingrid Robeynes (2007, capabilities, Freedom and Equality, Oxford University Press, New Delhi.

Census (2001) http://www.census.gov.in

Census (2011) http://www.census.gov.in

District Industries Centre http://dicpdk.in

District Statistical Handbook 2012-13

Gerald M. Meier and James E. Ranch (2002), Leading Issues in Economic Development, Oxford University Press, New York.

http://hdr.undp.org/sites/default/files/reports/267/hdr06-complete.pdf

Statistical Handbook of Tamil Nadu

WHO http://www.who.int