District Human Development Report - 2017

Sivaganga District

State Planning Commission
Tamil Nadu

SIVAGANGA

DISTRICT HUMAN DEVELOPMENT REPORT 2017

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

Contents

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MESSAGE

Tamil Nadu is a pioneer in implementing welfare programmes. The States's Twelfth Five Year Plan insists upon the betterment of Human Development status. Tamil Nadu in 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.

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PREFACE

The State Planning Commission always considers the concept of Human Development Index as an indispensable part of its development and growth. Previously, the State Planning Commission has published Human Development Report for 8 districts in the past during the period 2003-2008, which was very unique of its kind. The report provided a comprehensive view of the development status of the district in terms of Health, Education, Income, Employment, etc. The report would be a useful tool for adopting appropriate development strategies and to address the gaps to bring equitable development removing the disparities.

After the successful completion of the same, now the State Planning Commission has again initiated the process of preparation of Human Development Report based on the current status. The initiative of State Planning Commission is applaudable as this approach has enhanced the understanding of Human Development in a better spectrum.

As far as Sivagangai District is concerned, the Bharathidasan University, Trichy has prepared the **DHDR** for Sivaganga District under the assistance of **UNDP & SPC**. This report has been prepared with a lot of statistical data, information from line departments especially Education, Health, Rural Development and Department of Economics & Statistics. It Provides sub-district level disaggregated status on various parameters. It also provides lead for core development departments for their action in specific areas.

"Execution without planning is like a building without foundation" says an old adage. **"Well Planned work is half done"**. Perfect Planning leads to successful completion of the project. In this context, the **SPC** has thus provided an opportunity for such a planning in Sivagangai district to highlight several challenges the district faces in improving **HDI** and to accelerate the process of development.

Last but not least, I thank all those concerned who have put their energy & efforts and personal attention in preparing this report which would be inclusive of all minute details of this district and pave way for the equitable and sustainable growth of the district in the right direction.

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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.

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We are grateful to our Honable 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 Collectors Thiru.V. Rajaraman, I.A.S., and Thiru. T. Munusamy, I.A.S., and the present District Collector Tmt. S. Malarvizhi, I.A.S., 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, Former 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 former Collector (i/c) Thiru. T. Ilango, DRO, and District Planning Officer, Sivaganga Thiru. S. Bose, Thiru. Bismillahnashrudeen (i/c) and the present Secretary, DPO Office Thiru. K. Sukumar, Statistical Inspector, Thiru. K. Ramanathan, Thiru. S. Karthikeyan (Assistant), Tmt. Rajeswari (former Assistant), Tmt. P. Dhanalakshmi (Assistant), Thiru. S. Kasiviswanathan (Junior Assistant), Tmt. Indirani and others in the office for providing data and constant encouragement.

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. Manimegalai, 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 officials in the district Deputy Director of Statistics, District Industries Centre, District Employment Office, District Rural Development Agency, District Supply Office, Regional Joint Director, Animal Husbandry, Deputy Director of Health Services, District Programme Officer, ICDS, Deputy Director of Medical Services(TB Centre and Leprosy Centre), NRDWP, NBA, Additional Chief

Educational Officer, SSA, Chief Educational Officer, District Backward class Welfare Office, District AdiDravidar Welfare Office, Commissioner of Municipalities, Town Panchayats, Block Development Offices, BSNL, Lead Development Bank, District Co-operative Bank, District Social Welfare Office, Superintendent of Police, Project Officer, MahalirThittam, PAPD, Joint Director, Agriculture, Inspector of Factories for their support throughout the process.

We may fail in our duty, if we miss to acknowledge 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 syntax and semantic errors in the report. We also 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 Univiersity, and the Administative Staffs of Bharathidasan University for all the help and support provided by them.

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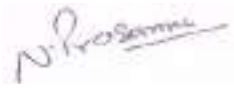

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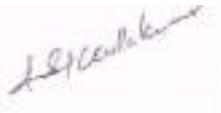

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CHAPTER 1
SIVAGANGA DISTRICT - A PROFILE

Chapter - 1

District Profile

Topography

Sivaganga (usually called as 'Sivagangai' in Tamil) is an administrative district of Tamil Nadu located in Southern India. Sivaganga District was carved out from the composite Ramnad District on 6th July, 1984 and the District started functioning on 15th March, 1985. The city of Sivaganga is the headquarters of the district. The district is located between 9.43' and 10.42' North latitude and 77.47' and 78.49' East longitude. Sometimes referred as 'MarudhuBhoomi' to honor the bravery of the great Marudhu brothers, the district is bordered in the North and Northeast by Pudukkottai District, on the Southeast and South by Ramanathapuram District, on the Southwest by Virudhunagar District, and on the West by Madurai District, and on the Northwest by Tiruchirrapalli District.

Soil of the district is predominantly black. Part of Sivaganga district has red soil also. The classification of soil in the Sivaganga district is as follows: 1. Lateritic soil and Red Sterile soil is found in the Western part of Devakottai, Karaikudi and the entire Thiruppathur; 2. Black soil is found in the Western part of Sivaganga and North West of Manamadurai; 3. Alluvium soil is found in the Eastern part of Devakottai and Northern part of Ilayangudi; 4. Red soil is found in the central part of Sivaganga, Northern part of Manamadurai and Southern portion of Ilayangudi.

The district experiences a very dry and hot climate with low degree of humidity. Normally, the temperature varies from 22^0C to 39^0C. The district receives a normal annual rainfall in the range 801 – 100 mm, during the year 2011-12, it received 872.8 mm of rainfall. There are no perennial rivers in the district. The river Vaigai is the only major one which enters the district near Tiruppuvanam and flows through Sivaganga block. The other seasonal rivers and minor streams flowing through the district are Sarugani, Bambar, Kottagudi, Manimuthar, Uppar, Uppargundam and Thenar in Thiruppathur block.

There are substantial graphite reserves in Sivaganga district. The Sivaganga graphite is of flaky variety with 14 per cent average Fixed Carbon used in the manufacture of refractory bricks, expanded graphite, crucibles and carbon brushes. Tamil Nadu Minerals Ltd. (TAMIN) has over 600 acres of graphite bearing land in Pudupatti, Kumaripatti and Senthiudayanathapuram of Sivaganga taluk, Sivaganga District, Tamil Nadu. The estimated reserve of graphite ore in the leasehold area is three million tones (recoverable graphite from 14 per cent F.C. is approximately 3 lakh tonnes).

History

The Kingdom of Ramnad originally comprised of the territories of Ramnad, Sivaganga and Pudukkottai of today. Regunatha Sethupathy alias Kilavan Sethupathy, the 7th King of Ramand reigned between 1674 and 1710. The King assigned to Peria Oodaya Thevar of Nalukottai a portion of land sufficient to maintain 1000 armed men. Vijaya Regunatha Sethupathy became the 8th King of Ramnad in 1710, after the death of Kilavan Sethupathy. The land was passed on to Sasivarna Thevar as dowry, free of taxation, sufficient to maintain 1,000 men. Meanwhile Bhavani Sankaran, the son of Kilavan Sethupathy conquered Ramnad territory and proclaimed himself as the Rajah of Ramnad. He became the 10th king of Ramnad and he reigned from 1726 to 1729. The ousted King Sasivarna Thevar along with his brother Kattaya Thevan joined forces with the King of Tanjore defeated BhavaniSankaran at the battle of Uraiyur and captured Ramnad in 1730. Thus Kattaya Thevan became the 11th King of Ramnad. Kattaya Thevan divided Ramnad into five parts and retained three for himself. He granted the two parts to Sasivarna Thevar of Nalukottai.

Sasivarna Peria Oodaya Thevar died in or the year 1750. He was succeeded by his only son Muthu Vaduganatha Peria Oodaya Thevar. He was the second Rajah of Sivaganga. His wife Rani Velu Nachiar acted as "friend, Philosopher and guide" to him. The British invaded Sivaganga Palayam in June 1772. Muthu Vaduganatha Rajah with many of his followers fell dead in that heroic battle. Rani Velu Nachiar and her daughter Vellachi Nachiar lived under the protection of Hyder Ali at Virupakshi near Dindigul. But, the heroic activities shown in the battle field by Velu Nachiar enabled her to later succeed her husband as the Queen in 1780 joined by her two brothers Servaigarars Vellai Marudu and Chinna Marudhu.The Queen Velu Nachiar granted powers to Marudhu Brothers to administer the country in 1780. Velu Nachiar died a few years later. The

Marudu Brothers served under Muthu Vaduganatha Thevar. Later they were elevated to the position of Commanders. Marudu brothers were not only warriors and noted for bravery, but they were very great Administrators.

During the period from 1783 to 1801, they worked for the welfare of the people and the Sivaganga Seemai was reported as fertile. They constructed many notable temples (i.e., Kalayarkovil) Ooranis and Tanks.

After many successions of legal heirs who ruled the estate, Sri D.S. Karthikeya Venkatachalapathy Rajah succeeded the estate of late Sri. D. Shanmuga Rajah and he was the Hereditary Trustee of Sivaganga Devasthanam and Chatrams consisting of 108 temples, 22 Kattalais and 20 Chatrams. Sri. D.S. Karthikeya Venkatachalapathy Rajah passed away in 30.8.1986 leaving a daughter named Tmt. Maduranthagi Nachiyar as his heir. At present, Tmt. Maduranthagi Nachiyar is administering the Sivaganga Estate, Sivaganga Devasthanam and Chatram of Sivaganga Royal Family. Based on the "District Gazette" 1990 of Ramanathapuram, and the history of Sivaganga maintained by Samasthanam, Sivaganga District has been formed mostly with an area of the entire Sivaganga Zamin and part of Ramnad Zamin.

Language

The Main language spoken in Sivaganga as in most parts of Tamil Nadu is Tamil. Although Tamil is the official language of the State, and is the common language of communication across Tamil Nadu, there are many dialects and slangs. In Sivaganga, Tamil is influenced by the dialects spoken by the people of Chettinad, who tend to speak more words drawn from traditional Tamil.

Art, Architecture and Culture

The art, culture and architecture of Sivaganga is predominantly characterized by Chettinad. Chettinad is a region of Sivaganga district with Karaikudi as its capital and comprises of 74 villages. Chettinad is the native of Nattukottai Chettiyars also known as Nagarathars. As Chettinad is situated in a strategic position along the trade route to South – East Asia, Chettiyars, a hard working community, moved as traders and money lenders to Burma, Srilanka, Malaysia, Singapore, Vietnam and other South – East Asian countries. They earned money there and returned to Chettinad along with different cultural experiences and contributed to the diversity of the society here. Chettinad is also

known for its culinary delicacies which can be attributed to the Chettiyars' exposure to the diverse culinary patterns of South-East Asia. Chettinad is home to some of the best chefs in Tamil Nadu. This is also thanks to the diverse cultural experiences which the people of Chettinad have been exposed to. Chettinad is famous for its traditional jewelry, silver ware, Kandanghi Sarees (hand woven), Kidarams (big vessels), brass vessels, Kudai (palmiyra leaf basket), clay and wooden toys (expecially Chettiyar and Aatchi) and decorative Kolam (art work).

Chettinad is also known for many clan temples, Ayyanar Shrines and Mariyamman Temples. The celebration of festivals like Deepavali, Pongal, etc., and rituals such as marriages are somewhat unique to the people of Chettinad. The Chettinad Architecture is also unique in character. The Nagarathars who returned with much knowledge and money constructed large mansions with Burma teak. The mansions are characterized by exquisite carvings and stucco work. The Chettinad architecture is characterised by its use of large space in halls, courtyards, verandas (Thinnai), etc., and huge Burma teak pillars, Belgian glass works, ceramic tiles (specially Athangudi tiles). One of the master pieces of Chettinad architecture can be seen in the Raja's palace at Kanadukathan. A Typical Chettinad house or mansion comprises of Mugappu (entrance), Valavu (living area), Irandamkattu (dining, storage), Munamkattu (kitchen) and thottam (garden, toilet, bathroom, space for washing etc.). The plastering work included several layers like lime mixture, ground white sea-shells, egg white, etc., the ceilings are characterised by terracotta tiles, with rose and coconut mixture plastering, which prevents heat. The Chettinad houses or mansions are so massive that they can even accommodate marriage cerimonies, with huge crowds. In the recent years, most Chettiars have migrated to different places and the mansions are being converted into hotels and resorts. This has attracted the tourism industry, which is capitalizing on the rich heritage and culture of this region.

District Map

Table 1.1 District Basic Demographic Indicators

Sl. No	Indicators	2001	2011
1	Population (no.)	11,53,747	13,39,101
2	Decennial Growth (per cent)	4.32	16.07
3	Density of Population (per sq,km,)	278	321
4	Urban population (per cent)	28.22	30.99
5	Sex Ratio	1,039	1,001
6	Percentage of 0-14 year old	27.0	22.6
Source: Census 2001 and 2011			

Table 1.1 provides the basic demographic features of Sivaganga district. According to Census 2011, the population of Sivaganga stood at 13.39 lakh, which was 1.85 lakh greater than the population according to Census 2001 (11.54 lakh). The decennial growth rate of population in 2011 was 16.07 per cent. When compared to 2001, the decennial growth rate has increased just above three fold. This increased growth in population in Sivaganga can be attributed to better standard of living and improvement in health services. The density of population per sq.km; increased to 320.46 in 2011 from 277.16 in 2001. This shows that people were moving towards urban area or urbanisation was picking up a pace.

This also can be linked to the urban population, which increased to 30.99 per cent in 2011 from 28.22 per cent in 2001. All this have been positive changes from 2001 to 2011. When we see the sex ratio, it declined to 1001 in 2011 from 1039 in 2001. This is a classic case of missing women (Amartya Sen). Even though the sex ratio was 1001 in 2011, the more favourable sex ratio of 1039 in 2001 has been washed away. In the case of percentage of 0-14 year old there was a decrease from 27 in 2001 to 22.6 in 2011. Although the overall population of the district has increased by 16.07 per cent during the decade 2001-2011, the 0-14 age group population has dropped. So, the increase in the population of Sivaganga district can be attributed to in-migration.

Economy

Agriculture

In order to understand the agricultural situation, it is important to know the land use classification. The total geographical area of the district was 4,189 sq. km., which was 3.22 per cent of the total geographical area of Tamil Nadu. Out of the total geographic area of 4,18,900 ha., 16,533 ha. of land was covered by forests and there was no change in this between 2001 and 2013. The total cultivable area in Sivaganga was 1,59,654 ha. in 2001. It declined by 14,678.6 ha. in 2013 to 1,44,975.4 ha. Probing into this, it was found that the land put to non-agricultural purpose increased by 14,821.4 ha., and this can be attributed to the conversion of cultivable land to land put to non – agricultural purpose. The net sown area declined from 1,09,427 ha. in 2001 to 97,942.4 ha. in 2013, and the land under miscellaneous trees and groves also declined from 8,208 ha. in 2001 to 6,671.8 ha. in 2013.

The district's principal crops are Rice, Millets and other Cereals, Pulses, Sugarcane, Groundnut, Ginger and Cotton, in which, rice was cultivated in nearly 70 per cent of the area followed by sugarcane in 5.93 per cent of the area. The main sources of irrigation are Tanks, Tube wells and other wells out of which, nearly 65 per cent of the irrigation is covered by Tanks followed by other wells (33.68 per cent) and Tube wells (2.2 per cent). One important aspect to note is that the area covered by Prosopis Julifora (Veli Karuvai) is the highest among all the districts in Tamil Nadu.

Table 1.2 Sectoral Distribution of Gross District Domestic Product Constant Price (2004-05 Prices)

(Rupees in Lakh)

Year	Primary	Secondary	Tertiary	Total
2004-05	41,811	74,171	1,92,630	3,08,612
2005-06	46,912	1,00,480	2,18,931	3,66,323
2006-07	37,798	93,188	2,54,791	3,85,777
2007-08	35,811	97,224	2,79,513	4,12,548
2008-09	41,664	97,120	3,07,483	4,46,266
2009-10	45,857	1,09,035	3,27,645	4,82,537
2010-11	53,023	1,30,154	3,68,621	5,51,798
2011-12	66,075	1,36,380	4,00,531	6,02,986

Source: Department of Economics and Statistics, Tamil Nadu

The sector-wise Gross District Domestic Product (GDDP) for Sivaganga district from the year 2004-05 to 2011-12 is given in Table 1.2, which provides a glimpse into the contribution by each sector to the output. The total GDDP of the district in the year 2004-05 was Rs. 3,08,612 lakh out of which the primary sector (including agriculture and allied activities) contributed Rs. 41,811 lakh, the secondary sector, which includes manufacturing, mining, construction, etc., contributed Rs. 74,171 lakh and the tertiary sector contributed about Rs. 1,92,630 lakh. In the year 2011-12, the total GDDP of the district increased to Rs. 6,02,986 lakh, in which the contribution of the primary sector increased to Rs. 66,075 lakh, the contribution of secondary and tertiary sectors increased to Rs. 1,36,380 lakh and Rs. 4,00,531 lakh respectively. The primary sector, which includes agriculture and allied activities, contributed around 14 per cent to the GDDP in the year 2004-05 and it reduced to 10.96 per cent during the year 2011-12; the secondary sector,

which includes manufacturing, mining, construction, etc., contributed around 24 per cent to the GDDP in the year 2004-05 and it reduced marginally to 23 per cent in the year 2011-12; while the tertiary sector (service sector) contributed around 62 per cent to the GDDP in the year 2004-05 and it increased to 66.42 per cent in the year 2011-12. There seemed to be some variation in the shares of the sectors between the two time periods. The contribution of the agricultural sector to the GDDP was the lowest compared to the other two sectors and it share also declined marginally over the years. This phenomenon is not unique to Sivaganga district, the State and National scenarios reflect the same picture.

Industry

There are 33 Large Scale Industries, 4,332 Medium Scale Industries, 8,192 Small Scale Industries and 6,962 Cottage Industries in the district. Among this, Sakthi Sugar Mills Pvt. Ltd., Padamathur, Modern Rice Mills, Sakkottai, Sri Vadivambigai Textiles Sakkanthi, Tamil Nadu Chemical Products, Kovilur and Tamil Nadu Clorides Ltd., Pottapalayam are important industries in the district. SIPCOT is located in three places, namely Karaikudi, Sivagangai, Kiruagakottai. In the total industrial units of 8,100 registered units are 7,422, i.e., 91.7 per cent. In which 18 are medium and 15 are large units. In these medium and large units 6, 690 are employed. The turnover of small scale industries are Rs. 1107.50 crores and for Medium and large scale industries are Rs. 965.87 crores. Apart from that, Sakthi sugar factory is located in the district, which has a capacity of producing more than 5,000 tonnes of sugar per day and provides employment to more than 1,000 labourers directly and indirectly. The District has 7,428 Micro and Small Enterprises and Artisan units with an average investment of Rs. 4.79 lakh. The total employment provided by MSME is 35,643. So, the total industrial sector was providing employment to 22.17 percent households.

Income

The per capita income of Sivaganga district stood at Rs. 26,325 in 2004-05, which was about Rs. 7,673 less than the State level of Rs. 33,998 during the same year. The per capita income of the district increased by around Rs. 24,000 during the period 2004-05 to 2011-12 and stood at Rs. 50,466 in 2011-12, while the State per capita income increased by around 30,000 during the same period and stood at Rs. 63,996 in 2011-12. In terms of the average annual growth rate of per capita income during the above period, Sivaganga district with 9.83 per cent, was marginally ahead of the State (9.52 per cent). But, in

absolute numbers, the district needs to do much more to catch-up with the State level. The number of Below Poverty Line (BPL) households in the district was 1,06,598 in 2013-14, in other words, the percentage of BPL households in the district was 31.45.

Table 1.3 Per Capita Income

(in Rupees)

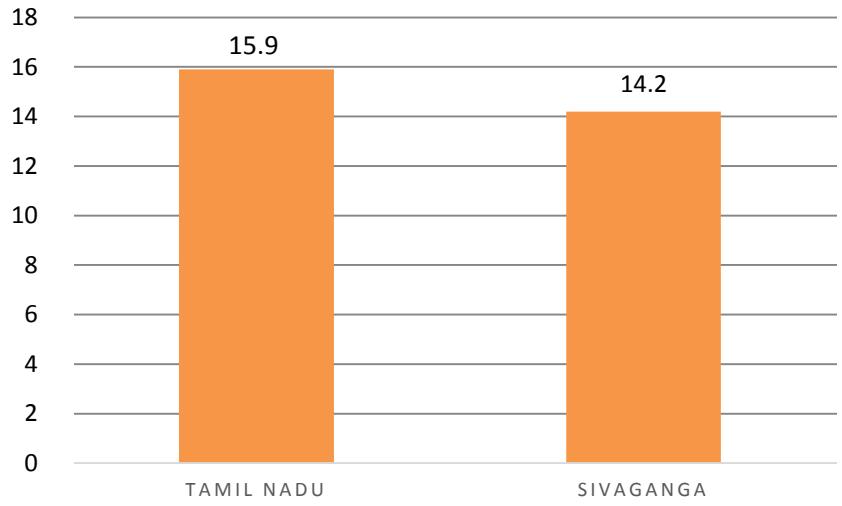
Year	District	State
2004-05	26,325	33,998
2005-06	31,133	38,435
2006-07	32,676	43,941
2007-08	34,839	46,293
2008-09	37,585	48,473
2009-10	40,545	53,359
2010-11	46,267	59,967
2011-12	50,466	63,996
Source : Department of Economics and Statistics, Tamil Nadu		

Social Sector

Health

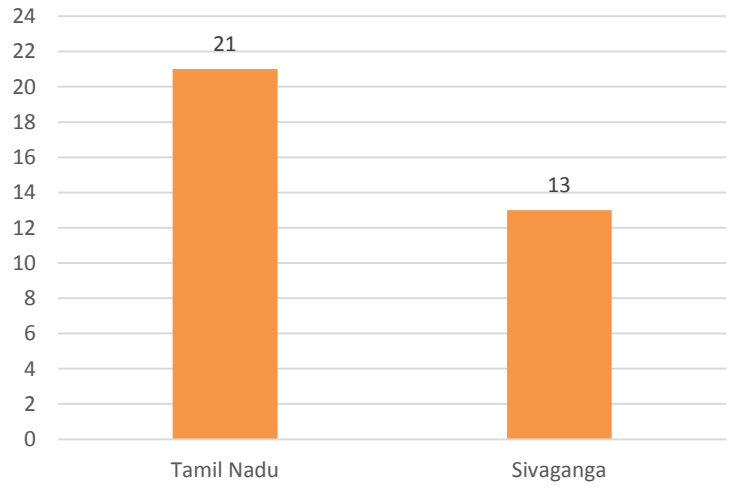
Health is one of the major determinants of human development, while Human Development Index tried to capture this taking into account the longevity of life and certain other indicators like Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR). It is very much important that other aspects of health such as the birth rate, death rate, diseases and vaccination. In this respect Sivaganga district, the Crude Birth Rate (CBR) stood at 14.2 in 2013-14, while that of Tamil Nadu was 15.9 in the same year, which was 1.7 points higher than that of Sivaganga district (Figure 1.1). The same can be seen in terms of IMR, i.e., the IMR in Sivaganga district in 2013-14 was 13, while that of Tamil Nadu was eight points higher at 21 (Figure 1.2). So, in Sivagnga district, the CBR was marginally lower than the State level and the IMR was much lower than the State level, i.e., there seems to be significant deviation from the State level

Figure 1.1 Crude Birth Rate



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

Figure 1.2 Infant Mortality Rate



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

Literacy and Education

The literacy rate in the district stood at 79.86 per cent in 2011 which was marginally lower than the State literacy rate 80.33 per cent. The female literacy rate was 71.85 per cent, which was much lower than the male literacy rate of 87.92 per cent. The rural literacy rate was 75.73 per cent in which the rural male literacy rate was 85.35 per cent and the rural female literacy rate was only 66.19 per cent. There was a gap of 19.16 per cent between the rural male and female literacy rate. The urban literacy rate was 89.10 per cent, in which the male urban literacy rate was 93.65 per cent and the female urban literacy rate was 84.56 per cent. Here, the gender gap in literacy was 9.09 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 102.58 per cent and 102.29 per cent respectively in the year 2013-14. The GER at the secondary level for both boys and girls was also quite high at 106.12 per cent and 106.17 per cent respectively in the same year.

The primary level completion rates for boys and girls were 94.57 per cent and 95.20 per cent respectively in the year 2013-14. The upper-primary level completion rates for boys and girls were 91.08 per cent and 91.70 per cent. The completion rates of boys and girls at both levels do not show any gender discrimination, but the completion rates at both the levels need to be addressed. The transition rates from primary to upper-primary and from upper-primary to secondary show a healthy picture for both boys and girls with all the rates nearing 100 per cent. Comparing the completion rates and transition rates of boys and girls, it can be observed that the completion rates of girls was marginally higher than the completion rates of boys while the transition rates of boys was higher than that of the girls. Likewise, the dropout ratio was marginally higher for boys at primary level than the girls, whereas it was lower for boys than girls at the upper-primary level. So, gender discrimination against the girls can be seen as we move up the education ladder.

CHAPTER 2

STATUS OF HUMAN DEVELOPMENT

Chapter - 2

Status of Human Development

"Economic growth without investment in human development is unsustainable - and unethical." – Amartya Sen, Nobel Laureate in Economics

"Vulnerability has multiple causes and consequences. Reducing vulnerability is a key ingredient in any agenda for improving human development. But if we are to succeed in reducing vulnerability, we need to approach it from a broad systemic perspective." – Joseph Stiglitz, Nobel Laureate in Economics

Introduction

According to the Human Development Report 2010, the concept of human development has been 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, where people have to promote or achieve the functioning's 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. Funtionings 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 functionings and ulitimately satisfaction. For example, cycle is a resource which can be used to travel. But, one needs capability to ride it in order to ulitimately travel and derive the utility or 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, times of egg consumption per week, etc. On the other hand, freedom is a real oppurtunity 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 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 comprise 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 Rate (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 Rate Under 5 Mortality Rate
Education	Literacy Rate Gross Enrolment in Primary Gross Enrolment in Secondary

The analysis of HDI of Sivaganga district, which comprises 12 blocks, reveals that Devakottai block tops the table followed by Ilaiyankudi, Thiruppathur, Sakkottai and Kallal with index values of 0.829, 0.697, 0.677, 0.665 and 0.577 respectively, while the bottom five blocks are S.Pudur, Kalaiyarkovil, Sivaganga, Manamadurai and Thiruppuvanam with index values of 0.508, 0.509, 0.521, 0.526 and 0.536 respectively. Here, it should be kept in mind that these are just inter-block variations and do not reflect the actual status or development levels of the blocks in Sivaganga district. The actual level of development would be analysed in the forth coming chapters of this report. In order to understand the inter-block variations, an analysis of the indicators of the HDI is necessary, which reveals that the health indicators seem to influence the HDI ranking of the various blocks of Sivaganga district to a larger extent compared to the other indicators.

Table 2.1 Top and Bottom Five Blocks in Human Development Index

Index	Top Five Blocks	Bottom Five Blocks
HDI	Devakottai(0.829)	S.Pudur(0.508)
	Ilaiyankudi (0.697)	Kalaiyarkovil (0.509)
	Thiruppathur (0.677)	Sivaganga(0.521)
	Sakkottai (0.665)	Manamadurai (0.526)
	Kallal (0.577)	Thiruppuvanam(0.536)

Under the Standard of Living indicators, Access to Cooking Fuel, Access to Toilet Facility, Access to Drinking Water and Access to Pucca House show substantial variations. In terms of Access to Cooking fuel, Sakkottai has the maximum of 50.77 per cent access, followed by Devakottai (40.34) (see Appendix Table 2.1 – 2.3). The least percentage Access to Cooking Fuel among blocks is found in Manamadurai with 21.68 per cent, which is followed by Thiruppuvanam (25.51). Only two blocks have higher percentage than the district level of 33.58 per cent. In terms of Access to Toilet Facility, Kannangudi tops with 85.64 per cent, followed by Devakottai (69.13) which is closely followed by Sakkottai (68.80), while the least is found in Kalaiyarkovil with 37.52 per cent, closely followed by Kallal 38.66 per cent. Out of the 12 blocks, six blocks, viz., Sivaganga, Devakottai, Kannangudi, Sakkottai, Thiruppathur and Singampunari stand above the district level of 56.82 per cent. Considering the Access to Drinking Water, S.Pudur provided with cent per cent water facility, apart from S.Pudur, six blocks namely Sivaganga, Manamadurai, Ilaiyankudi, Thiruppathur, Singampunari and Thiruppuvanam have more than 90 per cent access to drinking water, while Kannangudi has the least Access to Drinking Water with 83.67 per cent. In terms of Access to Pucca House, Sakkottai tops with 90.20 per cent closely followed by Sivaganga (89.00), while Kallal has the least with 67.55 per cent, closely followed by S.Pudur 68.09.

Probing the Health parameter, it can be found that MMR exhibits variations to the largest extent, while IMR and U5MR also exhibit substantial variations. In terms of MMR, seven blocks, viz., Manamadurai, Ilaiyankudi, Devakottai, Kannangudi, Singampunari, S.Pudur and Kallal record zero MMR, while two blocks, viz., Sivaganga and Sakkottai record more than 200, and Kalaiyarkovil records above 100. The lowest IMR is found in Ilaiyankudi (5.2) followed by Devakottai (10.8), Thiruppathur (11.7) and Sakkottai (11.8), which can be classified as better than the district level of 12.5. All the other blocks record IMR above the district level and the highest can be found in Kannangudi (20.7) followed by Thiruppuvanam (19.4). Even though in terms of size, U5MR may be small, but has substantial impact on the HDI outcome of the blocks. The lowest U5MR is seen in Devakottai (1.8) followed by Ilaiyankudi (2.1), while the highest can be seen in Singampunari (4.1) and S.Pudur (3.5). Three more blocks other than the top two in this respect, viz., Kallal (2.4), Thiruppathur (2.6) and Kannangudi (2.9) record lower rates than the district level of 3.00.

Analysing the Education parameter, it can be seen that Literacy Rate, shows substantial variations. In terms of Literacy Rate, Sakkottai tops with 84.78 per cent followed by Devakottai (81.83) and Sivaganga (80.41), while the least is found in S.Pudur with 69.60 per cent. Only three blocks, viz., Sakkottai, Devakottai and Sivaganga have higher rates than the district level of 79.90 per cent.

In terms of the block-wise analysis, Devakottai block secures the first position in terms of HDI as it performs best in terms of two health indicators, viz., MMR (zero) and U5MR (1.8); it performed second best in terms of five indicators, viz., Access to Cooking Fuel (40.34 per cent), Access to Toilet Facility (69.13 per cent), IMR (10.80), Literacy Rate (81.83 per cent) and GER Primary (103.25 per cent); and it also performs above the district level in terms of Access to Electricity (93.74 per cent), Access to Pucca House (85 per cent) and GER Secondary (106.68per cent). But, it performs below the district level in terms of Access to Drinking Water (88.24 per cent). Ilaiyankudi secures the second rank in terms of HDI ranking as it performs well in all the health indicators, i.e., best in two health indicators, viz., IMR (5.2) and MMR (zero) and second best in terms of U5MR (2.1); it also performs better than the district level in terms of Access to Toilet Facility (93.56 per cent) and Access to Drinking Water (90.84per cent). So, even though Ilaiyankudi performs below the district level in all the other indicators, it is able to secure the second rank in terms of HDI as it performs very well in all the three health indicators and tops the Health Index (0.962). Thiruppathur secures the third rank in terms of the HDI ranking as it performs second best in two indicators, viz., MMR (60) and GER Secondary (106.82 per cent); it performs better than the district level in five indicators, viz., Access to Toilet Facility (59.04 per cent), Access to Drinking Water (97.44 per cent), IMR (11.70), U5MR (2.6) and GER Primary (102.48 per cent). Sakkottai with much urban characteristics is able to secure only the fourth position in terms of HDI ranking inspite of performing best in four indicators, viz., Access to Cooking Fuel (50.77 per cent), Access Pucca House (90.20 per cent), Literacy Rate (84.78 per cent) and GER Secondary (107.16 per cent); and performing second best in two indicators, viz., Access to Toilet Facilities (68.80 per cent) and Access to Electricity (95.53 per cent); as it performs extremely poor in terms of MMR (240 – second highest). It is not pushed further down in the HDI ranking like Sivaganga, as it performs near the district level in the other two health indicators, i.e., IMR (11.8) and U5MR (3.1). Kallal secures the fifth spot in terms of the HDI ranking as it performs best in terms of MMR (zero) and above

district level in two other indicators, viz., U5MR (2.4) and Access to Electricity (92.86 per cent).

S.Pudur block, which is most rural based, stands last in terms of the HDI ranking as it performs most poorly in terms of Literacy rate (69.60 per cent); second lowest in terms of Access to Toilet Facilities (44.26 per cent), Access to Electricity (89.11 per cent), Access to Pucca House (68.09 per cent) and U5MR (3.5 – second highest); performs much worse than the district level in terms of IMR (16.30) and Access to Cooking Fuel (28.20 per cent). But, it is astounding to notice that the block has zero MMR and has 100 per cent coverage in terms of Access to Drinking water. Kalaiyarkovil block stands at the second last position in terms of HDI ranking as performs worst in terms of Access to Toilet Facility (37.52 per cent) and second last in Access to Drinking Water (87.14 per cent); it also performs worse than the district level in eight indicators, viz., Access to Electricity (92.36 per cent), Access to Pucca House (89 per cent), IMR (12.9), MMR (120), U5MR (3.3), Literacy Rate (77.23 per cent), GER Primary (102.10 per cent) and GER Secondary (106.40 per cent). Sivaganga block figures third from the bottom in terms of HDI ranking inspite of being much more urbanized and being the block headquarters as it performs poorly in all the three health indicators. It has the highest MMR (260), performs worse than the district level in the remaining two health indicators, i.e., IMR (15.8) and U5MR (3.4). It also performs below the district level in two other indicators, viz., Access to Cooking Fuel (32.08 per cent) and Access to Electricity (92.36 per cent). Manmadurai block, again another urbanized block, stands fourth from the bottom in terms of HDI ranking as it has the lowest Access to Cooking Fuel (21.68 per cent), and performs worse than the district level in six indicators, viz., Access to Toilet Facility (49.14 per cent), Access to Pucca House (70.12 per cent), IMR (17.6), U5MR (3.3), Literacy Rate (78.15 per cent), GER Primary (102.12 per cent) and GER Secondary (106.65 per cent). Thiruppuvanam block stands fifth from the bottom in terms of the HDI ranking as it performs worse than the district level in eight indicators, viz., Access to Cooking Fuel (25.51 per cent), Access to Toilet Facility (49.28 per cent), Access to Drinking Water (90.22 per cent), Access to Electricity (92.42 per cent), IMR (19.4), U5MR (3.3), Literacy Rate (77.64 per cent) and GER Primary (102.01 per cent).

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 was captured by three indicators for Female and Male separately, viz., Literacy Rates, Share of Juveniles (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 presented information on the human development in three dimensions while GII provided 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 Agri. wage rate
	Male Agri. wage rate

Looking at the GII of Sivaganga district, it can be seen that the top five blocks were S.Pudur, Manamadurai, Kallal, Singampunari and Devakottai with scores of 0.006, 0.008, 0.016, 0.016 and 0.020 respectively, while the bottom five blocks were Sivaganga, Sakkottai, Kalaiyarkovil, Thiruppuvanam and Thiruppathur with the scores of 0.091, 0.074, 0.073, 0.058 and 0.049 respectively. The top five blocks with GII necessarily

indicated the lowest gender inequality, while the bottom five blocks indicated higher gender inequality among the blocks.

Table 2.2 Top and Bottom Five Blocks in Gender Inequality Index

Index	Top Five Blocks	Bottom Five Blocks
GII	S.Pudur (0.006)	Sivaganga (0.091)
	Manamadurai (0.008)	Sakkottai (0.074)
	Kallal (0.016)	Kalaiyarkovil (0.073)
	Singampunari (0.016)	Thiruppuvanam (0.058)
	Devakottai (0.020)	Thiruppathur (0.049)

The analysis of the indicators of GII reveals that the labour indicators have much significant role in determining block ranks. Here also MMR plays an important role as discussed earlier. Indicators such as Share of Ante Natal Coverage and Female Literacy have low variations, while Share of Institutional Deliveries, Male Literacy Rate, Share of Female Children, Share of Male Children, Share of Female Elected Representatives in RLBs and ULBs, share of Male Elected Representatives in RLBs and ULBs and Male WPR have very low variations compared to other indicators.

In terms of Female WPR, Kannangudi tops with 46.90 per cent, which is followed by S.Pudur with 45.58 per cent (see Appendix Table 2.4 – 2.6). Eight blocks, viz., Kalaiyarkovil, Manamadurai, Thiruppuvanam, Ilaiyankudi, Kannangudi, Singampunari, Kallal and S.Pudur have better Female WPR than the district rate of 34.14 per cent. It can be seen that the Male WPR in Non-Agricultural Sector is much higher than the female WPR in Non-Agricultural Sector. In terms of Female WPR in Non-Agricultural Sector, except Sakkottai block, all the blocks fall below 40 per cent. The least Female WPR is found in Kannangudi with 11.87 per cent, which is followed by Ilaiyankudi and Kalaiyarkovil. It can be seen that the Male WPR in Non-Agricultural Sector ranges from 18.50 per cent to 83.33 per cent. Sakkottai stands first while Kannangudi has the least Male WPR in Non-Agricultural Sector. Three blocks, viz.,

Sivaganga, Sakkottai and Kallal have Male WPR in Non-Agricultural Sector above the district rate of 52.83 per cent.

The Male Agricultural Wage Rate has much higher variation among blocks compared to Female Agricultural Wage Rate. In terms of the Female Agricultural Wage Rate, Sakkottai blocks tops with Rs.171, while Thiruppuvanam block has the least rate of Rs.106. In terms of the Male Agricultural Wage Rate, Kannangudi and Singampunari the first two spots with Rs.341 and Rs.301 respectively, while it is Rs.198 for S.Pudur. Seven blocks, viz., Sivaganga, Kalaiyarkovil, Devakottai, Kannangudi, Sakkottai, Thiruppathur and Singampunari have better Male Agricultural Wage Rate than the district rate of Rs.267.

Analysing the block-wise variations, S.Pudur block secures the first place in terms of the GII ranking as it has zero MMR, and performs second best in terms of Share of Institutional Deliveries (99.17 per cent) and Female WPR (45.58 per cent). It also has the lowest gender gap in Agricultural Wage Rate (Rs. 74) and second lowest gender gap in the Female WPR in Non-agricultural Sector (6.83 per cent). Manamadurai secures the second place in terms of the GII ranking as it also has zero MMR, and performs second best in Female WPR in Non-agricultural Sector (39.65 per cent). It also has a high Share of Female Elected Representatives in RLBs and ULBs (39.62 per cent), Female WPR (35.47 per cent) and low gender gap in Agricultural Wage Rate (Rs. 115). Kallal secures the third place in terms of GII as it also has zero MMR, and performs second best in the Share of Institutional Deliveries (99.90 per cent). It also performs better than the district level in terms of Female WPR (36.18 per cent) and Female WPR in Non-agricultural Sector (33.99 per cent), and has a low gender gap in Agricultural Wage Rate (Rs. 120). Singampunari block gets the fourth spot in terms of GII as it too has zero MMR, has above district level Female WPR (38.34 per cent), and low gender gap in terms of Female WRP in Non-agricultural Sector (11.1 per cent). Devakottai gets the fifth position in terms of the GII ranking as it also has zero MMR, and performs better than the district level in terms of Share of Female Children (49.01 per cent), Female Literacy Rate (75.46 per cent) and Share of Female Elected Representatives in RLBs and ULBs (39.28 per cent).

Sivaganga block gets the last position in terms of GII ranking as it has the highest MMR (260), below district level Share of Female Children (48.60 per cent), Share of Female Elected Representatives in RLBs and ULBs (34.42 per cent) and Female WPR

(32.31 per cent). It also has high gender gap in the Litearcy Rate (13.11 per cent), WPR (23.78 per cent), WPR in Non-agricultural Sector (16.99 per cent) and Agricultural Wage Rate (Rs. 148). Sakkottai block gets the second last position in terms of GII as it has the lowest Female WPR (20.48 per cent), second highest MMR (240) and below district level Share of Female Elected Representatives in RLBs and ULBs (37.83 per cent). It also has high gender gap in terms of WPR (37.19 per cent) and WPR in Non-agricultural Sector (12.43 per cent). Kalaiyarkovil stands third from the bottom in terms of GII as it has high MMR (120), and below district level Share of Institutional Deliveries (99.91 per cent), Share of Antenatal Coverage (99.31 per cent), Female Literacy Rate (67.22 per cent) and Share of Female Children (48.60 per cent). It also had high gender gap in terms of Literacy Rate (20.91 per cent), WPR (16.56 per cent), WPR in Non-agricultural Sector (13.47 per cent) and Agricultural Wage Rate (Rs. 153). Thiruppuvanam block stands fourth from the bottom in terms of GII ranking as it performs below the district level in terms of Share of Institutional Deliveries (99.90 per cent) and Female Literacy Rate (69.06 per cent). It also had high gender gap in terms of Literacy Rate (16.79 per cent), WPR (19.94 per cent), WPR in Non-agricultural Sector (12.87 per cent) and Agricultural Wage Rate (Rs. 142). Thiruppathur block stands fifth from the bottom in terms of GII ranking as it has the lowest Share of Female Elected Representatives in RLBs and ULBs (33.33 per cent), and below district level Share of Institutional Deliveries (99.63 per cent), Share of Female Children (48.94 per cent), Female WPR (32.85 per cent) and Female Agricultural Wage Rate (Rs. 126). It also has high gender gap in terms of Literacy Rate (17.28 per cent), Share of Elected Representatives in RLBs and ULBs (33.34 per cent), WPR (25.87 per cent), WPR in Non-agricultural Sector (14.47 per cent) and Agricultural Wage rate (Rs. 147).

Child Development Index

The development of the children in the society and economy is of great importance as it determines the future of the society and the economy. Development at the childhood level was considered to be a most important phase of human life and so, the quality of health, well-being, learning and behavior were more important in this phase of life than any other phase. This phase comprised 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 behavior. 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 took into account the Health and Education of children into consideration for its computation. In the Health parameter, under five mortality rate (U5MR), Juvenile Sex Ratio (0-6 years) and Percentage of Malnourished Children were taken as indicators. In the Education parameter, Primary and Secondary Gross Enrolment Ratios, children never enrolled in schools and Transition Rates of Primary to Upper-Primary and Upper-Primary to Secondary were taken as indicators. The top five blocks in terms of CDI rankings are Devakottai, Thiruppathur, Kallal, Sakkottai and S.Pudur with index values of 0.704, 0.673, 0.655, 0.630 and 0.592 respectively, while the bottom five blocks are Thiruppuvanam, Kalaiyarkovil, Sivaganga, Kannangudi and Manamadurai with index values of 0.288, 0.427, 0.454, 0.469 and 0.475 respectively.

Table 2.3 Top and Bottom Five Blocks in Child Development Index

Index	Top Five Blocks	Bottom Five Blocks
CDI	Devakottai (0.704)	Thiruppuvanam (0.288)
	Thiruppathur (0.673)	Kalaiyarkovil (0.427)
	Kallal (0.655)	Sivaganga (0.454)
	Sakkottai (0.630)	Kannangudi (0.469)
	S.Pudur (0.592)	Manamadurai (0.475)

The analysis of CDI of Sivaganga shows that Juvenile Sex Ratio and Percentage of Malnourished Children have significant impact on the ranks of the blocks. The Juvenile Sex Ratio of the blocks ranges from 922 female per 1000 male in Singampunari to 1005 in Ilaiyankudi block. Six blocks, viz., Thiruppuvanam, Ilaiyankudi, Kannangudi, Sakkottai, Devakottai and S.Pudur perform better than the district rate of 960 (see Appendix Table 2.7 and 2.8). In terms of Percentage of Malnourished Children, Kannangudi (3) performs better than the district level of 10.7, which is closely followed by four blocks, viz., Kalaiyarkovil, Devakottai, Thiruppathur and Kallal (all stand at 4 per cent).

The block-wise analysis of CDI reveals that Devakottai block secures the first position in terms of CDI ranking as it performs best in two indicators, viz., U5MR (1.8) and Children Never Enrolled in Schools (zero per cent). It also performs better than the district level in Juvenile Sex Ratio (961), Percentage of Malnourished Children (4), GER Primary (103.25 per cent) and Transition Rate from Upper Primary to Secondary (99.69 per cent). Thiruppathur block secures the second position in terms of CDI ranking as it performs the best in Children Never Enrolled in Schools (zero per cent) and it has below district level U5MR (2.6), low Percentage of Malnourished Children (4), above district level GER Primary (102.48 per cent), above district level GER Secondary (106.82 per cent) and above district level Transition Rate from Upper Primary to Secondary (99.93 per cent). Kallal block secures the third position in terms of CDI ranking as it performs below district level in U5MR (2.4), low Percentage of Malnourished Children (4), zero percentage of Children Never Enrolled in Schools, above district level Transition Rate from Primary to Upper Primary (99.30 per cent) and above district level Transition Rate from Upper Primary to Secondary (99.78 per cent). Sakkottai block secures the fourth position in terms of CDI ranking as it performs above district level Juvenile Sex Ratio (966), below district level Percentage of Malnourished Children (8), highest GER Secondary (107.16 per cent), zero Percentage of Children Never Enrolled in Schools, and above district level of Transition Rate from Upper Primary to Secondary (99.81 per cent). S.Pudur block secures the fifth position in terms of CDI ranking as it has above district level Juvenile Sex Ratio (961), highest GER Primary (103.74 per cent), above district level GER Secondary (106.78 per cent) and above district level Transition Rate from Primary to Upper Primary (99.46 per cent).

Thiruppuvanam block is placed in the last position of in terms of CDI ranking as it has performs above district level in terms of U5MR (3.3), has highest Percentage of Malnourished Children (21), below district level GER Primary (102.01 per cent), above district level Children Never Enrolled in Schools (0.002 per cent), below district level Transition Rate from Primary to Upper Primary (99.04 per cent) and above district level Transition Rate from Upper Primary to Secondary (99.67 per cent). Kalaiyarkovil block is placed in the second last position of in terms of CDI ranking as it has above district level U5MR (3.3), low Juvenile Sex Ratio (946), below district level GER Primary (102.10 per cent), below district level GER Secondary (106.46 per cent) and below district level Transition Rate from Upper Primary to Secondary (99.59 per cent). Sivaganga block is placed third from the bottom in terms of CDI ranking as it performs poorly in terms of all the three health indicators; it has above district level U5MR (3.4), below district level Juvenile Sex Ratio (946) and high Percentage of Malnourished Children (19). Kannangudi block is placed forth from the bottom in terms of CDI ranking as it has second lowest GER Primary (101.81 per cent), lowest GER Secondary (106.38 per cent) and lowest Transition Rate from Upper Primary to Secondary (99.19 per cent). Manamadurai block is placed fifth from the bottom in terms of CDI ranking as it has above district level of U5MR (3.3), below district level Juvenile Sex Ratio (954), below district level Percentage of Malnourished Children (10), below district level GER Primary (102.12 per cent), below district level GER Secondary (102.65 per cent) and lowest Transition Rate from Primary to Upper Primary (98.74 per cent). Overall, the Health indicators, where the variations were more among the blocks need to be addressed rather than the Education indicators.

Multidimensional Poverty Index

Multidimensional Poverty Index (MPI) was calculated considering three criteria, health, education and standard of living. The indicators of health are taken as IMR, high order birth rate and percentage of malnourished children. The indicators of education are taken as drop-outs in primary and secondary levels, while the indicators of standard of living were 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 was 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 basic important services such as access to drinking water or toilet facility, which in turn

would make the family vulnerable diseases. So, it was 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

The MPI of Sivaganga district ranges from 0.264 to 0.685. Sakkottai block has performed better by having a low index value of 0.264 and S.Pudur block has performed the least by having a high index value of 0.685. The top five better performing blocks are Sakkottai, Devakkottai, Ilayankudi, Manamadurai and Sivaganga with index values of 0.264, 0.309, 0.483, 0.486 and 0.497 respectively, whereas, the bottom five blocks are S.Pudur, Thiruppathur, Thiruppuvanam, Singampunari and Kallal with index values of 0.685, 0.617, 0.615, 0.578 and 0.564 respectively.

Table 2.4 Top and Bottom Five Blocks in Multidimentional Poverty Index

Index	Top Five Blocks	Bottom Five Blocks
MPI	Sakkottai (0.264)	S.Pudur (0.685)
	Devakottai (0.309)	Thiruppathur (0.617)
	Ilaiyankudi (0.483)	Thiruppuvanam (0.615)
	Manamadurai (0.486)	Singampunari (0.578)
	Sivaganga (0.497)	Kallal (0.564)

Analysing the variations in the indicators of MPI, indicators falling under the Standard of Living parameter have significant influence in determining the ranking of the blocks. Along with these indicators, Percentage of Malnourished Children exhibits substantial variations among the blocks. Indicators such as IMR, High Order Birth Rate, Dropout in Primary. Dropout in Secondary and Access to Electricity have low variations compared to other indicators among the blocks. The remaining five indicators, Access to

Cooking Fuel, Access to Toilet Facilities, Access to Drinking Water, Access to Pucca House and Percentage of Malnourished Children exhibit substantial variations as mentioned earlier and have been discussed earlier in the HDI and CDI sections in detail.

Moving on the block-wise analysis, Sakkottai block secures the first position of in terms of MPI ranking as it performs best in terms of Dropout in Secondary (0.41 per cent), Access to Cooking Fuel (50.77 per cent) and Access to Pucca House (90.20 per cent) (see Appendix Table 2.9 and 2.10). It also has below district level IMR (11.8), below district level High Order Birth Rate (7.2), below district level Percentage of Malnourished Children (8), above district level Access to Toilet Facility (68.80 per cent) and above district level Access to Electricity (95.53 per cent). Devakottai block secures the second position of in terms of MPI ranking as it has below district level IMR(10.8), lowest High Order Birth Rate (3.9), low Percentage of Malnourished Children (4), below district level Dropout in Primary (0.45 per cent), below district level Dropout in Secondary (0.47 per cent), above district level Access to Cooking Fuel (40.34 per cent), high Access to Toilet Facility (69.13 per cent), high Access to Pucca House (85 per cent) and above district level Access to Electricity (93.74 per cent). Ilaiyankudi block secures the third position in terms of MPI ranking as it has the lowest IMR (5.2), below district level High Order Birth Rate (6.4), low Dropout in Primary (0.36 per cent) and above district level Access to Drinking Water (93.56 per cent). Manamadurai block gets the fourth spot in terms of MPI ranking as it has below district level of High Order Birth Rate (6.6), below district level Percentage of Malnourished Children (10), below district level Dropout in Primary (0.35 per cent), below district level Dropout in Secondary (0.47 per cent) and above district level Access to Pucca House (82 per cent). Sivaganga block gets the fifth spot in terms of MPI ranking as it has below district level Dropout in Primary (0.41 per cent), below district level Dropout in Secondary (0.47 per cent), above district level Access to Toilet Facilities (60.41 per cent), above district level Access to Drinking Water (92.15 per cent) and High Access to Pucca House (89 per cent).

S.Pudur block is placed in the last position in terms of MPI ranking as it has high IMR (16.3), Highest High Order Birth Rate (18.6), above district level Percentage of Malnourished Children (13), second highest Dropout Secondary (0.71 per cent), low Access to Cooking Fuel (28.20 per cent), below district level Access to Toilet Facility (44.26 per cent), low Access to Pucca House (68.09 per cent) and lowest Access to Electricity (89.11 per cent). Thiruppathur block is placed in the second last position of in terms of MPI ranking as it has above district level High Order Birth Rate (10.9), highest

Dropout in Primary (0.66 per cent), highest Dropout in Secondary (0.72 per cent), low Access to Cooking Fuel (28.19 per cent), below district level Access to Pucca House (73.60 per cent) and lowest Access to Electricity (89.11 per cent). Thiruppuvanam block is placed third from the bottom in terms of MPI ranking as it has very high IMR (19.4), above district level High Order Birth Rate (9.7), highest Percentage of Malnourished Children (21), second lowest Access to Cooking Fuel (25.51 per cent) and below district level Access to Toilet Facility (49.28 per cent). Singampunari block is placed fourth from the bottom in terms of MPI as it has high IMR (16.1), high High Order Birth Rate (13.8), high Percentage of Malnourished Children (15), above district level of Dropout in Primary (0.62 per cent), below district level Access to Cooking Fuel (28.19 per cent) and lowest Access to Electricity (89.11 per cent). Kallal block is placed fifth from the bottom in terms of MPI as it has above district level IMR (13.6), above district level Dropout in Primary (0.54 per cent), below district level Access to Cooking Fuel (30.34 per cent), below district level Access to Toilet Facility (38.66 per cent), below district level Access to Drinking Water (87.87 per cent) and below district level Access to Pucca House (67.55 per cent).Overall, in the Standard of Living parameter, the issues pertaining to access to cooking fuel, toilet and pucca house need to be addressed in all the blocks of Sivaganga district.

Table 2.5 Indices and Ranks

Blocks	HDI		GII		CDI		MPI	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Sivaganga	0.521	10	0.091	12	0.454	10	0.497	5
Kalaiyarkovil	0.509	11	0.073	10	0.427	11	0.532	7
Manamadurai	0.526	9	0.008	2	0.475	8	0.486	4
Thiruppuvanam	0.536	8	0.058	9	0.288	12	0.615	10
Ilaiyankudi	0.697	2	0.030	7	0.515	6	0.483	3
Devakottai	0.829	1	0.020	5	0.704	1	0.309	2
Kannangudi	0.559	6	0.026	6	0.469	9	0.525	6
Sakkottai	0.665	4	0.074	11	0.630	4	0.264	1
Thiruppathur	0.677	3	0.049	8	0.673	2	0.617	11
Singampunari	0.557	7	0.016	4	0.491	7	0.578	9
S.Pudur	0.508	12	0.006	1	0.592	5	0.685	12
Kallal	0.577	5	0.016	3	0.655	3	0.564	8

Conclusion

The analysis of the HDI reveals that Devakottai secures the first rank with an index value of 0.829 indicating better development and departs from all other blocks in the district. All other blocks can be classified under the moderately developed blocks with HDI values in the range 0.500 – 0.697. Ilaiyankudi, Thiruppathur and Sakkottai blocks fall in the range 0.601 – 0.700 and can be classified as better developed within the moderately developed blocks. Some blocks that were expected to secure better ranks fell back and the cause could be attributed to health indicators that have a strong influence on the HDI ranking. The much urbanized blocks seem to perform poorly in terms of these indicators. One reason may be better reporting in such blocks compared to the rural based blocks. The rural based blocks are able to secure top positions due to better health indicators, but these blocks perform poorly in the other indicators such as education and standard of living. The Standard of Living indicators particularly are at low levels in the rural based blocks, which need immediate attention. Especially, Access to Cooking Fuel and Access to Toilet Facility seem to be on the lower side in all the blocks. The district level statistics itself in this regard is not very encouraging.

The analysis of the GII reveals that rural based blocks perform much better than their more urbanized counterparts with S.Pudur block securing the top rank. This is as expected. The rural blocks would have more female WPR and lower gender gap in many indicators. But, what is to be kept in mind is that the differences among blocks in this regard has been strongly influenced by a single indicator, which is MMR; in terms of all other indicators there seems to be not much variation among the blocks. On the whole, improvement in female achievements needs more emphasis in terms of basic infrastructural facilities, especially health. Hence, in general the Sivaganga administration may identify strategies to particularly improve the MMR, which can be seen to be able to strongly influence the GII rankings. All the blocks figuring in the top five spots in terms of GII ranking have zero MMR, on the other hand the bottom five blocks have very high MMR. The Female WPR also needs to be improved in many blocks and strategies to reduce the gender gap in wages should be formulated. Often women do not participate in the labour force due their social conditioning and the kind of support systems

available for their participation. The State may have to function within such limitations and accordingly concentrate on areas where it would be possible to influence through its intervention and reduce the gender inequality. In addition to prioritizing to address the existence of relatively higher MMR, which will have spiraling effects on the other achievements including Health and Empowerment indicators such as representation of women in local bodies. It was a vicious cycle, where poverty contributes to poor health of women, which further influences the MMR, and poor health affects the child health in terms of malnourishment, which in turn would affect the IMR and U5MR. Hence, it is necessary to improve the Health and Education indicators taking them as priority areas, which will in turn influence the achievements with respect to other indicators. Such a focus will ultimately improve the GII values.

The CDI analysis suggests that the top six blocks get index values 0.500 – 0.799 and are classified under moderately developed blocks in this respect; they are Devakottai, Thiruppathur, Kallal, Sakkottai, S.Pudur and Ilaiyankudi. The remaining six blocks fall under the less developed category, amongst them Thiruppuvanam needs special attention as it gets very low index value of 0.288. Here also the health indicators seem to play a vital role in determining the CDI ranking.

The analysis of the MPI reveals that Sakkottai block secures the first rank in this regard with a very low index value of 0.264 followed by Devakottai (0.309). All other blocks had index values ranging between 0.483 – 0.685. Here, the Standard of Living indicators seem to have more influence on the ranking subject to district level or above district level performance in the Health indicators. All the blocks with higher values of MPI need be address issues related to basic infrastructure like cooking fuel and toilets. The health infrastructure also needs to be spruced-up in the district in all blocks. So, all the blocks except Sakkottai and Devakottai need to make huge effort in this direction.

From the discussions regarding HDI, GII, CDI, and MPI it can be known that the outcome is mixed. Blocks which secured better ranks in terms of one index have not been able to secure the same kind of positions in the other indices with the exception of Devakottai and to some extent Sakkottai. The reason seems to be the mixed achievement of the blocks in various indicators. None of the blocks are able to perform consistently in all the indicators under different parameters. Blocks that perform well in terms of the health parameter perform poorly in terms of the education or standard of living parameters.

CHAPTER 3

EMPLOYMENT, INCOME AND POVERTY

Chapter - 3

Employment, Income and Poverty

Introduction

Unemployment, low per capita income and poverty still remain some of the biggest issues in the Indian economy in general and to the States in particular. These concepts and issues are intertwined, complex and very difficult to define objectively. In many developing countries, poverty is associated with certain characteristics including poor governance, pro-rich economic policies, 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. Economic growth is expected to reduce the intensity of poverty and provides relief to the poor, via creation of jobs, improvement in the revenue and creation of infrastructure to enable the poor to have easy access to information and opportunities. This is why, in recent years, growth oriented reforms have been brought in.

The purpose of this chapter is to know the present status of one of the latest additions to the list of the districts in Tamil Nadu, viz., Sivaganga. There are 12 blocks with almost similar agro-climatic characteristics. Manamadurai and Thiruppuvanam may look slightly different because they are adjacent to the river Vaigai, which is not a perennial river, but water flows in the river for about three months during rainy season, and as a result, water table and soil types are more suitable for agriculture in general and tree crops in particular. Other blocks are largely dry with one or two spells of rain during October, November months. These aspects certainly play a vital role in determining the employment opportunities, income and poverty levels of the blocks under study.

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. There are at least three aspects of employment; i) production aspect, ii) income aspect, and iii) 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.

So, one should be intelligent enough to first, accept the fact that just increase in workforce participation rate alone would not result in reduction of incidence of poverty. What is seen today is the expansion of growthless jobs, meaning low wage rate per hour. Jobs in private sector are known for their exploitative characters. It is always seen that returns to Capatilists for outways those of the working class. Availability of a larger labour force depresses wage rate. Lower labour availability would lower wages as Capital intensive technology is opted. Under such circumstances, the government elected by people needs, to focues on creating an environment for providing remunerative job opportunities to the people.

Size of the Workforce and Work Participation Rate

Table 3.1 shows the size of the workforce in Sivaganga district in the years 2001 and 2011. Table 3.1, shows the percentage shares of different categories of workers of each block in the district which were analysed to see the differences if any. Sivaganga block population was around 11-12 per cent of the district population and the shares in the different categories of workers in the block were also around 11-12 per cent. Thus, this block did not differ, very much. In Kalayarkovil, the share of main workers was substantially greater than the population share of this block. In Manamadurai, the share of main workers for the year 2011 was much less (6.40 per cent) than its population share (7.72 per cent) for the year 2011. The other blocks also slightly differed from their population shares.

Table 3.1 Total Workers and Non-Workers (in numbers)

Sl. No	Blocks/District	Total Worker		Main Workers		Marginal Workers		Non-Workers		Total Population	
		2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
1	Sivaganga	58,069	70,884	43,469	56,488	14,600	14,396	76,281	89,461	1,34,350	1,60,345
2	Kalayarkovil	46,674	55,604	36,866	40,105	9,808	15,499	49,651	53,485	96,325	1,09,089
3	Manamadurai	38,345	47,155	26,736	31,301	11,609	15,854	57,190	56,200	95,535	1,03,355
4	Thiruppuvanam	46,378	56,537	36,935	44,577	9,443	11,960	55,882	62,391	1,02,260	1,18,928
5	Ilaiyankudi	51,017	57,485	40,908	44,727	10,029	12,758	51,884	55,664	1,02,721	1,13,149
6	Devakottai	46,435	59,205	40,091	40,576	6,344	18,629	60,070	65,971	1,06,505	1,25,176
7	Kannankudi	17,508	18,356	16,135	13,189	1,373	5,167	12,364	14,099	29,872	32,455
8	Sakkottai	71,129	96,881	60,193	76,900	10,936	19,981	1,24,455	1,51,307	1,95,584	2,48,188
9	Thiruppathur	42,173	52,300	32,013	36,836	10,160	15,464	55,606	61,882	97,779	1,14,182
10	Singampunari	34,278	38,477	28,455	27,442	5,823	11,035	36,509	40,369	70,787	78,846
11	S.Pudur	21,236	25,512	16,818	20,092	4,418	5,420	18,656	21,939	39,892	47,451
12	Kallal	38,858	41,775	26,296	28,869	12,562	12,906	43,279	46,162	82,137	87,937
	District	5,11,936	620171	4,04,751	4,61,102	1,07,105	1,59,069	6,41,827	7,18,930	11,53,747	13,39,101

Source: Census 2001 and 2011

The district's percentage increase in total workers was higher than the percentage increase in population. Of the total workers, the main worker population was about three times of the marginal worker population. Block-wise, Kannangudi followed by Devakottai and Kalayarkovil topped the list of the main workers' proportion. Among the blocks, Sakkottai registered the highest percentage increase in total workers followed by Devakottai by 27.50 per cent. The least percentage increase was observed in Kannangudi with 4.84 per cent, which was followed by Kallal with 7.51 per cent. Regarding the main workers, Kannangudi registered a sharp decline of main workers by 18.26 per cent between 2001 and 2011. Singampunari was the other block, which had a declining trend of main workers. Sivaganga block topped the table with 29.95 per cent increase of main workers (followed by Sakkottai 27.76 per cent), but there was a decline in the marginal workers. In the context of marginal workers, Kannangudi block registers a 276.33 per

cent of increase, followed by Devakottai with 193.65 per cent. The wide range of percentage change was found among the blocks in the category of marginal workers, i.e., it ranged from -104 per cent to 276.33 per cent. Manamadurai block's percentage change was negative for non-worker, which showed that the employment had an upward trend.

Work Participation Rate

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 Percentage of Worker Participation Rate

Rural/Urban	2001	2011
Rural		
Male	57.3	59.7
Female	41.8	42.2
Persons	49.4	50.9
Urban		
Male	52.1	55.9
Female	12.1	16.1
Persons	32.0	36.0
Total		
Male	55.8	58.5
Female	33.5	34.1
Persons	44.4	46.3
Source: Census 2001 and 2011		

Table 3.2 gives the details of the work participation rates of Sivaganga district. The workforce participation rates had slightly increased in all aspects, but the rate of increase was high in urban area compared to rural and total. The difference in the rate of growth of female WPR in urban and rural areas was higher than the difference of male and total WPRs. The percentage change of male population was three times greater than the percentage change of male WPR between 2001 and 2011. Whereas, the percentage of female population was 12 times greater than the percentage of female WPR. It is interesting to note that the percentage change of female WPR in urban area was greater than the percentage change of urban female population; Regarding both (rural and urban), the percentage change of population was three times greater than the male and total WPRs, while, it was nearly seven times for female.

The WPR is explained by various factors. The degree of urbanization is one of the important determinants, for it influences the employment and education opportunities available to the people. Availability of employment opportunities will have positive impact on WPR, while availability of educational services will have negative impact on WPR, because the former attracts more youth for going towards employment. The extent of urbanization (that influence people to take up job and to earn money) was slightly larger in the following blocks. They are: Sivaganga, Manamadurai, Devakottai and Thiruppathur. In Manamadurai WPR was much lower (43 for male and 23 for female), while Kannangudi reported the highest proportion of male workers (63 per cent) and also female workers (54 per cent). The reason for this may be due to certain factors like: i) the dependency ratio was very low; ii) larger proportion of workers were doing growthless jobs; and iii) education was relegated and drive for earning was stronger.

In terms of block-wise variations, the details of workers for the year 2011 showed slight improvement in the figures, barring Devakottai where the jump was very high. Comparison of male-female WPR showed the same trend similar to the averages of Tamil Nadu and India. Female WPR was lower than the male WPR, the differences were about 18 percentage points. Among the blocks, Kannangudi had the highest male and female WPR for both 2001 and 2011. But, what was to be noted was that the male WPR increased from 62.59 in 2001 to 66.00 in 2011, while the female WPR decreased from 54.97 in 2001 to 46.92 in 2011. It can be observed that the male WPR had increased in all the blocks for the period from 2001 to 2011, but the female WPR had increased in some blocks during the same period and decreased in the others. The female WPR had increased for Kalayarkovil, Manamadurai, Thiruppuvanam, Ilaiyankudi, Sakkottai,

Thiruppathur and Kallal and it had decreased in Devakkotai, Kannangudi, Singampunari and S.Pudur. The WPR for the whole district showed a marginal increase in female WPR from 33.84 in 2001 to 34.21 in 2011 and an increase in male WPR from 54.88 in 2001 to 58.54 in 2011.

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, Kannangudi block stoods first in Work Participation Rate in Sivaganga district. So, Puthurani village of Puthurani village panchayat, was randomly selected from Kannangudi block for this case study. The village comprised of 50 households out of which 46 household belonged to BC and MBC communities, while four households belonged to SC community. Most of the male members of the households worked abroad and came once in one or two years, and their families had migrated to nearby towns. The people who had migrated to the nearby towns visited the village during weekends and/or festivals. The people living the village comprised mostly of the aged, who worked as cultivators and agricultural labourers. Agricultural activities were carried out for about three months during a year. MGNREGS provided some relief from unemployment during the remaining days, mainly to women. Some of the men were occupied in goat rearing, while others preferred to be unemployed. Young women, whoever were residing in the village went to the nearby towns, such as Devakottai to work as sales persons in shops, which provided wages to the tune of Rs. 100-150 a day.

Overall, the economic condition of the village seemed to be relatively better as most of the young earning members in households were gainfully employed elsewhere and brought in the economic resources whilst visiting the village. Though economic condition of the people was relatively better, people did not like to live in this village. This was so because, the basic infrastructure facilities like drinking water and bus transport were not available in this village. So, they were in need of basic infrastructure to stay back in that village.

Box 3.1 Child Labour Decline in District

Sivaganga district has worked hard to achieve the status of child labour-free district in the State. The Labour Department in the district had launched the process of making the district child labour-free last year and achieved the action plan for child labour elimination by holding series of meetings, sensitising the people and conducting field inspections. The State government prescribed guidelines for the action plan. The Labour Department has prepared and submitted a 2,000 page report, detailing the steps taken to fulfil the guidelines and achieve the action plan. Heads of all the 445 village panchayats in the district had given written resolutions asserting that child labour was not observed in their villages. Chambers of commerce, shops and commercial establishments and Inspector of Industries had also reported about the absence of child labour in their respective areas. Neither registration of case involving child labour nor rehabilitation is reported in the district. Members of the Task Force and officials of the District Labour Department make surprise visits to shops, brick kilns, hotels and factories and found no child labour. Besides, self-help groups, those engaged in Magalir Ammaippu and Pudhu Vazhvu Thittam, and the staff of the Integrated Child Development Scheme, Health and Child Welfare departments were involved in admitting children below 14 years and dropouts to bridge schools. The officials and volunteers are also engaged in counseling parents who approached business/trade firms seeking jobs for their children. The parents are guided to government departments concerned in order to avail financial assistance for educating their wards under various schemes.

Sectoral Composition of Workers and Output

The Table 3.3 (a) and (b), provide the total worker population and the classification of the total workers in the various blocks of Sivaganga district. The Tables reveal that the total worker population increased in the district as well as in all the blocks between 2001 and 2011. The total workers were classified into cultivators, agricultural labourers, household workers and others. In the cultivators' category, only Singampunari showed an increase over the period 2001 to 2011. Another block registering an increase in the cultivators' category was Devakottai with 6.31 per cent for female. All the remaining blocks recorded a decline in this category. This was converse to the physical features of the district, i.e., agrarian blocks recorded a decline in the percentage of cultivators, whereas relatively industrial oriented block recorded an increase in the percentage of cultivators. This can be understood by looking at the agricultural land holdings data. The agricultural land holdings data reveal that the percentage of marginal

land holdings has increased in Singampunari block between the reference years 2001 and 2011 and so, the percentage of cultivators had also increased in the block.

Table 3.3(a) Composition of Workers in Major Sector

Sl. No	Blocks/District	Total workers (in no.)			
		2001		2011	
		Male	Female	Male	Female
1	Sivaganga	36,092	21,977	44,987	25,897
2	Kalayarkovil	26,270	20,404	31,690	23,914
3	Manamadurai	20,428	10,803	28,824	18,331
4	Thiruppuvanam	29,408	16,970	34,547	21,990
5	Ilaiyankudi	28,207	22,620	33,129	24,356
6	Devkottai	21,545	24,890	38,501	20,704
7	Kannankudi	8,940	8,568	10,832	7,524
8	Sakkottai	53,259	17,840	71,410	25,471
9	Thiruppathur	26,637	15,536	33,571	18,729
10	Singampunari	20,028	14,250	23,421	15,056
11	S.Pudur	11,404	9,832	14,795	10,717
12	Kallal	22,364	16,494	25,598	16,177
	District	3,04,582	2,00,184	3,91,305	2,28,866
Source: Census 2011					

In the case of agricultural labourers, all the 12 blocks recorded an increase in 2011 over 2001 except Manamadurai (male only). Here also, Singampunari recorded the highest increase in the percentage share of cultivators from 2001 to 2011, male cultivators (32.56 per cent) and female cultivators (36.88 per cent). The lowest increase was recorded by Sakkottai with 3.23 per cent for male and 5.22 per cent for female. This block being urban oriented, recorded small increases in the percentage of agricultural labourer category.

In the other category, the district total for male had come down between 2001 and 2011. Among the blocks, except three blocks, viz., Manamadurai, Devakottai and Kannangudi, all the other blocks recorded a decline of in the other category, whereas in the case of female, except Manamadurai, all other blocks registered a decline between 2001 and 2011. Singampunari block recorded the highest fall of 48.94 per cent for male

and 47.79 per cent for female. This also partially helped to understand the increase in the agricultural labourers in this block.

Table 3.3(b) Composition of Workers in Major Sector (in percentage)

Sl. No	Blocks/District	Cultivators				Agri. Labourers				Hotels, Transport, Service				Others			
		2001		2011		2001		2011		2001		2011		2001		2011	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	Sivaganga	26.42	25.64	17.60	13.52	13.77	21.23	29.21	50.27	1.64	2.62	1.52	2.67	59.81	53.13	51.66	33.54
2	Kalayarkovil	51.45	44.31	34.68	32.22	13.35	17.06	33.60	49.87	1.35	1.01	1.28	1.74	35.20	38.63	30.44	16.17
3	Manamadurai	28.05	51.97	23.89	16.33	26.75	19.28	25.50	44.02	2.12	3.67	1.90	3.74	45.20	28.75	48.71	35.91
4	Thiruppuvanam	28.86	21.58	14.54	9.20	21.07	27.73	37.45	55.67	1.14	1.46	1.06	1.86	50.07	50.70	46.95	33.27
5	Ilaiyankudi	46.87	46.47	39.41	43.33	12.87	17.26	24.07	42.78	1.79	1.89	2.76	3.34	40.25	36.27	33.76	10.56
6	Devkottai	51.37	33.11	31.26	39.42	14.48	14.76	17.49	31.66	1.55	1.23	1.38	3.09	34.15	52.13	49.87	25.84
7	Kannankudi	72.06	68.92	56.54	49.57	13.38	15.70	24.96	38.56	0.53	1.53	1.62	3.19	14.56	15.38	16.89	8.68
8	Sakkottai	9.82	13.75	7.13	10.81	5.19	11.05	8.42	16.27	2.02	4.46	2.11	4.93	84.98	75.20	82.31	67.99
9	Thiruppathur	30.05	31.04	21.05	17.02	11.41	16.56	28.76	47.26	1.45	2.08	1.94	2.70	58.54	52.40	48.25	33.02
10	Singampunari	4.01	7.26	18.05	14.06	7.31	17.86	39.56	54.74	1.04	2.16	2.65	4.12	88.68	74.88	39.74	27.09
11	S.Pudur	41.42	32.69	23.70	17.60	28.76	34.91	46.95	59.88	1.46	1.95	1.35	6.59	29.82	32.40	28.01	15.94
12	Kallal	28.30	27.09	25.24	24.64	13.29	16.04	26.24	41.37	1.66	1.68	2.03	3.41	58.41	56.87	46.49	30.57
	District	30.57	32.27	22.59	22.98	13.66	18.50	25.58	43.47	1.58	2.09	1.82	3.29	55.78	49.23	50.01	30.26

Source: Census 2011

The sector wise Gross District Domestic Product (GDDP) for Sivaganga district would provide a glimpse into the contribution by each sector to the output. The contributions of Primary, Secondary and Tertiary GDDPs were Rs.41,811 lakhs, Rs. 74,171 lakhs and Rs. 1,92,630 lakhs in 2004-2005 respectively, which have substantially increased to Rs. 66,075 lakhs, Rs. 1,36,380 lakhs and Rs. 4,00,531 lakhs in 2011-12 respectively. There has been an average annual growth in the GDDP in the district during the above period to the tune of 10.13 per cent with marginal variations in the growth rates among the sectors.

Registration and Placement

The Employment Exchanges in various districts of the State are 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 job-seekers registered over years and their placement has been provided in Table 3.4.

Table 3.4 Registration and Placement (in no.)

Sl. No	Year	Registration	Placement
1	2007	40,110	281
2	2008	42,188	218
3	2009	50,388	334
4	2010	25,781	243
5	2011	37,713	242
6	2012	19,318	412
7	2013	18,906	363
8	2014	32,643	204
Source: Employment Office, Sivaganga.			

It can be inferred from the Table 3.4 that the registration of job-seekers had been oscillating over the period 2007 to 2014. It increased from 40,110 in 2007 to 50,388 in 2009, but fell to 25,781 in 2010 and again picked up to 37,713 in 2011. Later it dropped to 18,906 in 2013 and increased to 32,643 in 2014. The placement also had varying trend of the same period. It was 281 in 2007, then increased to 334 in 2009 and fell to 242 in 2011. Later it increased to 412 in 2012 and dropped to 204 in 2014. As a percentage of total jobseekers registered, the number placed was very small at around one per cent on an average. So, certainly something has to be done to improve this situation.

Other than registration and placement, the Sivaganga district Employment Exchange was engaged in many training activities and implementing Government schemes like Unemployment Relief Scheme, Job Mela, Study Circle, etc. The State Government provided an annual assistance of Rs 60,000/- for running the Unemployment Relief Scheme in which registered unemployed youth below 40 years of age (5 years relaxation for SC candidates) (five years past registration) got some unemployment allowance per month for three years (below SSLC-Rs.100, SSLC –

Rs.150, HSC – Rs.200, Degree – Rs.300). The differently abled candidates also got benefit from this scheme (one year waiting period and double the amount in each educational category). The Employment office in Sivaganga district also conducts coaching classes for competitive exams under the auspices of the study circle. In the recent years, 350 candidates had cleared different competitive exams benefiting from the study circle scheme.

The District Employment office, in order to provide a platform for jobseeking candidates and private sector companies, conducts three 'Job Melas' per year. This programme has been providing many potential candidates with private sector jobs. Apart from this the District Employment office also conducts Career Exhibition in the colleges to spread awareness regarding career opportunities to students. As already mentioned, in terms of placement, the District Employment office is able to provide jobs only to a handful of jobseekers. The jobs being provided are also at a very low level. Higher level jobs are not provided through this office as such positions are filled up through competitive exams. Hence, the Employment office may be provided with more Funds to carry out more training programmes, which may empower the youth to secure jobs through competition.

Box 3.2 MGNREGA - Employment and Income

A majority of the poor in rural areas mainly depend on the wages earned through unskilled, casual and manual labour. Inadequate labour demand or unpredictable crisis adversely impacts their employment opportunities. Moreover, the unorganized sector that provides employment to the unskilled rural poor, is not able to provide sufficient employment or remuneration to all. In this regard the Mahatma Gandhi National Rural Employment Guarantee Act is an attempt to provide job for the rural illiterate and aged persons with some wage income. Even though the wage rate of Rs.132 per day for 100 days per person in a family works out to be less than seven rupees per person per day, it should be understood that some interventions to counter the tragedy of the rural poor is certainly better than no intervention at all. And moreover, the people appear to be satisfied with this amount, instead of going without any income. Large proportion of households have got job through MGNREGA in Kallal (96.64 per cent) and S.Pudur (89.97 per cent) blocks. This proportion is very low in Sakkottai (23.21 per cent) and Thiruppathur (28.22 per cent). The district level in this regard was 50.93 per cent in 2013-14 and two other blocks, viz., Manamadurai and Singampunari. The percentage of households provided with employment is very low in these blocks as these blocks have much urban areas and MGNREGA does not apply to urban areas. 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 MGREGA. 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 is quite remarkable and the women are able to bargain for higher wages, thanks to MGNREGA.

Income

Per Capita Income

Table 3.5 Per Capita Income at Constant (2004-05) Prices (in Rs.)

Year	District	State
2004-05	26,325	33,998
2005-06	31,133	38,435
2006-07	32,676	43,941
2007-08	34,839	46,293
2008-09	37,585	48,473
2009-10	40,545	53,359
2010-11	46,267	59,967
2011-12	50,466	63,996
Average Annual Growth Rate (per cent)	9.83	9.52

Source: Department of Economics and Statistics, Tamil Nadu

Table 3.5 presents the per capita income of Sivaganga district for the period 2004-05 to 2011-12. The per capita income of Sivaganga district was Rs.26,325 in 2004-05, which grew by an average annual growth rate of 9.83 per cent and stood at Rs.50,466 in 2011-12. At the same time, the State's per capita income was higher at Rs. 33,998 in 2004-05 and Rs. 63,996 in 2011-12, and grew at an average annual growth rate of 9.52 per cent. So, in absolute per capita income, the State was way ahead of the district, while in the average annual growth rate of per capita income, the district was marginally ahead of the State during the period 2004-05 to 2011-12. But, the district lags behind many districts in Tamil Nadu in economic performance and it is indicative of the existing backwardness of this district in both agriculture and industry.

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 levels at the block level has to be analysed in the district.

Table 3.6 Trends in Poverty Level

Sl. No	Blocks/District	Total No. of HHs	Total No.of BPL HHs	Percentage of BPL HHs
1	Sivaganga	40,743	9,795	24.04
2	Kalaiyarkovil	28,284	10,528	37.22
3	Manamadurai	26,519	8,658	32.65
4	Thiruppuvanam	29,584	8,518	28.79
5	Ilaiyankudi	29,397	9,967	33.90
6	Devakottai	31,270	7,725	24.70
7	Kannangudi	7,950	3,144	39.55
8	Sakkottai	62,830	6,311	10.04
9	Thiruppathur	28,665	7,066	24.65
10	Singampunari	19,563	6,280	32.10
11	S.Pudur	10,938	5,905	53.99
12	Kallal	23,195	6,784	29.25
	District	3,38,938	90,681	26.75

Source: DRDA, Sivaganga (2013-14)

Table 3.6 reveals the trends in poverty level of Sivaganga district during the year 2013-14. The details of households (HHs) below poverty line (BPL) are given in the table. It can be seen the district level was 26.75 per cent during the year 2013-14. Among the blocks, S.Pudur registered the highest percentage of BPL HHs with 53.99 followed by Kannangudi with 39.55 and Kalaiyarkovil with 41.38. This trend was quite alarming. All these blocks recorded very high rates of poverty compared to the district level. The lowest percentage of BPL HHs were found in Sakkottai with 10.04 and this was the only block to have much lower percentage of BPL HHs compared to the district level. However, three blocks, viz., Sivaganga, Thiruppathur and Devakottai had lower percentage of BPL HHs compared to the district level. All other blocks had higher percentage of BPL HHs compared to the district level. The composition of the workforce also did not provide much help in explaining these trends. On the whole, the many blocks in the district had high incidence of poverty and something needed to be done urgently in this regard.

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 and in its present form, it roughly distributes about 10 to 12 per cent of the annual food grains production or it meets 12 to 15 per cent of the individual food requirements in the country. The targeting system is the main reason why the PDS is often criticized as it fails 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/District	HH Provided Family Cards
1	Sivaganga	48,719
2	Kalayarkovil	44,905
3	Manamadurai	31,657
4	Thiruppuvanam	31,045
5	Ilaiyankudi	34,874
6	Devkottai	41,863
7	Kannankudi	8,514
8	Sakkottai	95,755
9	Thiruppathur	30,915
10	Singampunari	18,519
11	S.Pudur	11,573
12	Kallal	24,451
	District	4,22,790

Source: Statistical Handbook, Sivaganga (2013-14)

Table 3.7 explains the block-wise family card holders of Sivaganga district for the year 2013-14. In the district, the total number of family cards was 4,22,790 in the year 2013-14, which includes OAP cards, Police cards, Agathikal (Refugee) cards, None (Honorary) cards. It was 24.74 per cent higher than the total number of households in the district. Sakkottai block alone had 22.65 per cent of total family cards in the district, followed by Sivaganga block with 11.52 per cent. In absolute numbers also Sakkottai had

the highest number of family cards (95,755) followed by Sivaganga block with 48,719 family cards. In terms of the percentage of family cards to total households in the blocks, Kalayarkovil ranked first with 158.76 per cent followed by Sakkottai with 152.40 per cent. Except Singampunari, in all other blocks, the number of family cards was higher than the total number of households in the district. The number of family cards was higher than the total number of total households due to the reason that a house is shared by more than one family in urban areas. This may be due to two reasons, firstly, one house may have more than one household or family and the second, one household or family may have more than one family card. Whatever the reason may be, more than 100 per cent family cards does not mean each and every household has a family card. There may still be households without family cards in the blocks, which have more than 100 per cent family cards. The Government has taken several measures to weed out duplication in family cards. Along with these measures, proper accounting of households is also needed in order to get the true picture regarding the family cards.

Land Use Pattern and Agriculture

Block-wise details regarding the different categories of lands for two points of time (2001-02 and 2013-14, Appendix Tables 3.1 (a and b)) reveal that in all the blocks, there was no change in the area under forest. In majority of the blocks, the area of barren and uncultivable land had slightly shrunk between the reference years. Maximum decline in this regard can be noticed in Manamadurai block from 1077 ha. in 2001-02 to 81.7 ha. in 2013-14. Except three blocks, viz., Kalayarkovil, Manamadurai and Kannankudi, in all the blocks, the area put to non-agriculture purpose has widened. The highest rise in this regard can be noticed in Sivaganga and Sakkottai blocks, which have greater urban characteristics. Some marginal differences across the blocks were found in the cultivable waste land. Except five blocks, viz., Sivaganga, Kalayarkovil, Thiruppuvanam, Kannangudi and Thiruppathur, a decline in the area under cultivable waste land can be noticed. Kannangudi and Kalayarkovil blocks record an increase in the permanent pastures and grazing land, whereas Thiruppathur, Singampunari and S.Pudur recorded a marginal increase, while in the remaining blocks a decline can be observed. Land area under miscellaneous crops and groves had shrunk in almost all the blocks, but very sharply in Manamadurai block. Current fallow land area recorded decrease in Thiruppuvanam, Kannangudi and Kallal blocks over the reference years, while other blocks recorded increase in this respect. Reduction was also found in area under other fallow lands between the reference years in all blocks except Sivaganga,

Devakottai, Thiruppathur, S.Pudur and Singampunari. In terms of the net area sown, four blocks recorded an increase, viz., Kalayarkovil, Devakottai, Kannangudi and S.Pudur. The same blocks recorded an in increase in terms of the gross cropped area also. Thus, small changes were observed among the blocks in the district between the reference years.

The analysis of cropping intensity of Sivaganga district (see Appendix Table 3.2), revealed that the net cropped area and the gross cropped area were the same in 2001-02, i.e., cropping intensity was one. In 2013-14 the cropping intensity recorded a negligible increase and stood at 1.002. During the period 2001-02 to 2013-14 the gross cropped area of Sivaganga district declined by 11,436.48 ha. and the net cropped area declined by 11,654.57 ha. and stood at 98,160.52 ha. and 97,942.34 ha. respectively in 2013-14. Devakottai and Kannangudi blocks registered some amount of increase in the gross cropped area and net cropped area during the reference period followed by Kalaiyarkovil (small) and S.Pudur (marginal), while all other blocks registered fall in the gross cropped area and net cropped area.

In terms of irrigation intensity (see Appendix Table 3.3), also the same picture as of cropping intensity was reflected. All the blocks had an irrigation intensity of 1.0 in both the reference years, except Sivaganga block in 2001-02 (1.24). Over the period 2001-02 to 2013-14 Sivaganga district recorded a decline in the gross irrigated area and net irrigated area and stood at 65,060.05 ha. and 64,842.50 ha. respectively in 2013-14. All the blocks except Kannangudi registered a fall in the gross and net irrigated areas.

Conclusion

In this chapter, it can be seen that there was an average annual growth in the GDDP in the district during the above period to the tune of 10.13 per cent with marginal variations in the growth rates among the sectors. In terms of the per capita income, the district lags behind many districts in Tamil Nadu in economic performance and it is indicative of the existing backwardness of this district in both agriculture and industry.

Wide percentage change was found among the blocks in the category of marginal workers, i.e., it ranged from -104 per cent to 276.33 per cent. Manamadurai block's percentage change was negative for non-worker, which showed that the employment had an upward trend. The main worker population had increased over the decade (2001 to

2011) in almost all the blocks of Sivaganga district except, Kannangudi and Singampunari, two of backward blocks of the district.

The size of the work force had increased over the years with much variation among the blocks, while the work force participation rate remains somewhat the same between 2001 and 2011. Availability of employment opportunities will have positive impact on WPR, while availability of educational services will have negative impact on WPR, because the former attracts more youth for going towards employment. The extent of urbanization (that influence people to take up job and to earn money) was slightly larger in Sivaganga, Manamadurai, Devakottai and Thiruppathur blocks. In Manamadurai, WPR was much lower (43 for male and 23 for female), while Kannangudi reported the highest proportion of male workers (63 per cent) and also female workers (54 per cent). The reason for this may be due to certain factors like: i) the dependency ratio was very low; ii) larger proportion of workers were doing growth less jobs; and iii) education was relegated and the drive for earning was stronger. The land holding pattern was tilted towards the upper castes, while the SCs remained casual labourers.

As a percentage of total jobseekers registered, the number placed was very small at around one per cent on an average. So, certainly something has to be done to improve this situation. District Employment office is able to provide jobs only to a handful of jobseekers. The jobs being provided are also at a very low level. Higher level jobs are not provided through this office as such positions are filled up through competitive exams. Hence, the Employment office may be provided with more funds to carry out much more training programmes, which may empower the youth to secure jobs through competition.

The most important impact of the MGNREGA has been on rural wages, which have seen the daylight in the past six to seven years. The increase has not only been in nominal terms, but also in real terms, which is a heartening fact in terms of the benefits trickling down to the poor rural masses. The wage increase for female labourers is quite remarkable and the women are able to bargain for higher wages, thanks to MGNREGA. The poverty in the district seemed to be widespread and pervasive among all the blocks, with the exception of a couple of blocks, which is a matter of concern. Except Sivaganga, Thiruppathur and Devakottai all other blocks had higher percentage of BPL HHs compared to the district level. The composition of the workforce also did not provide much help in explaining these trends. On the whole, many blocks in the district had high incidence of poverty and there is need to do something urgently in this regard.

The number of family cards was higher than the total number of householdsdue to the reason that a house is shared by more than one family in urban areas. There may still be households without family cards in the blocks, which have more than 100 per cent family cards. The Government has taken several measures to weed out duplication in family cards. Along with these measures, proper accounting of households is also needed in order to get the true picture regarding family cards. If these things go well, nearly 25 per cent of the PDS products would be saved and simultaneously the inclusion of needy would automatically take place.

A new scheme with camp based approach may be through Kaushal Kendras to be held in every block to give information about skill training options, outline possible career paths and their income generation potential. Exploring skills among youth in villages, to create awareness about skill acquisition and certification through live demonstration of skills supplemented by communication packages via local social media will bear fruits in increasing employment elasticity rates in blocks of the district. So, development in this district requires some big-push, a large public sector investment, which has been absent since the beginning.

CHAPTER 4

DEMOGRAPHY, HEALTH AND NUTRITION

Chapter - 4

Demography, Health and Nutrition

Introduction

Public Investment in social sector, i.e., health and education could mainly enhance everyone's potential and might 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 the 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 play an important role in the process of development in any area. The hyper growth of population, 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 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 will analyze the changes in demography, health and nutritional pattern in the district and the way the Government has tried to improve the health status of the people.

Demographic Trends and Health Indicators

Population and Demographic Transition

Recently a growing literature has evolved, which contradicts the commonly accepted view regarding population 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 impact 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.

Table 4.1 provides population details of Sivaganga district for the years 2001 and 2011. According to the table, Sivaganga had a population of 11, 53,747 in 2001 and it increased to 13, 39,101 in 2011 with a decennial growth of 16.1 per cent. As a percentage of the State's population, Sivaganga district population was 1.9 per cent in 2001 and remained the same in 2011 also. Among the blocks, Sakkottai registered the highest increase of 19.95 per cent in 2001 and 18.53 per cent in 2011 respectively. In most of the other blocks population growth between 2001 and 2011 was 8-12 per cent. Kallal and S.Pudur blocks registered the lowest growth rates of population between the reference years.

Table 4.1 Demographic Profiles

Sl. No	Blocks/District /State	Population (in no.)		Density (per sq km)		SC Pop per cent		ST pop per cent	
		2001	2011	2001	2011	2001	2011	2001	2011
1	Sivaganga	1,34,350	1,60,345	301	360	12.00	13.14	0.01	0.02
2	Kalaiyarkovil	96,325	1,09,089	166	188.47	17.00	18.06	0.12	0.01
3	Manamadurai	95,535	1,03,355	273.7	295.8	17.00	23.12	0.12	0.04
4	Thiruppuvanam	1,02,260	1,18,928	312	363.69	20.52	21.61	0.14	0.15
5	Ilaiyankudi	1,02,721	1,13,149	257	270	20.20	22.18	0.01	0.00
6	Devakottai	1,06,505	1,25,176	269	339.5	18.23	17.99	0.01	0.21
7	Kannangudi	29,872	32,455	136	147.34	37.00	36.06	0.07	0.03
8	Sakkottai	1,95,584	2,48,188	561	712.65	10.54	11.26	0.22	0.06
9	Thiruppathur	97,779	1,14,182	283.24	330.43	14.94	14.59	0.02	0.01
10	Singampunari	70,787	78,846	312	348	14.00	13.82	0.02	0.00
11	S.Pudur	39,892	47,451	249	269.19	17.20	17.76	0.01	0.00
12	Kallal	82,137	87,937	206	220.39	16.14	16.00	0.05	0.01
	District	11,53,747	13,39,101	277.16	320.46	17.90	18.80	0.07	0.05
	State	6,24,05,679	7,21,47,030	480	555	19.00	20.01	1.04	1.10

Source: Census 2001 and 2011, Sivaganga

Population density of the district had been recorded in 2001 as 277 and it increased to 320 in 2011 but was much lower than the level of State, which was 480 in 2001 and 555 in 2011. Among blocks Sakkottai block had the highest density of 561 and 713 in 2001 and 2011 respectively and it was much higher than the district and State levels. The reason for this may be due to the fact that Sakkottai is a major urban centre with five town panchayats. Among the rest of the blocks, five blocks had higher population density than the district level, which are Sivaganga, Thiruppuvanam, Devakkottai, Thiruppathur and Singampurnai. The lowest population density can be seen in Kannangudi block with 147.34, which was less than half of the district level. The block was comparatively rural in nature and hence, the lower density.

SC population of Sivaganga district increased from 17.90 per cent to 18.80 per cent between 2001 and 2011. This increase was similar to the increase of the State from 19.00 per cent to 20.01 per cent between 2001 and 2011. Among the blocks, the highest increase in SC population was registered in Manamadurai block. Kannangudi block

comprised the highest percentage of SC population in both the reference years, but also recorded the highest decline from 37.0 per cent in 2001 to 36.06 per cent in 2011. Sakkottai block had recorded the lowest SC population in both the reference years (10.54 per cent in 2001 and 11.26 per cent in 2011). In the district, five blocks registered a declining population trend in population growth during 2001-11.

ST population of Sivaganga comprised a meager amount. It was just 0.07 per cent of total population of the district in 2001, which declined to 0.05 per cent in 2011. But, in the State there was an increase in ST population from 1.04 per cent to 1.10 per cent. Among the blocks Devakottai block registered an increase from 0.01per cent to 0.21 per cent between 2011 and 2011, while there was a decline in Ilaiyankudi, Singampunari and S.Pudur blocks. Only 3 out of 12 blocks registered an increase in the share of ST population and in the rest of the blocks ST population share declined.

Crude Birth Rate and Crude Death Rate

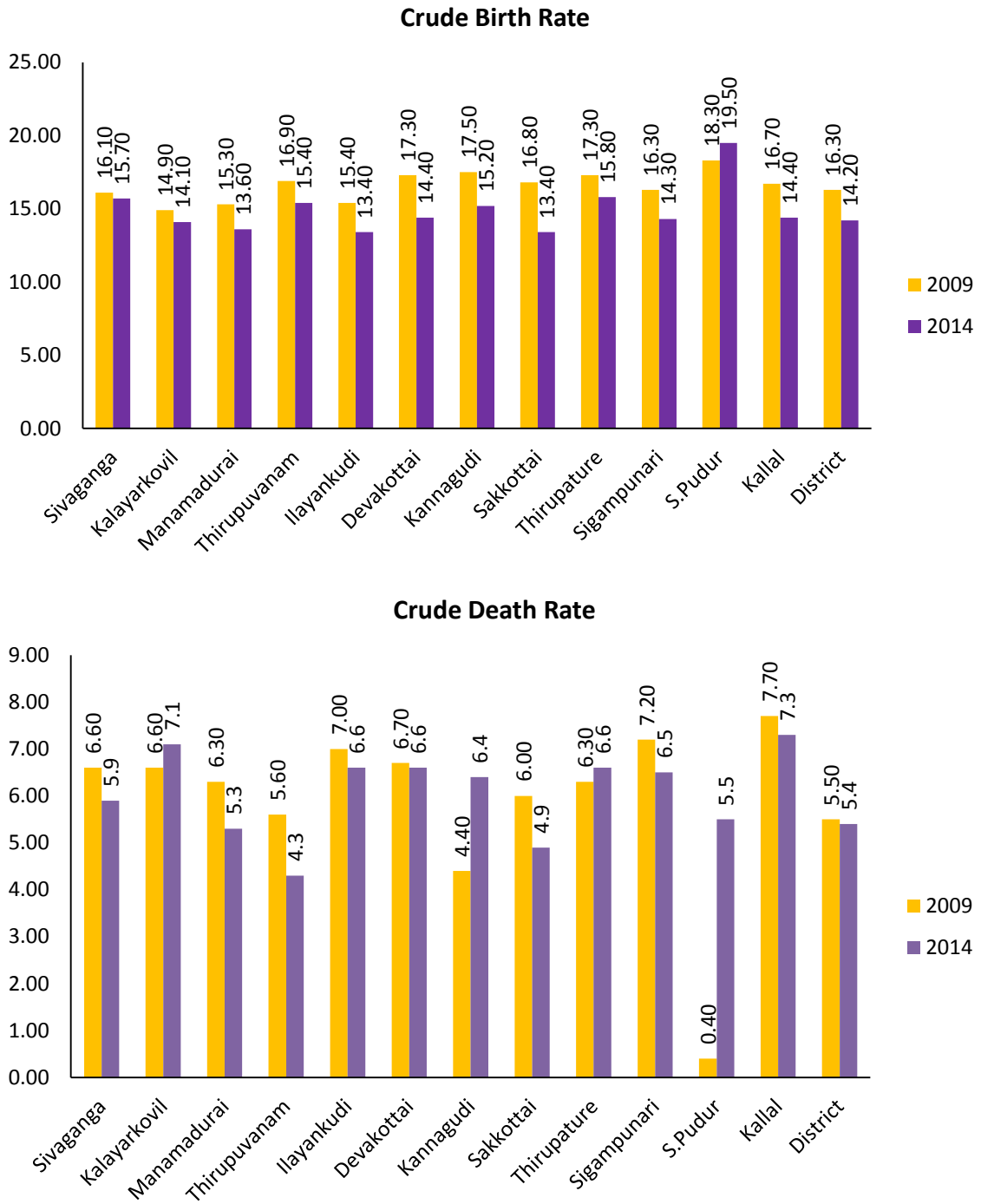
Achievements and gaps can be assessed by observing the trends for various health indicators like Life Expectancy at Birth, Infant Mortality Rate, Crude Birth Rate, Crude Death Rate, Total Fertility Rate, Maternal Mortality Rate, and Morbidity Patterns in any block, District, State or Country.

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 (mid-year); it is often expressed as the number of live births per 1,000 of the population per year. Crude Birth Rate is frequently used in population geography and demography. It is also used as an indicator in population studies. The Crude Birth Rate could of concern for particular countries that may be experiencing population decline, or for national governments who are worried about population growth rates that are higher than their country can sustain. 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 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 depicts the trends of CBR and CDR in the various blocks of Sivaganga district during the years 2009 and 2014 (see Appendix Table 4.1). It can be observed that CBR had declined between the years 2009 and 2014 from 16.3 to 14.2. In the year 2014, the CBR of the district was lower than the State level of 15.9. Among the blocks, CBR

was the highest in S.Pudur block (19.5) during 2014 and it is the only block to have recorded an increase between the reference years. The lowest CBR was recorded in Sakkottai and Ilaiyankudi blocks (13.4), closely followed by Manamadurai block (13.6). Other than these three blocks Kalayarkovil block had CBR lower than the district level.

Figure 4.1 Trends in CBR and CDR



Source: Health Department, Sivaganga

The CDR in Sivaganga district declined marginally from 5.5 in 2009 to 5.4 in 2014. Among the blocks, it was observed that except Kalayarkovil, Kannangudi, Thiruppathur and S.Pudur, all others recorded marginal fall in the CDR between the reference years. The lowest CDR was registered in Thiruppuvanam block (4.3) during 2014, followed by Sakkottai (4.9), while the highest CDR was registered in Kallal block (7.3), closely followed by Kalayarkovil (7.1) during the same year.

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 is an important indicator of social development. Sex ratio is defined as the number of females per 1000 males in the population. It is expressed as the number of females per 1000 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.

Tamil Nadu State sex ratio increased from 987 to 995 for the years 2001 and 2011 which was much better than the ratio of the country. Sex ratio in the district during 2001 was 1039, which was higher than the ratio of the State (987). But the district sex ratio declined by 3.51 per cent in 2011 as compared to 2001. Most of the blocks in the district registered a negative sex ratio for the years 2001 and 2011 except Manamadurai and Sivaganga which increased from 989 to 1000 and 982 to 999 respectively. Notable decline among blocks was seen in Kannangudi and Devakottai of 10.36 and 9.25 percentages during the reference years. In Sakkottai block, sex ratio remained the same (1,004) during the reference years. In overall terms, the sex ratio was satisfactory in the district.

Table 4.2 Sex Ratio

Sl. No	Blocks/District /State	General		Per cent of Increase	SC		Per cent of Increase or Decrease
		2001	2011		2001	2011	
1	Sivaganga	982	999	1.73	995	993	-0.2
2	Kalaiyarkovil	1,078	1,046	2.97	1,062	1,027	-3.30
3	Manamadurai	989	1,000	1.11	982	997	1.53
4	Thiruppuvanam	990	975	-1.52	1,004	993	-1.1
5	Ilaiyankudi	1,079	1,023	-5.19	984	1,013	2.95
6	Devakottai	1,081	981	-9.25	1,099	981	-10.74
7	Kannangudi	1,091	978	-10.36	1,063	981	-7.71
8	Sakkottai	1,004	1,004	0.00	1,024	1,031	0.68
9	Thiruppathur	1,051	997	-5.14	1,029	974	-5.34
10	Singampunari	990	992	0.2	1,075	1,038	-3.44
11	S.Pudur	1,035	982	-5.12	1,046	983	-6.02
12	Kallal	1,095	1,034	-5.57	1,134	1,046	-7.76
	District	1,039	1,001	-3.51	1,041	1,005	-3.37
	State	987	996	0.92	999	1,004	0.5

Source: Census 2001 and 2011

The SC sex ratio of Sivaganga district declined from 1041 in 2001 to 1005 in 2011, (a decline of 3.37 per cent) but was still above the prescribed level of 1000 and also above the State level figures. Most of the blocks registered a decline in the sex ratio among SC population during the reference years. The highest decline of 10.74 per cent was registered in block Devakottai as it declined from 1099 in 2001 to 981 in 2011. Among all blocks of the district Kallal block was having the highest SC sex ratio of 1134 in 2001 which declined to 1046 in 2011 but was still higher than all other blocks. In this block there was a decline of 7.76 per cent in SC sex ratio throughout the decade. The sex ratio below the desired level was registered as 981 in Devakottai and Kannangudi blocks, during 2011.

ST sex ratio of the district increased to 15.11 per cent during the decade of 2001 to 2011. It was recorded as 843 in 2001 & 850 in 2011 which was much lower than the normal level. The highest increase of 215 per cent from 333 in 2001 to 1050 in 2011 was recorded in Sivaganga block. There was a negative decline of 50.07 per cent in sex ratio in ST's block S.Pudur from 667 to 333 during the reference year, which was much lower than normal sex ratio. In overall terms the sex ratio ST population in the district had increased but the attention was required in Singampunari, S.Pudur and Kaliyarkovil blocks where sex ratio among ST population had declined in a terrific rate.

Table 4.2 showed the sex ratio of the district from 2001-11 block-wise and its percentile increase and decrease during the reference period. Table 4.2 represents the sex ratio among SC, ST and General population during 2001-11 and percentage increase and decrease.

Child Sex Ratio

The Child or Juvenile 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.

Child Sex Ratio takes into note the children who are in the age group of 0-6 years. The ratio in India is defined as the number of females per 1000 males in the same age-group of the population in given area. Changes in Child Sex Ratio reflects underlying socio-economic and cultural patterns of the society, especially its attitude towards the girl child which derives the society towards the early scanning of fetus through scientific techniques like ultra-sonography 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 Sivaganga 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 960 in 2011, which was higher than the State level. Among the blocks, Ilaiyankudi block had the highest child sex ratio of 1,005. The child sex ratio was 922 for Singampunari block, which was the lowest among all the blocks of the district. The child sex ratio in Sivaganga block was 946 in 2011, which was less than the sex ratio in the district. Among the 12 blocks, 6 blocks registered a higher sex ratio than the district level. The lower level of child sex ratio in certain blocks reflected low girl

preference in the blocks and increased level of private medical practices where the chances of female feticide existed, 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 no valid proofs of female infanticide were available. The child sex ratio in the district has decreased and needs to be paid attention.

Table 4.3 Child Sex Ratio

Sl. No	Blocks/District /State	Population in the Age Group of 0-6(2011)		Sex-Ratio
		Male	Female	
1	Sivaganga	8,961	8,474	946
2	Kalayarkovil	5,577	5,274	946
3	Manamadurai	5,377	5,129	954
4	Thiruppuvanam	6,851	6,637	969
5	Ilaiyankudi	5,318	5,343	1,005
6	Devkottai	6,005	5,771	961
7	Kannankudi	1,535	1,506	981
8	Sakkottai	12,775	12,343	966
9	Thiruppathur	6,092	5,839	958
10	Singampunari	4,267	3,935	922
11	S.Pudur	2,822	2,711	961
12	Kallal	4,442	4,251	957
	District	70,022	67,213	960
	State	38,20,276	36,03,556	943
Source: Integrated Child Development Scheme, Sivaganga				

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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 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	64.0*	70.0*	68.8	72.3	4.8	2.3
2	State	64.8^	67.1^	71.8	75.8	7.0	8.7

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

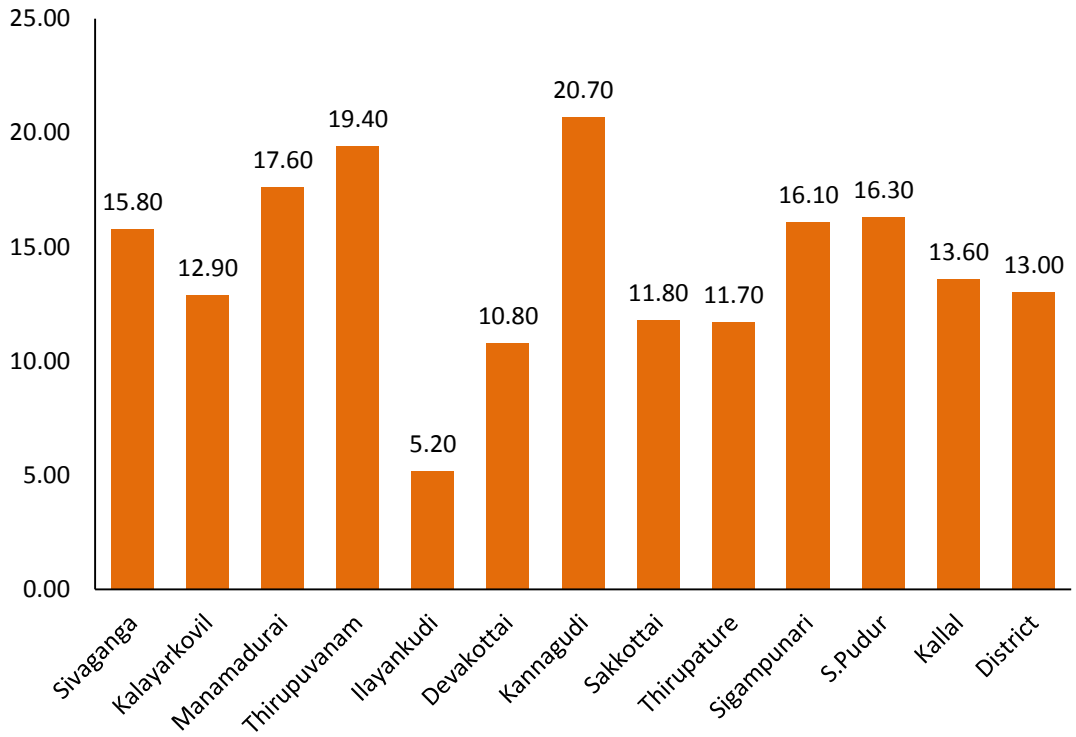
Table 4.4 represents the ratios of life expectancy among male and female in the district and the State during 2001-02 and 2013-14. Life expectancy of district has improved from 64.0 years to 68.8 years among male between the reference years. There was an improvement of 4.8 years during the reference years. It also improved among female from 70.0 years to 72.3 years during the same period, which represents an improvement of 2.3 years. The combined life expectancy at birth of the district improved from 67.0 years to 70.4 years between the reference years. In Tamil Nadu life expectancy among male and female improved in the course of 2001-02 to 2013-14. Among male there was an improvement of 7.0 years during the reference years, while among female the improvement was better than male at 8.7 years during the reference years. The district level female life expectancy was higher than that of the State level (67.1 years) during 2001-02, but dropped below the State level (75.8 years) during 2013-14. The district level male life expectancy was lower than the State level during both the reference years, but the gap widened during 2013-14. The combined life expectancy of the State increased from 65.95 years to 73.8yearsduring the reference years. Comparing the district and State life expectancy figures, the district falls below the State level in all respects.

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 low.

Figure 4.2 Infant Mortality Rate – Block-Wise



Source: Health Department, Sivaganga (2013-14)

Figure 4.2 depicts the IMR in the various blocks of Sivaganga district for the year 2013-14 (see Appendix Table 4.2). The district IMR was 13 in the year 2013-14, which was much lower than the State level of 21. Among the blocks, Ilayankudi recorded the lowest IMR of 5.2, while the highest IMR was recorded in Kannangudi (20.7) followed by Thiruppuvanam (19.4). Other than Ilaiyankudi, four blocks, viz., Devakottai, Sakkottai, Thiruppathur and Kalaiyarkovil had IMR below the district level. All the other blocks had IMR higher than the district level. Respiratory infections, water-borne diseases, poor immunity of neonates 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. The prevailing rate of infant mortality was a symptom of the inadequate care given to the child during pregnancy and after childbirth. The quality of antenatal and post-natal care influenced the survival of infants. This was reflected in the high incidence of pre-mature births as being the significant cause of infant mortality in many blocks of the district. Low birth weight including premature birth was one of the major causes for infant mortality as this increased the infant's receptiveness towards infection. So, infrastructural facilities in the GHs, PHCs and HSCs need to be strengthened and the health care personnel need relevant training with regard to antenatal and post-natal care. Providing training alone is not sufficient, appropriate transport facilities also need to be provided to the health care personnel in order to enable them to reach remote places keeping in mind the dispersed population in many blocks of the district.

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 while pregnancy or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the 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 could be prevented.

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 (especially young women) will not only face the mortality risks when they are adults, but they are also at risk now. 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 information and seek sexual and reproductive health services would enable them to make the right health decisions need to be emphasized.

Table 4.5 Maternal Mortality Ratio

Sl.No	Blocks/District /State	2013-14
1	Sivaganga	260
2	Kalayarkovil	120
3	Manamadurai	0
4	Thiruppuvanam	60
5	Ilaiyankudi	0
6	Devakottai	0
7	Kannagudi	0
8	Sakkottai	240
9	Thiruppathur	60
10	Sigampunari	0
11	S.Pudur	0
12	Kallal	0
	District	80
	State	68
Source: Health Department, Sivaganga		

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Table 4.5 provides the MMR of the blocks of Sivaganga district for the year 2013-14. The district MMR was 80, which was quite high compared to the State level of 68. The MMR seemed to pose some sort of trouble. The reason for the MMR being higher in the district than the State may be due to two reasons one is the high number of anemic mothers and two, poor antenatal coverage, but these two were found to have improved, i.e., the percentage of anemic mothers in the district was 2.8 in 2011 and ante-natal coverage in the district was 101 per cent in 2011. As the two obvious reasons have been addressed, the other one that is not addressed is the connectivity between remote villages and hamlets to health services due to poor roads and transport facilities. The density of the population per sq. km. increased to 320.46 in 2011 from 277.16 in 2001. This may be due to migration towards urban areas for better livelihood opportunities and better living conditions. But, migration for better livelihood opportunities does not always coincide with better living conditions, in fact it may be the other way round and may lead to serious health consequences, such as working in polluted industries. This can

also affect the MMR. Even though institutional deliveries recorded 100 per cent, the access to such facilities at the proper time was of crucial importance.

Among the blocks, seven blocks in the district registered zero MMR in 2013-14, while two blocks, viz., Sivaganga and Sakkottai registered the highest MMR among the blocks with 260 and 240 respectively in 2013-14. Other than these two blocks Kalaiyarkovil block registered with high MMR of 120. This may be due to some intervention by the respective authorities or the absence of it or zero level can be observed in many blocks during 2013-14 due to the referral to higher level of care. But, nothing much can be said regarding the blocks in terms of the trend of MMR, as these seemed to be random occurrences and moreover the methodology of MMR uses maternal mortality per one lakh live births, which was not even close to the number of pregnant women in a block in a particular year. 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.

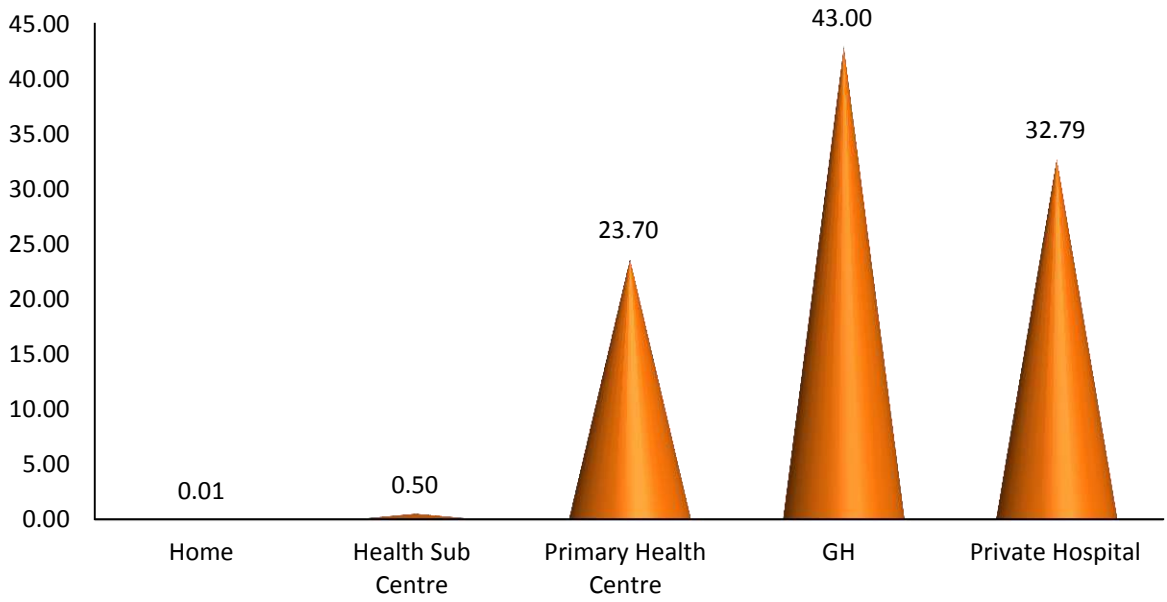
Place of Delivery

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 are equipped with medical facilities and well experienced doctors and other medical staff. There are 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 Private Hospitals. Despite this, in some places home deliveries have been reported to betaking place because of the distance factor. In Tamil Nadu PHC's and HSC's have been operative in every district.

Figure 4.3 presents the share of deliveries that took place at home, HSC, PHC, government hospital and private hospital in the district during 2013-14 (see Appendix Table 4.3). The share of deliveries which took place at home was negligible at 0.01 per cent. The share of deliveries was highest in GH (43 per cent) followed by private hospital (32.79 per cent) and PHC (23.7 per cent), while the share of deliveries that took place in SHC was 0.5 per cent. In total, the share of institutional deliveries in the district was 99.99 per cent in 2013-14, which is a remarkable achievement and equals the State level.

Among the blocks, in terms of home delivery, five blocks, viz., Sivaganga, Manamadurai, Ilaiyankudi, Devakottai and Singampunari recorded zero home deliveries, while there were one or two home deliveries in the other blocks. Five blocks, viz., Kalaiyarkovil, Manamadurai, Sakkottai, Thiruppathur and S.Pudur reported a few deliveries at SHC.

Figure 4.3 Percentage of Institutional Delivery



Source: Health Department, Sivaganga (2013-14)

In terms of the share of deliveries in PHCs, S.Pudur block registered the highest share of 46.05 per cent followed by Thiruppuvanam (44.80 per cent), while the least was registered in Ilaiyankudi (15 per cent) followed by Thiruppathur (18.02 per cent). In terms of the share of deliveries in GH, Manamadurai topped the chart with 52.7 per cent followed by Sivagangai (48.6 per cent), while the least shares were recorded by S.Pudur (23.3 per cent) followed by Kannangudi (28.4 per cent). The highest share of deliveries in private hospital was recorded by Kannangudi with 46.2 per cent followed by Singampunari (40.60 per cent) and Devakottai (40.20 per cent), while the least share were recorded by Thiruppuvanam (13.20 per cent) and Kalaiyarkovil (22.10 per cent) and Manamadurai (22.20 per cent). In terms of the share of total institutional deliveries, three blocks, viz., Sivaganga, Ilaiyankudi and Sakkottai recorded 100 per cent in this respect, while the lowest was registered in S.Pudur (99.17 per cent), Singampunari (99.19 per cent) and Devakottai (99.28 per cent).

Still Birth Rate

The definition recommended by WHO for international comparison referred that a baby born with no signs of life at or after 28 weeks' gestation can be termed as still birth. In calculating the still birth rate, the number of still births has been divided by the total number of births and then multiplied by 1,000. Sometimes (mainly for the sake of comparison), the number of still births is calculated per 1,000 live births only. The major causes of still birth 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	2007	2008	2009	2010	2011	2012	2013	2014
1	Sivaganga	12.70	13.50	15.30	14.60	13.50	12.8	9.5	10.5
2	Kalayarkovil	10.40	9.80	9.20	11.20	8.70	10.6	7.6	10.6
3	Manamadurai	11.60	14.70	15.20	10.10	9.30	10.6	11.8	6.9
4	Thiruppuvanam	13.80	14.10	13.40	18.80	12.70	9.3	13.3	12.5
5	Ilaiyankudi	1.20	9.90	10.60	11.20	9.80	14.7	13.8	16.1
6	Devakottai	9.20	8.30	7.30	10.90	11.50	10.4	9.0	6.5
7	Kannagudi	15.30	15.60	9.60	9.70	13.80	18.3	14.5	6.7
8	Sakkottai	14.10	14.50	11.60	9.90	7.20	10.2	5.3	7.5
9	Thiruppatur	13.20	13.80	9.90	6.00	9.70	15.1	5.0	8.3
10	Sigampunari	10.50	11.50	11.30	13.60	7.50	5.9	6.8	5.4
11	S.Pudur	1.80	14.10	3.90	15.00	11.20	18.1	16.3	18.3
12	Kallal	14.40	15.30	12.40	13.10	11.40	9.5	10.6	10.5
	District	11.60	11.80	10.20	11.10	11.10	11.00	8.7	9.7

Source: Health Department, Sivaganga

The data for still birth rate has been provided in the Table 4.6 for various blocks of Sivaganga district during the period 2007 to 2014. Still birth rate in the district was 11.6in the year 2007 and declined to 9.7 in the year 2014. The highest still birth rate was registered in Kannagudi (15.3), Kallal (14.4) and Sakkottai (14.1) blocks in 2007, while in 2014S.Pudur registered the highest still birth rate of 18.3 followed by Ilaiyankudi (16.1). The lowest still birth rate was recorded by Ilaiyankudi (1.2) in 2007 followed by S.Pudur

(1.8), while the lowest still birth rate in the year 2014 was recorded by Singampunari (5.4) followed by Devakottai (6.5). There are variations in all the blocks over the reference period, however comparing 2007 and 2014, three blocks, viz., Kalaiyarkovil, Ilaiyankudi and S.Pudur, recorded an increase in the still birth rate between the aforesaid years. And in the year 2014, six blocks, viz., Sivaganga, Kalaiyarkovil, Thiruppuvanam, Ilaiyankudi, S.Pudur and Kallal had still birth rate higher than the district level. So, These blocks may need special attention and monitoring with regard to the occurrence of still births.

Immunization

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by 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 a health maintenance activity which helped in improving the health status of children at later stages of development. Immunization is particularly done for children below the age of five, so that their immune system would fight against the diseases like polio, ear infections, respiratory infections diarrheal infections, etc. The best way found 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 the reduction of some severe diseases.

Immunization is a proven tool for controlling and eliminating life-threatening infectious diseases. It is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations. It has clearly defined target groups; it can be delivered effectively through outreach activities; and vaccination does not require any major lifestyle change. It was a sign of good health education among the people of the district that they had 100 percentor more children immunized in the blocks except Kannangudi, which had recorded 99 per cent in this respect (Appendix Table 4.4). Kallal block topped the board with 120 per cent immunization, while the other blocks ranged from 100 per cent to 105 per cent. It can also be said that the health department had put its efforts to achieve the target of 100 per cent since 2011 onwards and also that parents are much keen in proper health of their children in the district.

Female Infanticide

Female infanticide refers to the killing of newborn female child 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 advancements in technologies like ultra-sonography have complicated this issue by helping the parents to identify the gender of the fetus at an 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, preference for boys was prevalent in the district, but there were no official records of female infanticide. Though unofficial sources reveal that feticide was present in the district.

Nutritional Status

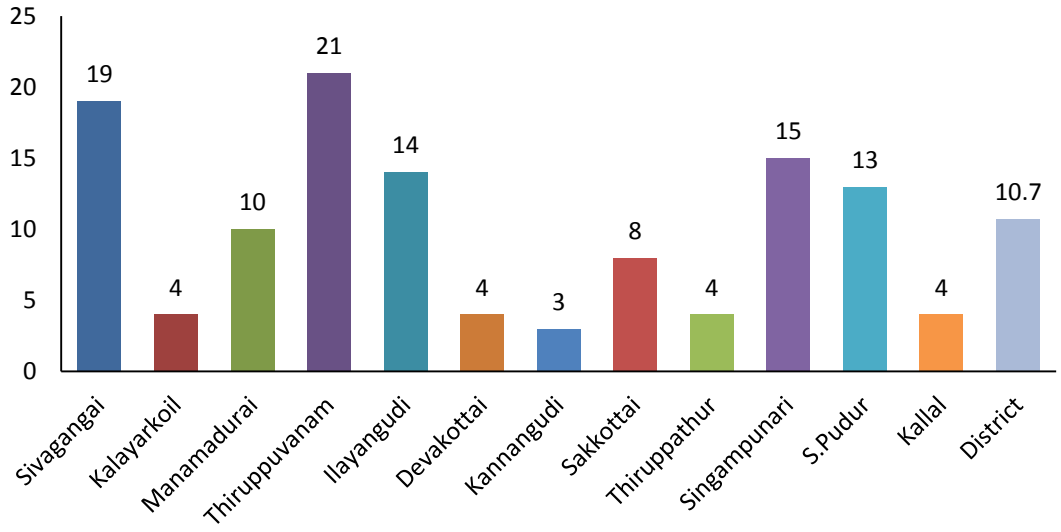
Nutrition level and Trend

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, recurrent infection, 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 in the 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 centers in the villages have 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 year) (Percentage of Underweight Children)



Source: ICDS, Sivaganga (2013-14)

Figure 4.4 represents the nutritional status of children within the age of 0-5 in the various blocks of Sivaganga district indicating the levels of malnutrition during 2013-14. The Figure shows that the malnourishment in the district ranges from three per cent to 21 per cent in the year 2013-14, with a district level of 10.70 per cent. Six blocks, viz., Kalayarkovil, Devakottai,Kannangudi, Sakkottai, Thiruppathur and Kallal recorded lower rates of malnourishment than the district level among children in the age group 0 -5 years during the years 2013-14, while the remaining seven blocks registered higher rates than the district level in this respect. The lowest rate of malnourishment among children in the age group 0 – 5 years was recorded in Kannangudi block (3 per cent), while the highest was recorded in Thiruppuvanam block (21 per cent) followed by Sivaganga (19 per cent). Several blocks in the district seem to have 10 to 20 per cent malnutrition levels, which needs to be addressed through better dietary supplements at their door step.

Case Study: Access to AnganwadiCenters

The ICDS was launched on 1st May, 2003, in the district and was one of the most important and unique programme in the district for early childhood care, better nutrition and overall social welfare of the children, juveniles and women. It also took care of the pregnant women during pre and post-delivery periods. The ICDS provided 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.

S.Pudhur block with a total number of 69 Anganwadi Centres out of which 47 were Main Centres and 22 were Mini Centres was selected for the study in the district. The block was chosen due to lower attendance of children in Anganwadi Centres. The causes for lower attendance in the centers was analysed through field visit to some of the Anganwadi Centers in the block at random. Personal interviews were conducted with the local women and the staff members in the Anganwadi Centres. It was found that the total number of children registered within the age group 0-5 years was 3,687. The total number of staff in the centres was 105 out of which 65 were Anganwadi workers and 40 were Anganwadi helpers.

From the field visit in the selected Centres, the reason for low attendance in the Anganwadi Centres was found to the distance between the habitations of people and the Anganwadi Centres. The habitations in the block were much scattered and the parents were not able to take their children to Anganwadi Centers on a daily basis. The transaction cost involved was much higher in terms of time, cost and risk. The women expressed that they would have to forgo the wages of a day's work if they were to take their children to the Anganwadi Centre and so, they preferred to visit the Centre occasionally. This is a genuine concern and we need to look into the alternative methods of reaching the children, but the food provided by ICDS could not be properly utilized by the children who need it for better health. The Anganwadi workers who occasionally visit the houses of the children for check-ups and vaccination could not visit on a regular basis due to lack of transport facilities. But, for improving the health and basic educational status of the children in the block it is necessary for children to attend the Anganwadi Centre on a regular basis. So, it is suggested that intervention in this regard could be provision of two-wheelers to the Anganwadi workers, so that they would be in position to reach the houses of people in far away places on a regular basis.

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 much acute putting both the mother and child at a risk. The most important cause of anaemia during pregnancy is inadequate dietary intake of iron. Hence, in this regard, the Reproductive and Child Health Programme in India aimed 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 Provision of IFA Tablets

Sl.No	Blocks/District	Per cent of Women took IFA Tablets	Per cent of Children took IFA Tablets	Per cent of AdosolentGirls took IFA Tablets
1	Sivaganga	91	58	68
2	Kalayarkovil	104	70	78
3	Manamadurai	87	68	99
4	Thiruppuvanam	118	55	94
5	Ilaiyankudi	82	78	100
6	Devakottai	120	55	100
7	Kannagudi	113	45	99
8	Sakkottai	80	45	100
9	Thirupature	118	60	87
10	Sigampunari	107	54	97
11	S.Pudur	110	86	43
12	Kallal	79	58	96
	District Total	97	58	84

Source: Health Department, Sivaganga (2013-14)

Table 4.7 represents the provision of IFA tablets during 2013-14 among three categories of population in the various blocks of Sivaganga district. In Sivaganga district 97 per cent of women took IFA tablets during the year 2013-14. Among blocks, Devakottai recorded the highest percentage of women who took IFA tablets with 120, followed by Thiruppuvanam and Thiruppathur (118 and 113 respectively), and while the lowest in this respect was Kallal with 79 closely followed by Sakkottai (80). In terms of the percentage of children who took IFA tablets, the district level was 58, and none of

the blocks recorded cent per cent as in the case of women and adolescent girls. The highest in this respect was recorded by S. Pudur (86) followed by Ilyankudi (78), while the lowest was recorded by Kannangudi and Sakkottai (45 each). In terms of the percentage of adolescent girls who took IFA tablets, the district level was 84. Among the blocks, three blcoks, viz., Ilaiyankudi, Devakottai and Sakkottai recorded cent per cent in this respect, while the lowest was registered in S.Pudur (43) followed by Sivaganga (68). Other than the bottom two blocks, Kalayarkovil block was below the district level.

Box 4.1 Nutrition Programmes of Government

ICDS was launched on 1st may 2003 in the district and is one of most important and unique programme in the district for early child hood care, better nutrition and overall social welfare of the children, male/female infants and women. It also takes care of the pregnant women during pre and post-delivery. ICDS 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 per MRP June 2014 total number of Anganwadi workers sanctioned in the district was 1,552 comprising of 1155 in main centers and 397 in mini centers out of which 1334 were posted and 218 posts were vacant. A maximum of 152 Anganwadi workers were in Kalaiyarkovil block and minimum of 41 in Kannangudi block Meanwhile total number of SNP fed ANW was 7,565 and SNP fed PNM was 6,495. During June 2014 total number of beneficiaries in the age group of six month to five year above in the district was 53,249. Total number of sanctioned CDPOs in the block was 12 but only five were posted and seven posts were vacant, one Gr. I and one Gr. II Supervisor post were vacant. In Sivaganga district, from the field visits, it was observed that programme was running in an efficient manner but the raw material status like rice and wheat provided by civil supplies corporation of Tamil Nadu Government to improve overall health was not good enough to improve the health of beneficiaries in overall terms.

There were many programmes conducted for maintaining the nutritional status of beneficiaries in the district. They get funds directly or indirectly for some programs and conduct few programs without getting funds. Panchayat Raj Instructions (PRI) was getting Rs 2000 as fund in every block as fund to provide awareness among the people about the schemes with the help of ICDS staff to improve the health status. Every year ICDS conducted "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" was celebrated on October 8th with a vision to create awareness on 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 the time of pregnancy, calorie intake for better health of pregnant women and also awareness about Dr.Muthulakshmi Reddy scheme. This is a scheme from which the pregnant women gets Rs.12,000 in 3 installments on the basis of antinatal visits, institutional deliveries.

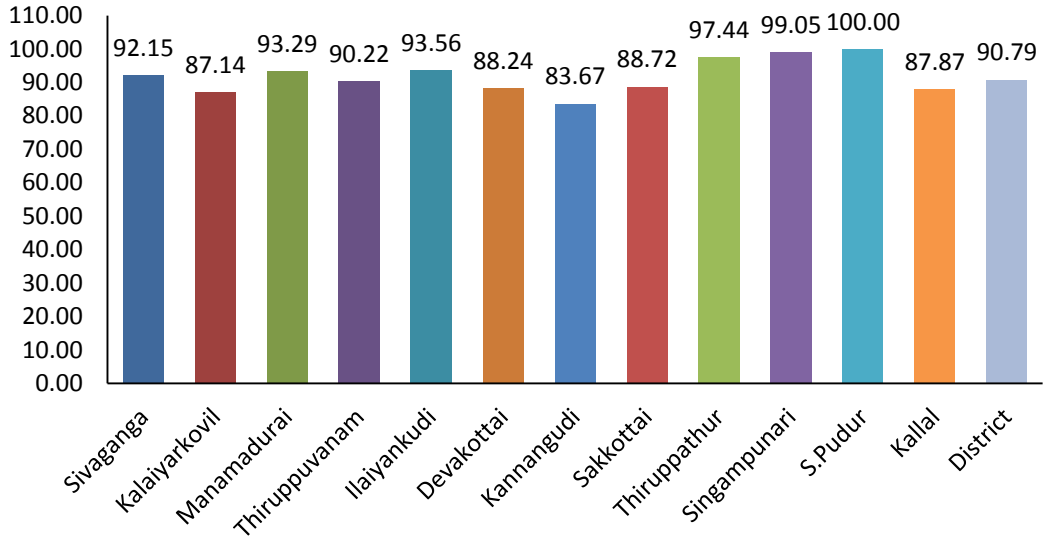
Kishori Shakti Yojna (KSY) was initiated on April 1st 2011, under the Ministry of Women and Child Development. It was implemented using the platform of ICDS Scheme through Anganwadi centres and is currently functioning in the district. This scheme was initiated using the infrastructure of Integrated Child Development Services (ICDS). 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 every Anganwadi centre 2-3 adolescent girls were targeted under these schemes that were 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. It was found that, after attending the programs, throughout Sivaganga district, the number of normal weight children increased. It was observed that those who were attending the programs acquired good knowledge about the health programmes in the district.

Non –nutritional Factors and their Impact on Nutrition

Water Supply

Access to safe drinking water and access to water in general and all other activities is a prerequisite 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 aimed to get rid of water-borne diseases including intestinal infections, worm infection, diarrhea, jaundice, typhoid, etc. which in turn would reduce the incidence and morbidity of these diseases and would improve the economic condition of the people .

Figure 4.5 Access to Drinking Water (in percentage)



Source: Nirmal Bharath Abiyan Report 2013-14

Figure 4.5 shows the details of the access to drinking water in the various blocks of Sivaganga district during 2013-14 (see Apendix Table 4.6). In Sivaganga district 90.79 per cent of the habitations were covered with access to drinking water facility. Total number of habitations covered was 3,294 during 2013-14, out of which 3,018 were from rural areas and 276 from urban areas. With respect to urban areas, the coverage in this respect was 100 per cent. Out of the twelve blocks, seven blocks covered 90-100 per cent of its habitations and 100 per cent was covered by S.Pudur block closely followed by

Singampunari (99.05 per cent). The block with lowest coverage was Kannangudi with 83 per cent followed by Kalaiyarkovil with 87.14 per cent. Anyhow, all the blocks record very good figures with regard to access to drinking water and the small gaps in all the blocks need to be filled.

All efforts have been made to safeguard water through rain water harvesting by the district authorities, thanks to the directions from the State government. Investment in better leak detection, maintenance and repair of water system could improve the supply of water to a large extent. This would improve personal hygiene and reduce the occurrence of water-borne and other associated diseases.

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 the health both in households and across the 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 Provision of Toilet

Sl. No	Blocks/District	Total Number of HHs	Number of HHs are with Toilet Facilities	Per cent of HHs Provided with Toilets
1	Sivaganga	40,743	24,613	60.41
2	Kalaiyarkovil	28,284	10,611	37.52
3	Manamadurai	26,519	13,031	49.14
4	Thiruppuvanam	29,584	14,580	49.28
5	Ilaiyankudi	29,397	16,092	54.74
6	Devakottai	31,270	21,618	69.13
7	Kannangudi	79,50	6,807	85.62
8	Sakkottai	62,830	43,226	68.80
9	Thiruppathur	28,665	16,923	59.04
10	Singampunari	19,563	11,275	57.63
11	S.Pudur	10,938	4,841	44.26
12	Kallal	23,195	8,967	38.66
	District	3,38,938	1,92,584	56.82

Source: Nirmal BharathAbiyan Report 2013-14

Table 4.8 provides the block-wise details of the number of households with toilet facilities in the various blocks of Sivaganga district according to the Nirmal Bharat Abiyan data for 2013-14. In Sivaganga district 56.82 per cent of the households had

access to toilet facility during 2013-14. Totally 1,92,584 HHs were covered, out of which 95,603 rural households and 96,981 urban households were covered. Kannangugi block with 85.62 per cent coverage topped the board followed by Devakottai (69.13 per cent) and Sakkottai (68.80 per cent). The least coverage was recorded by Kalaiyarkovil block with 37.52 per cent closely followed by Kallal (38.66 per cent). Out of the 12 blocks in the district, six blocks, viz., Sivaganga, Devakottai, Kannangudi, Sakkottai, Thiruppathur and Singampunari had percentage of HHs with toilet facility above the district level. Except a few blocks, all the blocks perform poorly in this respect. Moreover, the mere presence of toilets does not mean it is being used for the purpose it was built or even used at all. There are many toilets that are being used as store rooms or sheds, many toilets are damaged beyond use and many toilets do not have water. These aspects are pervasive throughout the district in all the blocks. So, there is a pressing need for awareness regarding the use of toilets in all the blocks of the district, which would certainly have a strong impact on the health of the people.

Case Study: Toilet Facility

Toilets with proper water connection are to be ensured at every household, so as to ensure the households are free of Health hazards. In Sivaganga district, only 57 per cent of the households had access to toilet facility during the year 2013-14. This implies that 43 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 analyze the access to toilet facility of the households in Kalaiyarkovil block, Sivaganga district as the block with the lowest access to toilet facility (37.52 per cent). Ilandakarai village was selected at random from Kalaiyarkovil block for the study.

The village consisted of 150 households out of which only four households had toilets or in other words, it was found that 99 per cent of the households in the village did not have toilet facility in their house. Most of the young adults had migrated from this village to nearby towns for better employment opportunities and better education facilities for their children. Most of the houses were occupied by old-aged persons who could not go for productive employment. Moreover, the attitude of such people was against the use of toilets in their houses. The one per cent of the households that had toilet facility, only one toilet was in use and the other toilets were not in use due to poor maintenance. Even though the people residing in the village seemed to be relatively better in economic terms, they did not prefer to build toilets. Actually, they did not have awareness regarding the benefits of the usage of toilets. Arguments such as "why should we use toilets in such old age and/or in the presence of sufficient waste land?", were common. Also many people 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 needs to be changed and this respect along with the Panchayat Board, there is need to be educated in this regard as Government schemes do not seem to have penetrated into the village.

Box 4.2 Utilization of Public Health Services and Health Programmes of State and Central Govt.

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 Anemia Control Programme, E) School Health Programme, F) Dental Programme, G) Hospital on Wheels Programme, 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, D) Janani – ShishuSurakshaKaryakaram, E) Janani Suraksha Yojna, F) Funding for MCHV & public health services through NRHM, G) Building, Vehicle, and Infrastructure support through NRHM and much more.

During 2012-13, total number of General hospitals in the district was 26, comprising of nine modern GH, six modern women's and children hospitals (WCH), ten Siddha hospitals and one Homoeopathy hospital. There were three modern dispensaries, three urban health posts, one other medical TB Sanatorium and 275 health sub centers during the same period. Total number of PHCs was 81, comprising of 48 modern medicine, two Ayurvedic, 26 Siddha, one Unani, two combined Yoga and Naturo and two Homoeopathy in the district during the reference year.

The total strength of beds in district was 1,016 comprising of 676 in modern medicine general hospitals, 279 in modern medicine WCH, 57 in Siddha hospitals, four in Homeopathy hospitals. The total number of doctors and nurses in the district was 213 and 415 respectively comprising of 70 doctors and 169 nurses in modern medicine hospitals and 104 doctors and 246 nurses in WCH, 32 doctors in Siddha hospitals, one doctor in Unani hospital, two doctors in combined yoga and naturopathy, and three doctors in homeopathy hospitals. Total number of in-patients registered in the district during 2012-13 was 75,140 and the total 5,042,234 out patients were facilitated with health services in the district during the same year in different types of hospitals. The highest number of PHCs were in Kalayarkovil and Kallal blocks, but only one PHC was there in Kannangudi block. The highest number of in-patients were treated in Kalaiyarkovil and the lowest in S.Pudur block.

Progress of family welfare programmes in the district was efficient. For sterilization a target of 7,100 was fixed with an achievement of 6,745 (95 per cent) in the district during 2012-13. For Intra Uterine Device a target of 9,500 was fixed with an achievement of 8,416 (88.58) during reference period. For users of Conventional Contraceptives and Oral Pills a target of 4,500 and 3,000 was fixed respectively with an achievement of 3,453 (76.73 per cent) and 1,641 (54.70). Health Services in the district are utilized properly. In overall terms the health status of the district is improving.

Special Progammes

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 the often they can not bear the high cost of frequent treatments. Gradually their economic condition worsens and their life becomes tougher.

National AIDS Control Programme

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 only in 1992 to arrest and eradicate the disease. Table 4.9 gives the details of the HIV positive cases in the years 2007-08 and 2013-14. From the Table it can be seen that the total HIV positive cases has declined by 51.31 per cent, i.e., from 573 in 2007-08 to 279 in 2013-14. The number of HIV positive cases was the highest in the age group 30-39 (both male and female) during 2007-08 and in the year 2013-14. The age group 40-49 recorded the second highest number of HIV positive cases in the year 2007-08 and 2013-14. In both the reference years, the incidence of HIV was noticed more among the male compared to the female. In the age group 25-29, the incidence of HIV was observed to higher for female compared to male in both the reference years.

Table 4.9 HIV Positive Cases (in no.)

Age and Sex-Wise HIV Positives					
Sl.No.	Age-Group	2007-08		2013-14	
		Male	Female	Male	Female
1	0-14	12	6	5	3
2	15-19	4	8	2	1
3	20-24	14	37	4	4
4	25-29	39	62	10	15
5	30-39	152	98	75	42
6	40-49	79	33	51	31
7	50 and above	22	7	30	6
	Total	322	251	177	102
Source: Health Department, Sivaganga					

Tuberculosis and Leprosy Cases

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. It once affected every continent and it has left behind a terrifying image in history and human memory - of mutilation, rejection and exclusion from society. Today, the diagnosis and treatment of leprosy is easy.

Table 4.10 TB and Leprosy Cases (in no.)

Positive TB Cases/Leprosy					
Sl.No.	Blocks/District	Positive TB Cases		Leprosy	
		2007-08	2013-14	2007-08	2013-14
1	Sivaganga	161	177	4	4
2	Kalaiyarkovil	21	130	2	1
3	Manamadurai	49	118	2	3
4	Thiruppuvanam	18	92	8	0
5	Ilaiyankudi	31	79	2	1
6	Devakottai	233	141	3	2
7	Kannangudi	6	40	1	0
8	Sakkottai	67	241	4	6
9	Thiruppathur	27	97	1	2
10	Singampunari	26	53	3	1
11	S.Pudur	2	47	2	1
12	Kallal	27	65	3	3
	District	668	1280	35	24

Source: Health Departmet, TB Centre and Leprosy Centre, Sivaganga

Table 4.10 presents the TB and Leprosy cases registered in the various blocks of Sivaganga district during 2007-08 and 2013-14. In Sivaganga district, the number of TB cases increased from 668 to 1280 between 2007-08 and 2013-14. Among the blocks, Devakottai (233) followed by Sivaganga registered the highest number of TB cases (161) in 2007-08, while in 2013-14, the highest number of TB cases were registered in Sakkottai (241) followed by Sivaganga (177). In the year 2007-08, the lowest number of TB cases was reported in S.Pudur block (2) and Kannangudi (6), while in the year 2013-14, Kannangudi (40) had the lowest number of TB cases, followed by S.Pudur (47). In general the number of TB cases registered an increase between the reference years in all the blocks except Devakottai. The highest increase of 174 between the reference years was recorded in Sakkottai. Another block that registers an increase in the number of TB cases of more than 100 was Kalaiyarkovil. The incidence of TB in the district as a whole and in individual blocks increased between 2007-08 and 2013-14, which needs to be addressed.

With regard to Leprosy cases, it can be seen that there was a fall in the number of positive cases in the district from 35 to 24, between 2007-08 and 2013-14. The blocks Thiruppuvanam and Kannangudi recorded zero Leprosy cases during 2013-14. Three

blocks, viz., Manamadurai, Sakkottai and Thiruppathur witnessed an increase in the number of Leprosy cases, while in Sivaganga and Kallal blocks, the number of Leprosy cases remained the same between the reference years. All the other blocks registered a fall in the number of Leprosy cases between the reference years. However, Leprosy needs to be eradicated and in this regard, the district needs to monitor the existing cases and spread awareness regarding preventive and precautionary measures.

Conclusion

This chapter reveals that among the blocks of Sivaganga district, Sakkottai had the highest population (2.48 lakhs) and Kannangudi (0.33 lakhs) had recorded the lowest during 2011. The SC population had recorded an increase of about one per cent in the district during the period 2001 to 2011. Even though the population in the district expanded, the child sex ratio in the district had decreased. Singampunari had the lowest child sex ratio and was identified as one of the backward blocks in the district. The lower level of child sex ratio in certain blocks reflected low girl preference in the blocks and increased level of private medical practices, where the chances of female feticide existed and could not be refused. Also the natural decline in the birth of female children could be responsible for the decline in child sex ratio because no valid proof of female infanticide were available. Anyhow, it could not be denied that there was a boy preference widely present in the district, which could be changed only over a period of time with persistant and insistent statutory and non-statutory measures to be ministered by GOs and NGOs.

The LEB in the district had a decadal increase of 2.3 for females and 4.8 for males which was low compared to the State level. SBR had increased in Sivaganga, Kalaiyarkovil, Ilaiyankudi, Sakkottai, Thiruppathur and S.Pudur, which needs to be addressed by health administration department of the district. The CBR was the highest in S.Pudur block (19.5) during 2014 and it was the only block to have recorded an increase between 2009 and 2014. Except Kalaiyarkovil, Kannangudi, Thiruppathur and S.Pudur, all other blocks recorded marginal fall in the CDR between the reference years. The district administration has to scale-up their activities to provide safe portable water, sanitation, control communicable and non-communicable diseases in the district.

The IMR was higher in Kannangudi, Thiruppuvanam, Manamadurai, Singampunari, Sivaganga and S.Pudur. Poor health performance in such blocks, need

adequate attention in protecting child health in the district. 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 couples and pregnant mothers would fetch desirable results in this regard. Zero level was observed in many blocks during 2013-14, this may be due to some intervention by the respective authorities in the area or by putting in place on early referral to higher level of care.

Water and Sanitation seemed inseparably intertwined to ensure sustenance of health in the State. In Sivaganga district 91 per cent of habitations were covered with access to drinking water facility. But, better leak detecting techniques and repair of broken hardware or replacement of the same, would improve the drinking water supply in the district.Regarding sanitation, access to toilet facility was observed to be poor in except a few blocks. Moreover, the mere presence of toilets does not mean it is being used for the purpose it was built or even used at all. There are many toilets that are being used as store rooms or sheds, many toilets have been damaged beyond use and many toilets do not have water. These aspects are pervasive throughout the district in all the blocks. Open air defecation was very common in the district which made the people more prone to water related diseases. So, there is a pressing need for awareness regarding the use of toilets in all the blocks of the district along with strict statutory measures alone do bring forth desirable results in this regard.

The age group 40-49 recorded the second highest number of HIV positive cases in the year 2007-08 and 2013-14. In both the reference years, the incidence of HIV was noticed more among the males compared to the female. In the age group 25-29, the incidence of HIV was observed to be higher for female compared to male in both the reference years. These issues need to be addressed with appropriate package of treatment, counseling and follow-up measures. It is appalling to notice an up surging rate of positive TB cases in the district. Except Devakottai, all the blocks registered hyper increase in TB cases which need war speed actions in the district. Air Pollution caused by Granite Quarries, Crusher Units were the major causes for increasing Chronic Obstructive Pulmonary Disease (COPD), Bronchial Asthma related restrictive lung diseases and thereby increasing TB cases in the district. Corrective measures should be initiated to mitigate the problems. A major TB sanatorium supported by satellite sanatoriums need to be established in the district in order to arrest the growth of such dreadful disease.

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 were to be implemented with war speed. Integrated approaches between Health and Education Departments co-ordinatedat the district level would fetch better results. People Participatory Approach and Peoples Movement initiated by NGOs and SHGs in safeguarding water bodies and environment and Health could make strides in Growth.

CHAPTER 5

LITERACY AND EDUCATION

Chapter - 5

Literacy and Education

Introduction

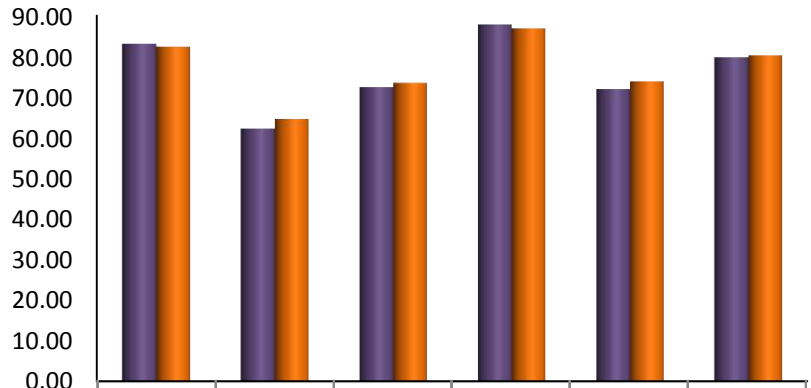
Sivaganga is one of the backward districts with a large chunk of population being dependent on non-agricultural activities. There are several backward blocks in the district registering poor performance with regard to HDI and other indices. HDI has been determined by the human capital formation factors such as literacy and education. Human resources must be given necessary training through education and knowledge building to be considered as human capital. The kind of education, the quality and the required skill based education, etc., will improve the human resource potential on the one hand and help them to contribute to knowledge based society on the other. HDI will improve with increased literacy and education. Hence, any initiative to improve HDI may need to primarily concentrate on increasing literacy and education. When education is attained such that there is no inequality, it will lead to move towards development with gender and social justice. Hence, a chapter on literacy and education has been included in this report to analyze the educational achievements.

Literacy

The district literacy rate was 72.43 per cent, which was marginally lower than the State level of 73.47 per cent for the year 2001 (see Apendix Table 5.1). The district female literacy rate (62.27 per cent) for the same year was also marginally lower than the State (64.55 per cent). But, the district male literacy rate was 83.06 per cent, which was marginally higher than the State male literacy rate of 82.33 per cent. In the year 2011, the situation remained the same, i.e., the total district literacy rate and female literacy rate were marginally lower than the State total and female literacy rates respectively, and the district male literacy rate was marginally higher than the State male literacy rate. The male and female literacy gap was 20.79 per cent and 18 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 4.72 per cent and 4.6 per cent for district and State respectively, but still the male and female literacy gap was in double digit, which needs to be taken care of.

Figure 5.1 Literacy Rate Male/Female



	2001			2011		
	Male	Female	Total	Male	Female	Total
Literacy rate District	83.06	62.27	72.43	87.92	71.85	79.85
Literacy rate State	82.33	64.55	73.47	86.81	73.86	80.33

Source: Census 2001 and 2011

Regarding blocks, Sakkottai block stands at the top in male and total literacy rates, whereas in the female literacy rate, Devakottai stands first. S.Pudur block scored very low in male, female and total literacy rates in the year 2001. In the year 2011 also S.Pudur block was the last among the blocks in Sivaganga district. Though the female literacy rate of Sakkottai increased by 14.54 per cent and the total literacy rate by 4.2 per cent, the male literacy rate had a steep drop by 9.43 per cent in 2011 compared to 2001. The Thiruppathur male literacy rate also fell by 2.68 per cent. So, the reasons for the fall in male literacy rate of Sakkottai and Thiruppathur should be identified and rectified. The literacy rate of S.Pudur showed better performance in the year 2011 compared to the year 2001, but it scored the least among the blocks in male literacy during the same period, so the Government should take necessary steps to improve the literacy rate of the block. The district literacy rate improved to 79.85 per cent in 2011 and the State literacy rate also improved to 80.10 per cent. It can by observed that the improvement in district literacy rate has kept pace with the improvement in State literacy rate during the reference period, but the district literacy rate was still marginally lower than the State level.

Elementary Education

Primary Education

Primary education brings a strong foundation to Human Development. All developed countries and third world countries, which have relatively higher HDI show a strong evidence that they had invested sufficiently on Primary Education and also enacted strict policies to complete a certain years of schooling with compulsion. Dropout was not allowed and hence the issues of completion rate, enrolment, dropout and efforts to improve the enrolment, completion rate, etc., have never been an issue. In the Indian context, only in 2010 the Right to Education Act was passed impressing to have compulsory education. Moreover, unlike in other countries, the attitude of the people in recognizing education as an important human capital formation and knowledge enhancing is yet to be recognized. So, primary education and its completion is a pre-requisite for human capital formation and human development. The enrolment in primary education is analyzed in this section. When a person gets enrolled at the primary level, he or she will get 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.

The primary level GER in Sivaganga district during the period 2011-12 to 2013-14 has been presented in Table 5.1. It can be seen from the Table that the total GER at the primary level of Sivaganga district was above 100 per cent in all the reference years and increased marginally from 102.29 per cent in 2011-12 to 102.43 per cent in 2013-14. It was also at par with the State level of 102.45 per cent during 2013-14. The district GER at the primary level for boys and girls was 102.58 per cent and 102.29 per cent respectively in 2013-14. Comparing these rates with State level, it was found that the district boys' rate was marginally higher and the district girls' rate was marginally lower than the State rate. Gender gap of 0.29 per cent during 2013-14 was found at the primary level, which was negligible and also it had marginally dropped from 0.62 per cent in 2011-12.

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	Sivaganga	102.89	102.87	102.89	102.81	102.81	102.58	102.85	102.84	102.74
2	Kalaiyarkovil	102.16	102.14	102.21	101.73	101.73	101.99	101.95	101.94	102.10
3	Manamadurai	101.91	101.89	102.02	102.07	102.07	102.21	101.99	101.98	102.12
4	Thiruppuvanam	102.11	102.09	102.10	101.43	101.43	101.92	101.77	101.76	102.01
5	Ilaiyankudi	101.79	101.77	101.84	101.63	101.63	101.74	101.71	101.70	101.79
6	Devakottai	101.82	101.80	101.85	102.54	102.54	104.64	102.18	102.17	103.25
7	Kannangudi	102.07	102.05	102.04	101.49	101.49	101.58	101.78	101.77	101.81
8	Sakkottai	102.73	102.71	102.75	101.84	101.84	101.9	102.29	102.28	102.33
9	Thiruppathur	102.77	102.75	102.80	102.05	102.05	102.15	102.41	102.40	102.48
10	Singampunari	102.78	102.76	102.88	102.33	102.33	102.48	102.56	102.55	102.68
11	S.Pudur	106.14	105.12	105.30	101.89	101.89	102.17	104.02	103.51	103.74
12	Kallal	102.07	102.05	102.22	101.91	101.91	102.11	101.99	101.98	102.17
	District	102.60	102.50	102.58	101.98	101.98	102.29	102.29	102.24	102.43

Source: Education Department, Sivaganga

The block-wise analysis reveals that S.Pudur had the highest total GER at the primary level with 103.74 per cent during 2013-14, followed by Devakottai (103.25 per cent), while the lowest was recorded by Ilaiyankudi 101.79 per cent closely followed by Kannangudi (101.81 per cent) during the same year. Five blocks, viz., Sivaganga, Devakottai, Thiruppathur, Singampunari and S.Pudur registered total primary GER above the district level. Among the boys, the primary GER was highest in S.Pudur at 105.30 per cent in 2013-14 followed by Sivaganga (102.89 per cent), while the lowest in this respect was registered by Ilaiyankudi (101.84 per cent) closely followed by Devakottai (101.85 per cent). Among the boys, three blocks, viz., Thiruppuvanam, Kannangudi and S.Pudur had a slight fall in the primary GER between 2011-12 and 2013-14. In terms of the girls' primary GER, Devakottai topped the chart with 104.64 per cent during 2013-14, followed by Sivaganga (102.58 per cent), while Kannangudi (101.58 per cent) followed by Ilaiyankudi (101.74 per cent) registered the lowest in this

respect. Except Sivaganga, in all other blocks, the girls' primary GER had increased between 2011-12 and 2013-14. The gender disaggregated data helps to scrutinize the gender differences in primary enrolment. At the district level gender gap was not visible, while among the blocks, some amount of gender gap could be noticed. S.Pudur had the highest gender gap of 3.13 per cent against the girls during 2013-14. Gender gap against the girls was present in all blocks except Manamadurai and Devakottai. Devakottai had 2.79 per cent gender gap against the boys with regard to primary GER during 2013-14.

Anyhow, the GER at the primary level was higher than 100 per cent in all the blocks, which is a very good achievement. This could be attributed to primary education pro-active policies initiated by both the State and Central Governments including Sarva Shiksha Abiyan, Right to Education Act, compulsory education for children under 14 years, Mid-day Meals Scheme, etc. The deviations from the district level identified in certain blocks as mentioned above, may be due to the migration or other factors.

Completion Rate and Dropout Rate in Primary Education

More than enrolment, completion rate of the enrolled children in primary school and 'no' dropout are necessary conditions for human development. In Sivaganga district, the completion rate has been provided in Table 5.2(a), which shows that it was in the range of 94 to 99 per cent during the reference period 2011-12 to 2013-14. The district total primary completion rate increased from 94.89 per cent in 2011-12 to 97 per cent in 2013-14. The boys' and girls' total completion rates at the primary level were 97.01 per cent and 96.98 per cent respectively during 2013-14 and both registered an increase compared to 2011-12. Among the blocks, the highest total completion rate at the primary level was witnessed in Kannangudi block with 99.54 per cent during 2013-14, closely followed by Ilaiyankudi (99.51 per cent), while the lowest was found in Thiruppuvanam (95.27 per cent) followed by Manamadurai (95.53 per cent). In terms of boys' primary completion rate during 2013-14, the highest was recorded in Devakottai (99.54 per cent) closely followed by Kannangudi and Ilaiyankudi (99.50 per cent), while the lowest was recorded in Thiruppuvanam (95.20 per cent) followed by Manamadurai (95.50 per cent). In terms of the primary completion rate for girls in 2013-14, Kannangudi topped the board with 99.58 per cent, closely followed by Ilaiyankudi (99.52 per cent), while the lowest was registered in Thiruppuvanam (95.34 per cent) followed by Manamadurai (95.56 per cent). Thiruppuvanam and Manamadurai blocks figure in all the

three categories of total, boys and girls completion rates at the primary level during 2013-14, which needs immediate attention. The gender gap in the completion rate at the primary level was 1.6 per cent against the girls, which can be considered to be low, but still existing. But, only one block, viz., Devakottai was found to have gender gap against the girls, which was to the tune of 1.8 per cent and this seems to be reflected at the district level. All other blocks had low level gender gap against the boys.

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	Sivaganga	94.51	95.61	96.98	96.62	96.72	97.64	95.57	96.17	97.31
2	Kalaiyarkovil	93.21	94.31	95.80	95.61	95.71	95.96	94.41	95.01	95.88
3	Manamadurai	93.42	94.52	95.50	95.15	95.25	95.56	94.29	94.89	95.53
4	Thiruppuvanam	92.62	93.72	95.20	94.23	94.33	95.34	93.43	94.03	95.27
5	Ilaiyankudi	98.37	99.47	99.50	98.64	98.74	99.52	98.51	99.11	99.51
6	Devakottai	98.41	99.51	99.54	98.92	99.02	97.48	98.67	99.27	98.51
7	Kannangudi	94.64	95.74	99.50	93.89	93.99	99.58	94.27	94.87	99.54
8	Sakkottai	95.61	96.71	97.80	95.87	95.97	97.94	95.74	96.34	97.87
9	Thiruppathur	93.63	96.73	95.60	93.24	93.34	95.74	93.44	95.04	95.67
10	Singampunari	94.55	95.65	96.50	93.11	93.21	96.64	93.83	94.43	96.57
11	S.Pudur	92.73	93.83	96.50	93.62	93.72	96.64	93.18	93.78	96.57
12	Kallal	93.14	94.24	95.70	93.54	93.64	95.76	93.34	93.94	95.73
	District	94.57	95.84	97.01	95.20	95.30	96.98	94.89	95.57	97.00

Source: Education Department, Sivaganga

Overall, it is pleasant to observe that the completion rate at the primary level in all the blocks in Sivaganga district showed improvement in 2013-14 compared to 2011-12 and it was also found that the boys' improvement was better than the girls' improvement. The completion rate at the primary level was lower than the district level in some of the blocks which needs attention. The completion rate at the primary level generally is influenced due to migration and/or economic factors and these aspects need to be addressed with suitable interventions like gainful employment for the parents or transit schools.

The dropout rate at the primary level of the various blocks in Sivaganga district has been presented in Table 5.2(b) for the period 2011-12 to 2013-14. The district's total dropout at the primary level was observed to be very low at 0.48 per cent during 2013-14 and did not show much change during the reference period. The district dropout rates at the primary level for boys and girls were 0.51 per cent and 0.43 per cent during 2013-14. The lowest total dropout at the primary level was witnessed in S.Pudur with 0.24 per cent during 2013-14, followed by Ilaiyankudi (0.35 per cent), while the highest was registered in Thiruppathur (0.69 per cent) followed by Singampunari and Kallal (0.57 per cent). Apart from the bottom three blocks, Sakkottai, Kannangudi, Thiruppuvanam and Kalaiyarkovil are the blocks that had higher total dropout at the primary level during 2013-14. Five blocks, viz., Ilaiyankudi, Devakottai, Kannangudi, Singampunari and S.Pudur exhibited falling trend in terms of the total dropout rate at the primary level between 2011-12 and 2013-14.

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	Sivaganga	0.54	0.54	0.58	0.28	0.28	0.28	0.41	0.41	0.43
2	Kalaiyarkovil	0.59	0.59	0.59	0.34	0.34	0.39	0.47	0.47	0.49
3	Manamadurai	0.26	0.26	0.30	0.43	0.43	0.47	0.35	0.35	0.39
4	Thiruppuvanam	0.29	0.29	0.37	0.64	0.64	0.64	0.47	0.47	0.51
5	Ilaiyankudi	0.55	0.55	0.53	0.17	0.17	0.17	0.36	0.36	0.35
6	Devakottai	0.58	0.58	0.57	0.31	0.31	0.30	0.45	0.45	0.44
7	Kannangudi	0.71	0.71	0.68	0.57	0.57	0.33	0.64	0.64	0.51
8	Sakkottai	0.59	0.59	0.61	0.38	0.38	0.40	0.49	0.49	0.51
9	Thiruppathur	0.79	0.79	0.81	0.52	0.52	0.56	0.66	0.66	0.69
10	Singampunari	0.72	0.72	0.69	0.51	0.51	0.45	0.62	0.62	0.57
11	S.Pudur	0.02	0.02	0.01	0.48	0.48	0.47	0.25	0.25	0.24
12	Kallal	0.39	0.39	0.41	0.69	0.69	0.72	0.54	0.54	0.57
	District	0.50	0.50	0.51	0.44	0.44	0.43	0.47	0.47	0.48

Source: Education Department, Sivaganga

In terms of the boys' dropout rate at the primary level, S.Pudur recorded the lowest with 0.01 per cent and was much lower than all other blocks during 2013-14. The highest in this respect was registered by Thiruppathur with 0.81 per cent followed by Singampunari with 0.69 per cent. Among the blocks, the girls' dropout rate at the primary level was lowest in Ilaiyankudi with 0.17 per cent followed by Sivaganga (0.28

per cent), while the highest was registered in Kallal (0.72 per cent) followed by Thiruppuvanam (0.64 per cent). Gender gap was negligible in terms of the dropout rate at the district primary level, however some amount gender gap in this respect could be noticed in the blocks. Gender gap against the girls was observed in S.Pudur (0.46 per cent), Kallal (0.31 per cent), Thiruppuvanam (0.27 per cent) and Manamadurai (0.17 per cent), while in the remaining blocks gender gap against the boys was in the range 0.20 per cent to 0.36 per cent.

Upper Primary/Middle School Education

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	Sivaganga	102.41	102.46	102.68	103.11	102.90	102.91	102.76	102.68	102.80
2	Kalaiyarkovil	102.11	102.16	102.49	102.33	102.13	102.26	102.22	102.15	102.38
3	Manamadurai	101.45	101.50	102.10	102.40	102.20	102.26	101.93	101.85	102.18
4	Thiruppuvanam	101.37	101.42	102.12	102.32	102.12	102.18	101.85	101.77	102.15
5	Ilaiyankudi	101.24	101.29	101.98	102.12	101.92	101.94	101.68	101.61	101.96
6	Devakottai	101.45	101.50	101.96	102.13	101.93	102.46	101.79	101.72	102.21
7	Kannangudi	102.02	102.07	102.26	102.09	101.89	101.98	102.06	101.98	102.12
8	Sakkottai	101.45	101.50	102.08	102.11	101.91	102.06	101.78	101.71	102.07
9	Thiruppathur	101.54	101.59	101.90	102.07	101.87	102.02	101.81	101.73	101.96
10	Singampunari	101.47	101.52	101.96	102.44	102.24	102.20	101.96	101.88	102.08
11	S.Pudur	101.61	101.66	101.58	102.10	101.90	101.94	101.86	101.78	101.76
12	Kallal	101.52	101.57	102.06	102.07	101.87	101.94	101.80	101.72	102.00
	District	101.64	101.69	102.10	102.27	102.07	102.18	101.96	101.88	102.14

Source: Education Department, Sivaganga

The enrolment of boys and girls in the upper primary or middle schools is very important as it has implications for a developed society. The upper primary gross enrolment ratio in Sivaganga district for the period 2011-12 to 2013-14 has been given in Table 5.3, and shows that there was a marginal increase in the total upper primary GER from 101.96 per cent in 2011-12 to 102.14 per cent in 2013-14. The upper primary GER

for boys and girls was 102.10 per cent and 102.18 per cent respectively in 2013-14. The boys' and girls' rates in this respect showed marginal increase and decrease respectively between 2011-12 and 2013-14. Among the blocks, the highest total upper primary GER was recorded in Sivaganga with 102.80 per cent followed by Kalaiyarkovil (102.38 per cent), while the lowest was registered in S.Pudur (101.76 per cent) followed by Thiruppathur and Ilaiyankudi (101.96 per cent). In terms of the upper primary GER for boys, the highest was recorded by Sivaganga with 102.68 per cent followed by Kalaiyarkovil (102.49 per cent), while the lowest was registered by S.Pudur (101.58 per cent) followed by Thiruppathur (101.90 per cent). Among the girls, the upper primary GER was highest for Sivaganga block (102.91 per cent) followed by Devakottai (102.46 per cent), while the least was registered in three blocks, viz., Kallal, S.Pudur and Ilaiyankudi with 101.94 per cent. All the blocks had upper primary GER higher than 100 per cent in all the categories, i.e., total, boys and girls, which is a welcome achievement. There was also no gender gap found at the district level, which is again welcome. Marginal gender gap could be noticed against the girls in some of the blocks, but there was nothing alarming about it.

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

The gender-wise upper primary completion and dropout rates for various blocks in Sivaganga district for the period 2011-12 to 2013-14 is given in Table 5.4(a) and (b). The Table 5.4(a) revealed that the total completion rate at the upper primary level improved from 91.39 per cent in 2011-12 to 93.75 per cent in 2013-14. The upper primary completion rates for boys and girls was 93.43 per cent and 94.08 per cent respectively during 2013-14. Both the rates showed improvement during the reference period. The block-wise analysis revealed that the total upper primary completion rate was highest in Kannangudi (98.51 per cent) during 2013-14, followed by Sakkottai (97.78 per cent), while the lowest was registered in Sivaganga (89.59 per cent) followed by Devakottai (90.31 per cent). So, much variation can be noticed among the blocks in this respect. Other than the bottom two blocks, three blocks, viz., Kalaiyarkovil, Thiruppathur and S.Pudur, had total upper primary completion rate lower than the district level. Among the boys, the upper primary completion rate was highest for Kannangudi block with 98.50 per cent during 2013-14, followed by Sakkottai (98.70 per cent), while the lowest was registered in Sivaganga (85.20 per cent) followed by

Devakottai (90.30 per cent). Apart from the bottom two blocks, Kalaiyarkovil, Thiruppathur, and S.Pudur blocks had upper primary completion rate for boys below the district level. In terms of the girls upper primary completion rate, the highest was recorded in Kannangudi (98.52 per cent) followed by Sakkottai (97.76 per cent), while the least was registered in Devakottai (90.31 per cent) followed by Thiruppathur (91.16 per cent). Sivaganga, Kalaiyarkovil, Thiruppuvanam and S.Pudur were the four blocks other than the bottom two, which had upper primary completion rate for girls lower than the district level.

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	Sivaganga	82.75	84.85	85.20	89.46	91.36	93.98	86.11	88.11	89.59
2	Kalaiyarkovil	86.75	88.85	90.60	89.54	91.44	90.62	88.15	90.15	90.61
3	Manamadurai	92.48	94.58	95.30	93.74	95.64	95.38	93.11	95.11	95.34
4	Thiruppuvanam	93.87	95.97	93.90	89.61	91.51	93.84	91.74	93.74	93.87
5	Ilaiyankudi	89.79	91.89	94.80	95.44	97.34	94.76	92.62	94.62	94.78
6	Devakottai	88.87	90.97	90.30	87.41	89.31	90.31	88.14	90.14	90.31
7	Kannangudi	95.88	97.98	98.50	96.31	98.23	98.52	96.10	98.11	98.51
8	Sakkottai	93.91	96.01	97.80	96.94	98.84	97.76	95.43	97.43	97.78
9	Thiruppathur	90.28	92.38	92.10	88.46	90.36	91.16	89.37	91.37	91.63
10	Singampunari	92.94	95.04	94.60	91.91	93.81	94.64	92.43	94.43	94.62
11	S.Pudur	91.98	94.08	92.90	89.34	91.24	92.94	90.66	92.66	92.92
12	Kallal	93.47	95.57	95.10	92.21	94.11	95.08	92.84	94.84	95.09
	District	91.08	93.18	93.43	91.70	93.60	94.08	91.39	93.39	93.75

Source: Education Department, Sivaganga

The gender gap in the district level completion rate at the upper primary level was found to be 0.65, which was marginal. Among the blocks, gender gap seemed to exist as at the district level in this respect except Sivaganga where it was 8.78 per cent against the boys. So, in Sivaganga block, boys tend to lag behind the girls in terms of the upper primary completion rate, which needs to be addressed. The main theoretic reason for the boys' completion rate to be low can be attributed to entry of boys in the job market. So, it is essential that boys be given proper counseling regarding the importance of going up the education ladder. In case they tend to be weak in studies, they should be provided with remedial coaching and moral support. Awareness in this regard may be provided to the parents, so that they would encourage their wards to complete schooling.

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	Sivaganga	1.91	1.71	1.65	1.96	1.66	1.69	1.94	1.69	1.67
2	Kalaiyarkovil	2.90	2.70	2.13	1.99	1.69	2.11	2.45	2.20	2.12
3	Manamadurai	2.81	2.61	2.06	1.91	1.61	2.03	2.36	2.11	2.05
4	Thiruppuvanam	1.87	1.67	1.35	0.97	0.67	1.11	1.42	1.17	1.23
5	Ilaiyankudi	1.73	1.53	1.58	1.96	1.66	1.60	1.85	1.60	1.59
6	Devakottai	1.77	1.57	1.57	2.01	1.71	1.70	1.89	1.64	1.64
7	Kannangudi	1.83	1.63	1.63	2.00	1.70	1.66	1.92	1.67	1.65
8	Sakkottai	1.47	1.27	1.26	2.60	2.30	2.25	2.04	1.79	1.76
9	Thiruppathur	1.48	1.28	1.29	2.19	1.89	1.89	1.84	1.59	1.59
10	Singampunari	1.58	1.38	1.39	1.99	1.69	1.71	1.79	1.54	1.55
11	S.Pudur	1.19	0.99	1.05	2.07	1.77	1.79	1.63	1.38	1.42
12	Kallal	1.17	0.97	0.99	2.17	1.87	1.91	1.67	1.42	1.45
	District	1.81	1.61	1.50	1.99	1.69	1.79	1.90	1.65	1.65

Source: Education Department, Sivaganga

Higher the completion rate, lower will be the dropout rate. The Table 5.4(b) shows the dropout rates of boys and girls in all the blocks of Sivaganga district during the period 2011-12 to 2013-14. The district total upper primary dropout rate marginally declined over the reference period and stood at 1.65 per cent during the year 2013-14. The lowest total upper primary dropout rate among the blocks was recorded in

Thiruppuvanam with 1.23 per cent during 2013-14 followed by S.Pudur (1.42 per cent), while the highest was registered in Kalaiyarkovil (2.12 per cent) followed by Manamadurai (2.05 per cent). There was some amount of variation noticed among the blocks in this respect. Other than the bottom two blocks, Sakkottai and Sivaganga had total upper primary dropout rate above the district level.

In terms of the boys' dropout rate at the upper primary level, Kallal recorded the lowest with 0.99 per cent during 2013-14, followed by S.Pudur (1.05 per cent), while the highest was registered by Kalaiyarkovil (2.13 per cent) followed by Manamadurai (2.06 per cent). Among the blocks, the girls' dropout rate at the upper primary level was lowest in Thiruppuvanam with 1.11 per centduring 2013-14, followed by, Ilaiyankudi (1.60 per cent), while the highest was registered in Sakkottai (2.25 per cent) followed by Kalaiyarkovil (2.11 per cent). Gender gap was 0.26 per cent in terms of the dropout rate at upper primary district level, however more gender gap in this respect could be noticed in the blocks. Gender gap against the girls was observed in nine blocks, the highest was found in Sakkottai with 0.99 per cent followed by Kallal 0.92 per cent, S.Pudur (0.74 per cent) and Thiruppathur (0.60 per cent), while in the remaining blocks gender gap was lower against the girls. Three blocks had gender gap against the boys, viz., Kalaiyarkovil, Manamadurai and Thiruppuvanam, and was in the range 0.02 per cent to 0.24 per cent.

Comparing the primary and upper primary dropout rates for all three categories revealed that the upper primary dropout rates were higher than the primary level and this was as expected. As we move up the education ladder, the dropout rates tend to increase, but one has to evolve strategies to reduce the dropout at all levels. The Government of Tamil Nadu has taken several steps in this regard and has been able to bring the dropout rates to very low levels. Yet much more has to be done to bring the dropout rates to the zero level. Children oriented education rather than rote learning can be one step in this direction. Rather than competing for marks, students may be encouraged to question and learn. This would involve them in the teaching-learning process and help them continue schooling rather than dropping out.

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 determines the transition rate from one level to another. In Table 5.5(a) and (b) the transition rates of the various blocks in Sivaganga

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 during the reference period.

Table 5.5 (a) Transition Rate

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	Sivaganga	99.56	99.62	99.33	99.29	99.24	98.97	99.43	99.43	99.15
2	Kalaiyarkovil	99.56	99.62	99.36	98.94	98.99	98.89	99.25	99.31	99.13
3	Manamadurai	98.88	98.94	98.59	99.16	99.21	98.89	99.02	99.08	98.74
4	Thiruppuvanam	99.14	99.20	99.35	98.79	98.84	98.79	98.97	99.02	99.07
5	Ilaiyankudi	98.91	98.97	98.78	99.54	99.59	98.83	99.23	99.28	98.81
6	Devakottai	99.59	99.65	99.39	99.25	99.30	98.69	99.42	99.48	99.04
7	Kannangudi	99.73	99.79	99.54	99.16	99.21	98.69	99.45	99.50	99.12
8	Sakkottai	99.88	99.89	99.33	99.73	99.78	98.49	99.80	99.84	98.91
9	Thiruppathur	99.88	99.94	99.48	98.94	98.99	98.63	99.41	99.47	99.06
10	Singampunari	99.91	99.97	99.48	98.64	98.69	99.47	99.28	99.33	99.48
11	S.Pudur	99.81	99.87	99.54	99.11	99.16	99.37	99.46	99.52	99.46
12	Kallal	99.85	99.91	99.46	98.73	98.78	99.13	99.29	99.35	99.30
	District	99.56	99.61	99.30	99.11	99.15	98.90	99.33	99.38	99.10
Source: Education Department, Sivaganga										

The transition rate from primary to upper primary for the various blocks in Sivaganga district presented in Table 5.5(a) revealed that the total transition rate from primary to upper primary for the district was 99.10 per cent and the same for boys and girls was 99.30 per cent and 98.90 per cent respectively during 2013-14. The State level rates in this respect were 99.81 per cent, 99.86 per cent and 99.75 per cent respectively during the same year. So, it can be seen that the district level rates were slightly below the State level rates with respect to the transition rates from primary to upper primary in all the three categories, i.e., total, boys and girls, but were high.

Among the blocks, Singampunari recorded the highest total transition rate from primary to upper primary with 99.48 per cent during 2013-14, closely followed by S.Pudur (99.46 per cent), while the lowest was recorded in Ilaiyankudi (98.81 per cent) followed by Sakkottai (98.91 per cent). The transition rate from primary to upper primary for boys among the blocks was highest in S.Pudur and Kannangudi (99.54 per cent) during 2013-14, followed by Singampunari and Thiruppathur (99.48 per cent), while the lowest was registered in Manamadurai (98.59 per cent) followed by Ilaiyankudi (98.78 per cent). Among the girls, the highest transition rate from primary to upper primary was recorded by Singampunari (99.47 per cent) during 2013-14, followed by S.Pudur (99.37 per cent), while the lowest was registered in Sakkottai (98.49 per cent) followed by Thiruppathur (98.63 per cent). Not much variation was witnessed among the blocks and gender gap also narrowed with respect to transition rate from primary to upper primary. However, some of the blocks registered with lower transition rate from primary to upper primary compared to the district level.

Table 5.5 (b) Transition Rate

Sl. No	Blocks/District	Upper Primary to Secondary								
		Boys			Girls			Total		
		2011-12	2012-13	2013-	2011-	2012-13	2013-14	2011-	2012-13	2013-14
1	Sivaganga	98.54	98.6	99.63	99.05	99.09	99.84	98.80	98.85	99.73
2	Kalaiyarkovil	99.15	99.21	99.4	99.62	99.66	99.77	99.39	99.44	99.59
3	Manamadurai	99.72	99.78	99.84	99.63	99.67	99.93	99.68	99.73	99.88
4	Thiruppuvanam	99.48	99.54	99.93	98.89	98.93	99.03	99.19	99.24	99.48
5	Ilaiyankudi	99.94	99.97	99.59	99.03	99.07	99.83	99.49	99.52	99.71
6	Devakottai	99.69	99.75	99.51	99.13	99.17	99.87	99.41	99.46	99.69
7	Kannangudi	98.61	98.67	98.88	99.11	99.15	99.5	98.86	98.91	99.19
8	Sakkottai	98.49	98.55	99.66	99.96	99.98	99.97	99.23	99.27	99.81
9	Thiruppathur	99.94	99.97	99.93	99.73	99.77	99.92	99.84	99.87	99.93
10	Singampunari	99.02	99.08	99.51	99.43	99.47	99.82	99.23	99.28	99.66
11	S.Pudur	98.59	98.65	99.72	99.04	99.08	99.51	98.82	98.87	99.61
12	Kallal	99.57	99.63	99.87	99.03	99.07	99.69	99.30	99.35	99.78
	District	99.23	99.28	99.62	99.30	99.34	99.72	99.27	99.31	99.67

Source: Education Department, Sivaganga

The transition rate from upper primary to secondary for the various blocks in Sivaganga district presented in Table 5.5(b) revealed that the total transition rate from primary to upper primary for the district improved over the reference period and stood at 99.67 per cent and the same for boys and girls was 99.62 per cent and 99.72 per cent respectively during 2013-14. Among the blocks, the highest transition rate from upper primary to secondary was recorded in Thiruppathur (99.93 per cent) during 2013-14, closely followed by Manamadurai (99.88 per cent), while the lowest was registered by Kannangudi (99.19 per cent) followed by Thiruppuvanam (99.48 per cent). The transition rate from upper primary to secondary for boys among the blocks was highest for Thiruppathur and Thiruppuvanam (99.93 per cent) during 2013-14, followed by Kallal (99.87 per cent), while the lowest was registered by Kannangudi (98.88 per cent) followed by Kalaiyarkovil (99.40 per cent). In terms of the girls' transition rate from upper primary to secondary, the highest was secured by Sakkottai (99.97 per cent) during 2013-14 followed by Manamadurai (99.93 per cent), while the lowest was registered in Thiruppuvanam (99.03 per cent) followed by Kannangudi (99.50 per cent). Here also not much variation was noticed among the blocks and the gender gap also was narrow.

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 schools. 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 Sivaganga district in the years 2011-12 and 2013-14. The total number of habitations in Sivaganga district was2,301 in 2011-12, which increased to 2,999 in 2013-14. The total number of primary schools declined from 1,140 in 2011-12 to 971 in 2013-14, while the total number of upper primary schools increased from149 in 2011-12 to 326 in 2013-14. So, there has been net increase of eight schools between the two reference years. The total number of primary schools during 2013-14 roughly works out to one primary school for every three habitations and one upper primary school for every nine habitations. This seems to be quite good, but the distance between the school and the habitation as another factor that needs to be analysed before making any value judgments.

Table 5.6 Availability of School

Sl. No	Blocks/District	Number of Habitations		Number of Primary School		Number of Upper Primary /Middle School	
		2011-12	2013-14	2011-12	2013-14	2011-12	2013-14
1	Sivaganga	197	281	138	118	18	39
2	Kalaiyarkovil	328	377	143	114	19	38
3	Manamadurai	134	243	97	72	10	25
4	Thiruppuvanam	159	192	98	65	11	37
5	Ilaiyankudi	200	297	123	97	14	30
6	Devakottai	185	399	89	87	20	36
7	Kannangudi	210	194	40	29	7	11
8	Sakkottai	304	334	93	107	11	23
9	Thiruppathur	183	191	101	87	12	37
10	Singampunari	111	170	68	63	6	13
11	S.Pudur	92	97	58	49	4	13
12	Kallal	198	224	92	83	17	24
	District	2,301	2,999	1,140	971	149	326

Source: Education Department, Sivaganga

Among the blocks, Sivaganga had the highest number of primary (118) and upper primary (39) schools during 2013-14, followed by Kalaiyarkovil (primary – 114; upper primary – 38), while the lowest were registered in Kannangudi (primary – 29; upper primary – 11) followed by S.Pudur (primary – 49; upper primary – 13). It is interesting to note that in all the blocks, the number of primary schools (except Sakkottai) declined and the number upper primary schools increased between the reference years. The number of schools were distributed in accordance with the number of habitations, but as observed earlier, the population in the district seems to be scattered and more importantly access to schools depend upon the distance to be covered to reach the school from the habitation.

Pupil-Teacher Ratio in Primary and Upper Primary

Pupil Teacher Ratio (PTR) and Pupil School Ratio (PSR) are important determinants of educational status of the population. The data for the primary and upper primary levels of both PTR and PSR have been provided in Table 5.7 for the year 2013-14.

Table 5.7 Pupil Teacher Ratio

Sl. no	Blocks/District State	Primary School		Upper Primary School	
		Pupil Teacher Raito	Pupil School Ratio	Pupil Teacher Raito	Pupil School Ratio
1	Sivaganga	25	57	23	227
2	Kalaiyarkovil	23	58	22	156
3	Manamadurai	23	82	21	224
4	Thiruppuvanam	24	77	21	181
5	Ilaiyankudi	23	68	21	163
6	Devakottai	23	69	17	209
7	Kannangudi	23	43	16	78
8	Sakkottai	23	58	23	299
9	Thiruppathur	24	70	21	140
10	Singampunari	23	78	23	322
11	S.Pudur	24	58	21	176
12	Kallal	24	54	20	175
	District	23	64	21	196

Source: Education Department, Sivaganga (2013-14)

The district level PTR at the primary and upper primary levels were 23 and 21 students per teacher respectively during 2013-14, which were in the ideal range. The block-wise analysis revealed that the PTR at both the levels were in the ideal range for all blocks with some variations. The lowest PTR at the primary level was recorded in Manamadurai (23) followed by Kalaiyarkovil (23), while the highest was registered in Sivaganga (25) followed by Thiruppuvanam (24). At the upper primary level, the lowest was recorded in Kannangudi (16) closely followed by Devakottai (17), while the highest was registered in Sakkottai (23) and Singampunari (23).

But, these figures are just averages at the block and district levels, at the individual school level, there certainly would be some mismatches like no students in some classes.

Moving on to the PSR, the district level at the primary and upper primary levels were 64 and 196 students per school respectively during 2013-14, which seems to be on the lower side. But, here the average at the district level or at the block level may not provide the true picture. For example, a school located in a urban area may have to cater to a larger proportion of students and would economize its operations, while a school located at a remote habitation may have to function with lower number of students. However, a relative comparison among the blocks would give some idea regarding this. The PSR at the primary level was highest in Manamadurai (82) during 2013-14, followed by Singampunari (78), while the lowest was registered by Kallal (64) followed by Sivaganga (57). In terms of the PSR at the upper primary level, the highest was recorded in Singampunari (322) followed by Sakkottai (229), while the lowest was registered in Kannangudi (78) followed by Thiruppathur (140). Some other blocks that had above 200 PSR at the upper primary level were Sivaganga, Manamadurai and Devakottai.

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 10^{th} standard with public examination, which indicates that one should have completed atleast upto this level. The secondary school GER for the various blocks of Sivaganga district has been presented in Table 5.8 for the years 2011-12 and 2013-14. The district total secondary school GER was higher than the 100 per cent level and showed a marginal increase from 106.38 per cent in 2011-12 to 106.70 per cent in 2013-14. The boys' and girls' secondary school GER also showed improvement between the reference years and stood at 106.59 per cent and 106.80 per cent respectively during 2013-14. The highest secondary school GER among the blocks in all three categories, i.e., total, boys and girls, was recorded by Sakkottai with 107.16 per cent, 107.09 per cent and 107.22 respectively during 2013-14, while all other blocks were near the respective district levels in this respect. Gender gap also did not seem to exist at the district level or at the block level. Thanks to the initiatives taken by the State Government and the district authorities for the remarkable performance with regard to the secondary school GER.

Table 5.8 Enrolment in Secondary Education

Sl. No	Blocks/ District	Secondary						
		No. of Schools	Boys		Girls		Total	
		2013-14	2011-12	2013-14	2011-12	2013-14	2011-12	2013-14
1	Sivaganga	7	106.75	106.85	106.79	106.91	106.82	106.88
2	Kalaiyarkovil	5	106.01	106.19	106.11	106.73	106.06	106.46
3	Manamadura	8	106.43	106.48	106.52	106.82	106.47	106.65
4	Thiruppuvan	9	106.32	106.51	106.75	106.91	106.53	106.71
5	Ilaiyankudi	4	106.22	106.39	106.27	106.46	106.24	106.43
6	Devakottai	3	106.29	106.49	106.72	106.86	106.50	106.68
7	Kannangudi	4	106.01	106.29	106.02	106.46	106.01	106.38
8	Sakkottai	10	106.96	107.09	106.85	107.22	106.90	107.16
9	Thiruppathu	6	106.55	106.69	106.65	106.95	106.60	106.82
10	Singampunar	7	106.53	106.74	106.57	106.78	106.55	106.76
11	S.Pudur	2	106.04	106.91	106.05	106.64	106.04	106.78
12	Kallal	5	106.12	106.47	106.17	106.87	106.14	106.67
	District	70	106.33	106.59	106.43	106.80	106.38	106.70

Source: Education Department, Sivaganga

Dropouts in Secondary Education

The dropout rate at the secondary level for all the blocks of Sivaganga district have been presented in Table 5.9 for the years 2012-13 and 2013-14. The Table reveals that the district total dropout at the secondary level was quite low at 0.54 per cent in 2012-13 and marginally declined to 0.50 per cent in 2013-14. The boys' and girls' dropout rates at the secondary level also declined marginally during the reference years and stood at 0.54 per cent and 0.53 per cent respectively during 2013-14. No gender gap can be found at the district level.

Table 5.9 Dropouts in Secondary Education (in percentage)

Sl. No	Blocks/District	Dropout in Secondary Rate					
		Boys		Girls		Total	
		2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
1	Sivaganga	0.46	0.43	0.53	0.50	0.50	0.47
2	Kalaiyarkovil	0.36	0.31	0.63	0.60	0.50	0.46
3	Manamadurai	0.45	0.41	0.54	0.52	0.50	0.47
4	Thiruppuvanam	0.43	0.40	0.56	0.54	0.50	0.47
5	Ilaiyankudi	0.51	0.48	0.48	0.53	0.50	0.51
6	Devakottai	0.40	0.35	0.59	0.58	0.50	0.47
7	Kannangudi	0.56	0.48	0.43	0.41	0.50	0.45
8	Sakkottai	0.56	0.52	0.40	0.30	0.48	0.41
9	Thiruppathur	0.98	0.92	0.54	0.51	0.76	0.72
10	Singampunari	0.40	0.30	0.59	0.52	0.50	0.41
11	S.Pudur	0.96	0.90	0.54	0.52	0.75	0.71
12	Kallal	0.44	0.40	0.55	0.51	0.50	0.46
	District	0.54	0.49	0.53	0.50	0.54	0.50

Source: Education Department, Sivaganga

Among the blocks not much variation could be found in terms of the total secondary level dropouts during 2013-14. Only two blocks, viz., Thiruppathur (0.72 per cent) and S.Pudur (0.71 per cent), were away from the district level. In the secondary level dropouts for boys, the lowest was recorded in Singampunari (0.30 per cent) during 2013-14, closely followed by Kalaiyarkovil (0.31), while the highest was registered in Thiruppathur (0.92 per cent) closely followed by S.Pudur (0.90 per cent). In terms of the secondary level dropouts for girls, the lowest was recorded in Sakkottai (0.30 per cent) during 2013-14, followed by Kannangudi (0.41 per cent), while the highest was registered in Kalaiyarkovil (0.60 per cent) followed by Devakottai (0.58 per cent). It is good that the participation of teachers and parents, strict monitoring by the State, etc., have contributed to such reduction in drop out.

Box-5.1 Initiatives for improvement in quality of Education

The quality of education mainly depends upon the interaction between the teacher and the student. Gap between teacher and student is one of the reasons the degradation of quality of education. People like to enroll their children in private schools rather than government schools for this reason. In this scenario, Activity Based Learning (ABL) summative and formative systems have been introduced to overcome these problems. These educational systems have certain objectives to improve the quality of education through improvement in the teacher – student interaction, like: one, imparting live education; two, introducing role play; three, encouraging cent per cent reading skill; and four, day-to-day interaction between the students about the their activities. To develop the skills, three types of performance standards have been implemented in Sivaganga district. The first consists of cleanliness in terms of the personal hygiene and class room environment; the second consists of effective use of available resources; and the third is about creating leadership skills among the students. Apart from, that one mobile science lab has been introduced to improve the quality of science education in the district. The above mentioned pedagogy methods have been implemented for lifting up the quality of education in Sivaganga district.

Analyzing the education related data of Sivaganga district, it was found that the girls' dropout was higher in the district and it was highest in S.Pudur block compared to other blocks of the district. So, a residential school was built in S.Pudur block exclusively for girls by the concerned authorities in order to pay special attention to the needs of girls and improve the quality of education in the block.

Box 5.2 Reading Writing Skills among Primary and Upper Primary School Children

Effective reading writing skills are as important for effective communication as speaking and listening skills. Reading skills serve as a foundation for writing. Developed and mastered, effective reading skills give people the opportunity to learn new information about the world, people, events, and places, enrich their vocabularies, and improve their writing skills. In India, around 40 per cent of children cannot read and write a paragraph without struggle in India. In this scenario, ABL was introduced by the government. This activity based learning is moderately influencing the students reading and writing skills. A separate supplementary reader book is issued to each student for improving reading capability. For developing writing skills among the students, a separate black board has been allotted to each student in primary education. The block level (Block Resource Teacher Educators (BRTEs) have been appointed for analyzing reading and writing skill among the children. BRTEs visit a school once in fifteen days and examine the progress of the students' reading and writing skills. Apart from this some of the Head Masters have been adopting different methods to improve the creativity of the students by using wall as learning material. These are the current steps implemented towards encouraging reading and writing skills in Sivaganga district. A random survey in some of the schools in Sivaganga district revealed that this mechanism is paying dividends.

Access to Higher Secondary Schools

The block-wise availability of high schools would give some understanding about the access to secondary education. There were totally 70 high schools in the district during 2013-14, which covers 2,999 habitations and roughly works out to one high school per 43 habitations.This ratio does not seem to be sufficient enough. Among the blocks, Sakkottai had the maximum number of 10 high schools during 2013-14, followed by Thiruppuvanam with nine high schools, while S.Pudur had the minimum of two high schools followed by Devakottai with three high schools. In terms of access ratio in the blocks, the lowest was recorded in Thiruppuvanam with one high school covering 21 habitations, followed by Singampunari with one high school covering 24 habitations, while the highest was found in Devakottai with one high school covering 133 habitations, followed by Kalaiyarkovil and Ilaiyankudi with one high school covering 75 habitations. So, the access ratio of high schools in the district needs to be improved by increasing the number of high schools in blocks where the access ratio was found to be high.

Basic Infrastructure

Infrastructure facilities in schools are very important for the students in the teaching-learning process. The basic infrastructure of the schools in the various blocks of Sivaganga district have been provided in Table 5.10 for the year 2013-14. It can be observed that nearly 50 per cent of the schools were functioning with three class rooms, while around 45 per cent of the schools had more than three class rooms.

Cent per cent of the schools had toilet facilities in the district, while the percentage of schools provided with girls toilet was around 96 per cent. Out of the 12 blocks, seven blocks, viz., Manamadurai, Ilaiyankudi, Devakottai, Kannangudi, Thiruppathur, S.Pudur and Kallal, had achieved 100 per cent with respect to provision of girls' toilets, while Kalaiyarkovil and Thiruppuvanam were the blocks that needed urgent attention in this respect. The schools without electricity in the district was just 0.7 per cent. Six blocks, viz., Sivaganga, Kalaiyarkovil, Devakottai, Kannangudi, Sakkottai and S.Pudur, achieved 100 per cent with respect to provision of electricity to schools. Around 35 per cent of the schools had no compound walls, but these schools may be small primary schools.

Table 5.10 Infrastructure

Sl. No	Blocks/District	Total No. Of Schools	With 3 Class Rooms	More than 3 Class Rooms	Without Toilet	With Girls Toilet	Without Electricity	Without Compound Wall	Without Drinking water	Without Desk and Chair
1	Sivaganga	127	50	74	0	4	0	49	0	0
2	Kalaiyarkovil	130	82	48	0	25	0	48	0	0
3	Manamadurai	92	43	44	0	0	1	33	0	1
4	Thiruppuvanam	109	52	53	0	13	3	34	0	0
5	Ilaiyankudi	92	52	39	0	0	1	47	0	2
6	Devakottai	93	63	30	0	0	0	22	0	0
7	Kannangudi	93	17	25	0	0	0	10	0	0
8	Sakkottai	94	40	48	0	1	0	71	0	0
9	Thiruppathur	102	47	54	0	0	1	32	0	8
10	Singampunari	79	32	46	0	2	1	12	0	6
11	S.Pudur	68	37	29	0	0	0	27	0	7
12	Kallal	80	48	31	0	0	1	12	0	7
	District	1159	563	521	0	45	8	397	0	31

Source: Education Department, Sivaganga (2013-14)

It was good to notice that around 100 per cent of schools had drinking water facility, and around 98 per cent of the schools had 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. Overall, the infrastructure of the schools were looking better, but for certain issues which needed to be taken care and hence, sufficient attention should be made to increase basic amenities in all the schools, which badly require them.

Hostel Facilities

The Tamil Nadu Government has provided hostel facilities for boys and girls under two categories, Backward Class Hostel and Adhidravidar Welfare Hostel. The students from rural areas and those who were in remote areas were supported with such hostel facilities. Hostel facility encouraged more boys and girls to join the education stream. The Table 5.11 provides the details of the hostel facilities in the various blocks of Sivaganga district for the year 2013-14. The hostel facilities were available in 172

schools in Sivaganga district out of the total 1,159 schools, which in terms of percentage works out to 14.84. Block-wise, it was observed that Sivaganga had the maximum number of schools covered with hostel facility (23), followed by Manamadurai and Sakkottai (18), while the lowest number of schools with hostels was found in Kannangudi (5) followed by S.Pudur (8). In terms of the students using hostels, the district level figure was 4,734, which was around 20 per cent of the total number of students in the schools with hostels. Among the blocks, Sivaganga had the highest number of students using hostels with 1,054 during 2013-14, followed by Thiruppathur (716), while the lowest in this regard was Kannangudi (32) followed by S.Pudur (124). In terms of the number of students per hostel, the highest was recorded in Sivaganga (46), while the lowest was registered in Kannangudi (6). Here, it can be observed that blocks with larger urban areas had more students in hostels compared to the blocks with more 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, there is needs to provide urban infrastructure in rural areas. There is also need to locate higher education facilities with hostels in rural areas too.

Table 5.11 Hostels

Sl. No	Blocks/District	No. Schools with Hostel	Total Number of Students	No. of Students in Hostels
1	Sivaganga	23	3,323	1,054
2	Kalaiyarkovil	14	2,230	422
3	Manamadurai	18	2,482	477
4	Thiruppuvanam	14	2,845	408
5	Ilaiyankudi	11	2,176	420
6	Devakottai	16	1,419	307
7	Kannangudi	5	327	32
8	Sakkottai	18	3,968	425
9	Thiruppathur	17	1,703	716
10	Singampunari	13	1,837	143
11	S.Pudur	8	1,318	124
12	Kallal	15	1,904	206
	District	172	25,532	4,734

Source: Education Department, DBCW, DADW, Sivaganga (2013-14)

Box-5.3 Technology Initiatives in School Education

Technology initiative programmes have been implemented since the introduction of SSA. In Sivaganga district computer aided learning in schools is empowering the students in the technologized world. To further develop the level of computer aided learning, the concerned authorities have adopted ICT oriented education. In this direction, internet connections have been provided to 14 schools in the district, which is a small number and needs to be increased rapidly. This scheme would be helpful to improve connectivity in the classrooms and assist collaborative learning. This system sets up avenues for the teachers and students to exchange unique teaching and learning processes. Apart from this, in an effort to reduce the study materials of school children, audio-visual based learning material has been given to all schools. For reducing communication gap between Headmasters and administrations, a special SIM card has been provided to all Headmasters. A science mobile van has been going around the district to provide science lab facility for primary education. It meets each school once in a fortnight.

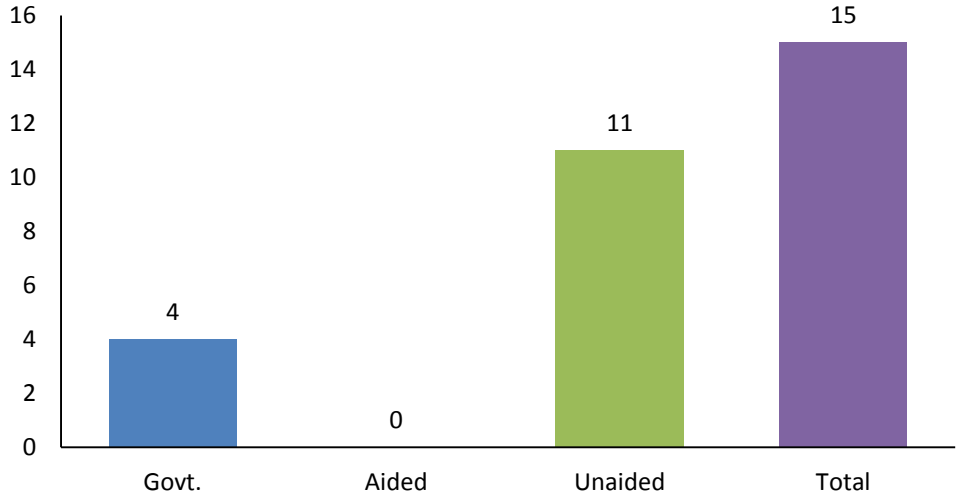
In order to get the upto date information, regarding the infrastructure of the schools, the school-based Annual Information System, called Unified District Information System for Education (UDISE 2012) has been introduced. This system helps to get data online and keep track of the infrastructural facilities by the concerned authorities.

Higher Education

Arts and Science Colleges

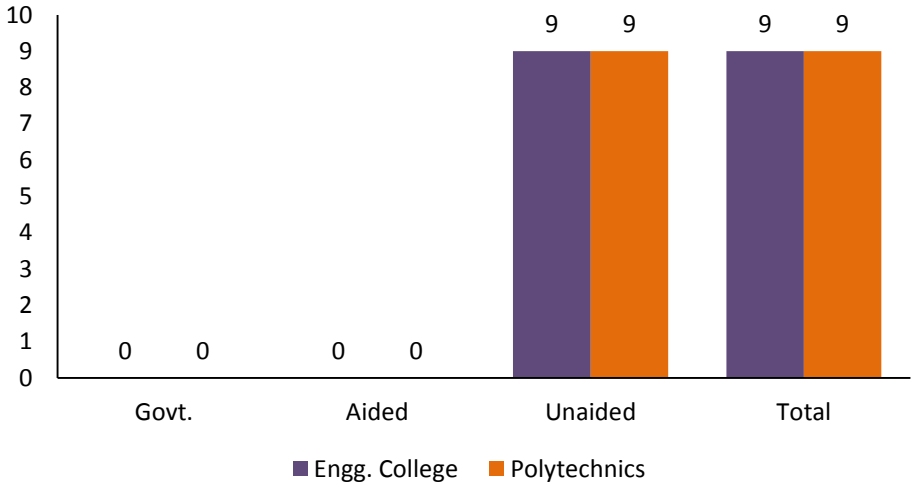
In Sivaganga district, there is one University, viz., Alagappa University, which is in Karaikudi (see Apendix Table 5.2). The details of the Arts and Science Colleges have been provided in Figure 5.2, and it can be seen that there were 15 Arts and Science Colleges in Sivaganga district in the year 2013-14, out of which four were government colleges and 11 unaided private colleges. The number of students in Arts and Science Colleges were more than Engineering Colleges. Block-wise, it was observed that Sakkottai, Sivaganga and Thiruppuvanam had colleges in all categories, viz., Arts and Science, Engineering, Polytechnic and Other Institutions, while S.Pudur and Kannangudi did not have any colleges. Sakkottai had five Arts and Science Colleges with 6,648 students followed by Devakottai (3 colleges; 3,320 students).

Figure 5.2 Arts and Science Colleges



Source: District Statistical Handbook, Sivaganga (2013-14)

Figure 5.3 Engineering Colleges and Polytechnic Colleges



Source: District Statistical Handbook, Sivaganga (2013-14)

Technical Education

Figure 5.3 provides the details of Engineering Colleges and Polytechnics in Sivaganga district for the year 2013-14 (see Apendix Table 5.3), which revealed that there were nine Engineering Colleges and nine Polytechnics, and all of them were unaided private institutions. In terms of Engineering Colleges, Thiruppuvanam had four colleges with 7,447 students followed by Sakkottai (3 colleges; 3,097 students). In terms of Polytechnics, Thiruppuvanam, Sakkottai and Kallal blocks had two each and Sivaganga, Manamadurai and Devakottai had one each.

Conclusion

In view of the above analysis, it could be said that the total literacy rate of Sivaganga district increased during the last decade (2001-2011). Female literacy rate in the district was notably lower than the State, which needs to be attended with appropriate measures. Among the blocks, though the female literacy rate of Sakkottai increased by 14.54 per cent and the total literacy rate by 4.2 per cent, the male literacy rate had a steep drop by 9.43 per cent in 2011 compared to 2001. The literacy rate of S.Pudur showed better performance in the year 2011 compared to the year 2001, but it scored the least among the blocks in male literacy during the same period, so necessary steps to improve the literacy rate of the poor performing blocks need to be strengthened through life-long learning programmes and community colleges.

Anyhow, the GER at the primary, upper primary and secondary levels were higher than 100 per cent in all the blocks, which is a very good achievement. The completion rate at the primary and upper primary levels were also high, nearing the 100 per cent mark. Not much gender gap was found in the primary and upper primary levels in terms of enrolment and completion rates. This could be attributed to primary education pro-active policies initiated by both the State and Central Governments including Sarva Shiksha Abiyan, Right to Education Act, compulsory education for children under 14 years, Mid-day Meals Scheme, etc. The deviations from the district level identified in certain blocks as mentioned above, may be due to the migration or other factors.

Comparing the primary and upper primary dropout rates for all three categories, i.e., total, boys and girls, revealed that the upper primary dropout rates were higher than the primary level and this was as expected. As we move up the education ladder, the dropout rates tend to increase, but one has to evolve strategies to reduce the dropouts at

all levels. The Government of Tamil Nadu has taken several steps in this regard and has been able to bring the dropout rates to very low levels. Yet much more has to be done to bring the dropout rates to the zero level. In terms of transition rate from primary to upper primary, some of the blocks had lower rates compared to the district level, which needs to be addressed.

The total number of primary schools during 2013-14 roughly works out to one primary school for every three habitations and one upper primary school for every nine habitations. This seems to be quite good, but the distance between the school and the habitation as another factor that needs to be analyzed before making any value judgments. It is interesting to note that in all the blocks the number of primary schools (except Sakkottai) declined and the number upper primary schools increased between the reference years. The number of schools were distributed in accordance with the number of habitations, but as observed earlier, the population in the district seems to be scattered and more importantly access to schools depend upon the distance to be covered to reach the school from the habitation.

The block-wise analysis revealed that the PTR at both the levels were in the ideal range for all blocks with some variations. But, these figures are just averages at the block and district levels. However, at the individual school level, there certainly would be some mismatches like students with no teachers or teachers with no students. In terms of the PSR, the district level at the primary and upper primary levels were 64.34 and 195.71 students per school respectively during 2013-14, which seems to be on the lower side. But, here the average at the district level or at the block level may not provide the true picture. For example, a school located in a urban area may have to cater to a larger proportion of students and would economize its operations, while a school located at a remote habitation may have to function with lower number of students even if moves in the opposite direction in terms of economy as it is the right of every child in the country to get education under the Right to Education Act.

The infrastructure of the schools were looking better, but for certain issues which need to be taken care and 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 larger urban areas had more students in hostels compared to the blocks with larger rural areas. This is quite natural as students would prefer to study in urban area, which

may offer them much more intangible benefits like greater exposure to resources. So, what needs to be done is that urban infrastructure should be provided in rural areas.

In terms of higher education, it was observed that Sakkottai, Sivaganga and Thiruppuvanam had colleges in all categories, viz., Arts and Science, Engineering, Polytechnic and Other Institutions, while S.Pudur and Kannangudi did not have any colleges. It was also observed that the number of students in Arts and Science Colleges were more than Engineering Colleges.

Overall, only when their attitude towards education is changed, more children will join the education stream. Children oriented education rather than rote learning can be one step in this direction. Rather than competing for marks, students may be encouraged to question and learn. This would involve them in the teaching-learning process and help them continue schooling rather than dropping out. Education and literacy being the requisite for human capital formation, facilities in this regard need to be provided and strengthened to improve the educational and literacy status in Sivaganga district.

CHAPTER 6

GENDER

Chapter - 6

Gender

"Woman is the companion of man, gifted with equal mental capacities. She has the right to participate in the minutes 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 the contributions of women the to the society. The policies of the State favour the participation of women in public life and contribute to society. But, often such policies are a contradiction to social norms, where the State often remains silent taking the sensitivity of such issues and also the social instability. However, since 1980s, gender as a concept was recognized and well discussed. It is since 1995 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 prominent in analyzing women's role in agriculture. They examine 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, effect choices of crop and technology, and define the gender role. (Meier and Rauch, 2002.) In the same perspective, the District Human Development Report (DHDR) also tries 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 in Sivaganga district.

Table 6.1 Comparative Status of Women

Sl.No		District
1	Female Population (in no.)	6,70,429
2	Percentage in Total Population	50.06
3	Sex-Ratio	1,003
4	Female Literacy Rate	71.85
5	School Enrolment (GER Primary)*	102.29
6	MMR*	80
7	Percentage of Women Workers in AgriculturalSector	66.44
8	Percentage of Women in Non-Agri. Sector	33.36
Source: **Census 2011, *Education Department, Tamil Nadu**		

The status of women in Sivaganga district had been analyzed 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 6,70,429 which was 50.63 per cent of the total population. As the percentage of female population was more than the 50, the sex ratio was inclined towards female at 1,003, which was a good trend. The female literacy rate was 71.85 per cent and was nine per cent lower than district male literacy rate and 3 per cent lower than the State female literacy rate as per the Census 2011. The female gross enrolment at the primary level in the district was 102.29 per cent in the year 2013-14, which was marginally lower than the district male and State female primary enrolment

rates of 102.65 per cent and 102.42 per cent respectively in the same year. The MMR of the district was 80, which was far behind the State level rate of 68 in the year 2013-14.

The percentage of women in the non-agricultural sector was 33.36 per cent, which was lower than the percentage of women in the agricultural sector (66.44 per cent). Hence, relatively less women were in non-farm employment in the district. The 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. Any scheme to empower women needs to concentrate on increasing the economic participation of women and recognition of such employment.

In the globalization context, women were preferred by private corporate in service industries, self-employment, out sourcing opportunities, etc., which may all be used in women's favour. Large corporates may establish rural industries, where reigned incentives and concessions may be offered by the State. Such initiatives will cater to more rural and female employment.

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. Micro level efficiency results through increased household productivity and macro efficiency results through positive synergies between indicators of gender equality and economic growth have been recorded. Development rationales for enhancing women's access to economic and financial resources include women'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 remain very much limited, although policies and schemes aiming at enabling women in the mainstream of economic affairs have been Implemented by the Government of India in general and the Government of

Tamil Nadu in particular. 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. The self-help group women have proved that women can come together and serve as change agents.

Box 6.1 Self Help Groups

Self Help Groups (SHGs) among women have been proving a significant strategy to bring the women into public space on the one hand and also make them reliant through micro credit operations. The women in group come together and save money and practice internal lending, which has considerably driven the traditional money lenders away. SHG, have created a silent revolution in the grass roots and has proved that poor are bankable, and women, given the opportunity and support will successfully transact with banking and avail formal credit. Access to formal credit was a dream, but now millions of women directly transact with banks and serve as models to other women. Banks are willing to support the SHG women on the basis of the performance of the internal lending and other indicators while doing the rating. Also, thanks to the Women Development Corporation for institutionalizing thousands of SHGs.

In Sivaganga district, the total number of SHGs was 5,177 with 64,714 members during 2013-14 (see Apendix Table 6.1). So, on an average each group had 12 to 13 members. The total credit availed in the district was 13,910.69 lakhs, which shows that each group received about 2.5 lakhs and each member received about Rs.20,000 as credit on an average. Sivaganga block had the maximum number of SHGs (1,264) followed by Manamadurai (839). The lowest number of SHGs, was found in S.Pudur block (28) followed by Kannangudi (36). Similar trend was noticed with respect to the number of members in the respective blocks.

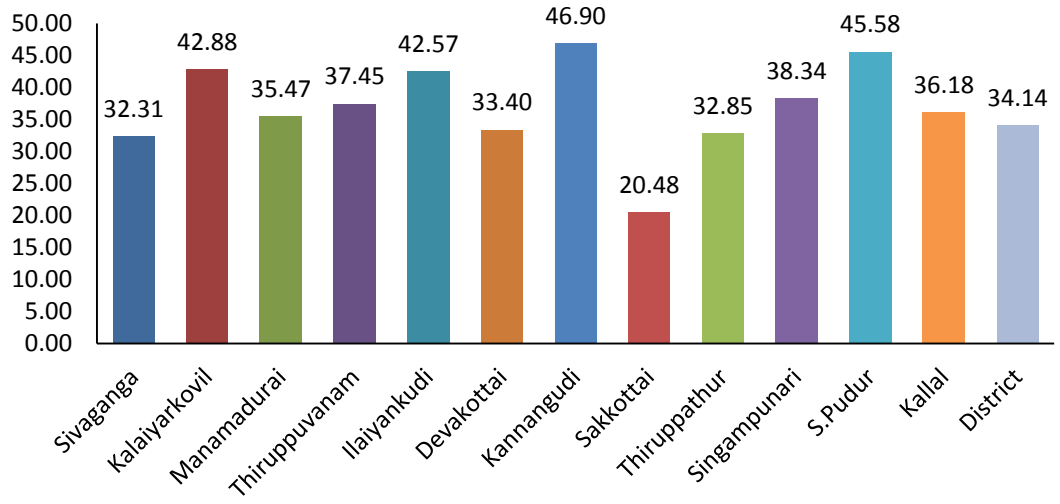
Block-wise variations provide that Sivaganga topped all the blocks with maximum credit availed (Rs.3,201 lakhs), followed by Manamadurai (Rs.2,732.49 lakhs). Other than these two blocks Kalaiyarkovil, Kallal and Devakottai availed more than Rs. 1,000 lakhs as credit. The block, which availed the lowest credit was Kannangudi with just Rs. 79.55 lakhs followed by S.Pudur (Rs. 91.07 lakhs). It should be noted that not all the SHGs in blocks with the maximum number of SHGs are fully active and linked with bank. Several groups would have remained confined to internal lending or failed to have qualified in the credit rating done by the Mahalir Thittam and the banks, in order to avail formal credit from the banks.

The SHG concept has gained momentum and gets spread to other areas by not over looking some of the processes laid down by the Women Development Corporation. Such deviations by Micro Finance Institutions (MFIs) may not take the SHG women for capacity building. Mere credit operations alone may not ensure empowerment unless the money saved is invested in enterprise development. Access to credit is one step forward and proves that women are bankable. But, real empowerment lies in converting such capacity and capability into enterprise development, which would bring economic independence and create employment opportunities for women in the local area.

Employment

The female WPR in Sivaganga district ranged from 21 per cent to 47 per cent (see Apendix Table 6.2). Kannangudi block had the highest female WPR and Sakkottai recorded the lowest female WPR out of the 12 blocks in the district. Fourblocks, viz., Kalaiyarkovil (43 per cent), Ilaiyankudi (43 per cent), Kannangudi (47 per cent), and S.Pudur (46 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 Sakkottai (21.per cent) and Sivaganga (32per cent) had the lowest female WPR (much lower than the district average), as these two blocks were much 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) MGNREA, sheme 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 Rate



Source: Census 2011

Trends in Political Participation

Political participation of women directly empowers women and contributes to women empowerment unlike employment, where the economic freedom through earnings, may not enable them to spend on their own. Added to this is the social expectation that women cannot manage the financial budget effectively and that it is the domain of men. On the other hand, participation of women in politics will take them to

power and accordingly sharing of power will be exercised contributing to empowerment. But, it has to be handled independently by the women involving themselves in decision making as per the norms.

Table 6.2 Membership in Assembly, Local Bodies

Sl. No.	Membership of Women in State Assembly and Local Body	Number of Male	Number of Female	Per cent of Female
1	Sivaganga	40	21	34.42
2	Kalaiyarkovil	37	25	40.32
3	Ilaiyankudi	41	30	42.25
4	Manamadurai	32	21	39.62
5	Thiruppuvanam	37	25	40.32
6	Kallal	39	21	35.00
7	Kannangudi	15	8	34.78
8	Devakottai	34	22	39.28
9	Thiruppathur	32	21	33.33
10	Sakkottai	23	14	37.83
11	Singampunari	26	14	35.00
12	S.Pudur	18	10	35.71
	District	374	232	38.28

Source: PAPD, Sivaganga (2011)

From Table 6.2, it can be observed that in Sivaganga district, the average participation in Local Bodies and Assembly for the year 2011 for both urban and rural areas was 38.28 per cent. It was around five per cent higher than the reservation of 33 per cent. Block-wise representation of women in Local Bodies and Assembly illustrates that Ilaiyankudi topped with 42.25 per cent followed by Kalaiyarkovil (40.32 per cent) Thiruppuvanam (40.32 per cent) and Manamadurai (39.62 per cent). On the other hand Thiruppathur received the least number of representations among all the blocks with lower percentage of women in Local Bodies and Assembly in Sivaganga district during 2011, followed by Kannangudi and Sivaganga. Sivaganga recorded the maximum gender gap with 19 per cent followed by Kallal with 18. Thanks to 33 per cent reservation in local bodies, which has driven up the percentage of women's political participation. Similarly, reservation in Assembly and Parliament alone will ensure more women to enter into politics.

The gender analysis has shown that there is gender gap in achievements, measured in terms of health, education, empowerment through employment, access to credit, participation in politics, etc. Encouraging women in paid employment, participation in decision making positions, and encouraging SHG women to engage in enterprise development, etc., will go a long way in improving the status of women and thereby reduce GII.

Conclusion

The gender analysis has shown that there is gender gap in achievements, measured in terms of health, education, empowerment through employment, access to credit, participation in politics, etc. Encouraging women in paid employment, participation in decision making positions, and encouraging SHG women to engage in enterprise development, etc., will go a long way in improving the status of women and thereby reduce GII.

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, sheme where more than 80 per cent of the workers were female. The WPR might hence have been influenced by these factors. The percentage of women in the non-agricultural sector was 33.36 per cent, which was lower than the percentage of women in the agricultural sector (66.44 per cent). Hence, relatively fewer women were in non-farm employment in the district. The 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. Any scheme to empower women needs to concentrate on increasing the economic participation of women and recognition of such employment. Thanks to 33 per cent reservation in local bodies, this has driven up the percentage of women's political participation. Similarly, reservation in Assembly and Parliament alone will ensure more women to enter into politics.

The SHG concept has gained momentum and has spread to other areas by not over looking some of the processes laid down by the Women Development Corporation. Such deviations by Micro Finance Institutions (MFIs) may not take the SHG women for capacity building. Mere credit operations alone may not ensure empowerment unless the money saved is invested in enterprise development. Access to credit is one step forward

and proves that women are bankable. But, real empowerment lies in converting such capacity and capability into enterprise development, which would bring economic independence and create employment opportunities for women in the local area.

In the globalization context, women were preferred by private corporates in service industries, self-employment, out sourcing opportunities, etc., which may all be used in women's favour. Large corporates may establish rural industries, where reigned incentives and concessions may be offered by the State. Such initiatives will cater to more rural and female employment.

Complete equality can be realized only when women participate in decision making particularly in politics, entrepreneurship, management etc. Representation of women in the gender sensitizing various committees must be made mandatory which will ensure the engendered policies. Engendering process will require both qualitative and quantitative interventions. Sivaganga district needs to implement such interventions for improving the work participation rate, literacy, education, political participation etc. The efforts taken by the district administration were appreciated. It should however be noted that the district has poor resources endowment and employment. Such poor resource endowment mainly impacts gender gap in terms of access to these resources. In order to fill the gap it is necessary that sufficient budgetary provision is made and sanctioned in time, towards creating gender sensitivity and mainstreaming gender in the development plan of the State.

CHAPTER 7

SOCIAL SECURITY

Chapter - 7

Social Security

Introduction

Social security exemplifies the message that each individual is in some way responsible for the well being of the other fellow citizens. David Kelly, 1988, brings out this in short as 'we are all in this together' (A life of one's own: rights and the welfare state, 1988) emphasizing the participation of everyone in creation of social security. Unlike insurance, the beneficiaries need not pay directly to the fund corpus, but others who belong to higher income strata need to contribute in some form though they may not benefit. The Government has the prerogative to take care each of its citizens and provide them with basic amenities, so as to create an equitable society. The fund allotted by the government for social security measures originate from the direct and indirect taxes paid by the people which is similar to any revenue generated by the Government. In this context the participation of every citizen could be understood, that whoever pays the taxes without evasion are indirectly supplying fund to social security schemes.

Each individual is entitled to social security benefits by virtue of just being a citizen of that country, whether he contributes to economy or not. The history of social security envisages that it started for war veterans and later for labourers during unemployment periods. Now it has broadened its limits to all nationals who are in need physically, economically or socially. The wellbeing of the people and equitable development constitute the prime function of any welfare Government, for which these social security schemes provide a means to achieve the ends. The old aged, destitute, widows, unemployed, physically challenged, sick and unhealthy are given assistance by the Government in cash or kind so as to meet out their basic necessities. Though there are many NGOs that do a similar work in the uplift of the marginalized, the Government is the best institution to do the work in a comprehensive, sustainable and secular manner.

Government of Tamil Nadu scores better among other states in India in this sector owing to its holistic approach, including every citizen who in some way needs

assistance. Old age pension of Rs.1000 per person per month, with 30 kg of free rice through PDS, employment guarantee through MGNREGA are a few that secure better living standard for the old, destitute, widows and physically challenged. Provision of food, water, medicines and salt a subsidized rate would create a state with healthy happy citizens. Future of a State lies in the hands of the new born as they would be the citizens of tomorrow. Tamil Nadu Government with a clear comprehension that 'healthy mothers beget healthy children', has introduced schemes for the benefit of the female population in many ways.

Demographic Profile of the Aged

Demographic profile data as given in Table 7.1 provides the number of people above 60 years in the District of Sivaganga and in turn the number that were in need of social security cover to lead a respectable life. Of the total population of 13,39,101, about 1,53,040 were above 60 years of age and this was about 11.43 per cent of the population, with a share of 50.26 per cent male and 49.74 per cent female. Comparing this with the data of Tamil Nadu, the total share of above 60 years population was 10.41 per cent, and the shares of male and female were 48.75 per cent and 51.25 per cent respectively. Comparing the district figures with the State figures reveals that the district's above 60 years population figures were not in line with the State's figures and some deviations could be noticed. The total share of the above 60 years of the district was one per cent above the State's level. In terms of the shares of male and female, while the State's level male share was lower than that of female share, it was the other way round in the district.

Table 7.1 Demographic Profile (in no.)

Sl. No	District/State	Total Population	Population aged above 60		
			Male	Female	Total
1	District	13,39,101	76,918	76,122	1,53,040
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 scheme to assist the needy aged persons as part of the social security measures. Identification of the population in need of income for sustenance, disbursal of funds every month at their residence and monitoring such tasks might look difficult, but it has been successfully implemented in the State for long years.

Financial Security

Table 7.2 Financial Assistance to Old Age People

Sl. No	Category	Number of People Assisted	
		2012-13	2013-14
1	Indira Gandhi National Old-age pension	28,155	44,637
2	Indira Gandhi National Disabled Pension	889	866
3	Indira Gandhi National Widow Pension	6,974	6,638
4	Destitute PH Pension	10,192	9,989
5	Destitute Widow Pension	10,573	10,126
6	Destitute Deserted Wives Pension	1,619	1,549
7	Destitute Agriculture Labourer Pension	18,722	5,007
8	Un Married Pension	321	312

Source: District Revenue Office, District Statistical Handbook, Sivaganga (2013-14).

Table 7.2 explains the assistance received by different categories of people in the district. Maximum beneficiaries were from Indira Gandhi National Old Age Pension Scheme, the number of beneficiaries of which increased from 28,155 in the year 2012-13 to 44,637 in the year 2013-14 (people of both sex), while next was for Destitute Agricultural Labourer Pension,the number of beneficiaries under which declined from 18,722 in the year 2012-13 to 5,007 in the year 2013-14. Among the Destitute Widows, the number of beneficiaries marginally declined from 10,573 to 10, 126 during the same period. Similarly, the number of beneficiaries under Destitute Physically Handicapped Pension also declined from 10,192 to 9,989; Indira Gandhi National Widow Pension from 6, 974 to 6, 638; Destitute Deserted Wives Pension from 1, 619 to 1, 549; and

Unmarried Pension from 321 to 312 during the reference period. In short, all the categories, except the first category, witnessed a decline in 2013-14 compared to 2012-13, so it is necessary to analyse whether the number of beneficiaries had reduced or it was due to some other reason and appropriate steps may be initiated to spread awareness in this regard.

Differently Abled

Table 7.3 Assistance to Differently Abled (in no.)

Sl.No	Categories	Male	Female	Total
1	Locomotor	442	221	663
2	Hearing Impaired	161	174	335
3	Mental Retardation	129	69	198
4	Cerebral palsy	8	11	19
5	Visual Impaired	76	56	132
6	Multiple Disorders	26	27	53
7	Leprosy	28	6	34
8	Mental Illness	20	19	39
	Total	890	583	1,473

Source: Differently Abled Welfare Department,Sivaganga (2013-14)

Table 7.3 shows the number of people receiving assistance under different categories of differently abled. Of the total 1,473 recipients, 890 were male and the rest 583were female during the year 2013-14. Category-wise, 663 fall under locomotor disability, 335 hearing impaired, 198 mentally retarded, 19 with cerebral palsy, 132 visually challenged, 53 multiple disorders, 34 were with leprosy and 39 were with mental illness. Financial assistance given to these differently abled would help them to meet out their needs and would be of some succor to their caretakers.

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 need 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 financially help to 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 Schemeprovides 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 realted 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 statusof the mothers. The marriage and maternity assistance was provided to 3,219 women during 2013-14 in Sivaganga district, out of which 1,163 were graduates and 2,056 were non-graduates (see Apendix Table 7.1).

Other schemes like supply of Iron tablets to pregnant women, home check up by nursing assistants, free immunization to mother and child and cash benefits for family planning are a few that complement the social care given to the needy. Another laudable initiative is Chief Minister's comprehensive health insurance scheme wherein major surgeries were conducted all over the State in prescribed hospitals for the poor free of cost. The effect of such social security measures has a profound impact on health and standard of living of the people. So, such programmes are welcome and need to be continued in the long run for the improvements and the intangible benefits they provide.

Case Study: Widows, Destitute Widows and Disabled

The case of widows, destitute widow and disabled persons is important 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 Karisalpattipanchayat, located in S.Pudur block, Sivaganga district, reveal the existence of many such people, mostly women, who have to face unbearable conditions and situations every day. This reality is not understood by many or people simply refuse to accept the existence of such people. 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 deserted husband. A deserted short statured woman without any social security or support system lives at the edge of the life, and is afraid of being abducted and thrown into begging by the beggar mafia. Further, 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.

Crime against Women

Table 7.4 Crime against Women

Sl. No	Category	Number of Cases				
		2010	**2011**	2012	2013	2014
1	Rape	3	5	11	15	16
2	Dowry Death	4	1	3	4	3
3	Molestation	16	33	37	35	13
4	Sexual Harassment	0	1	0	0	0
5	Cruelty by Husband and His Relatives	35	43	57	87	51
6	Kidnapping And Abduction of Woman And Girls	30	30	39	26	37
Total		88	113	147	167	120
Source: Police Department, Sivaganga						

Table 7.4 comes out with the information regarding crime against women for the consecutive years from 2010 to 2014. 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. This indicator is one of the important components to identify and provide security to women who form nearly half the population. The data showed a marked increase in the number of registered cases of crime against women. Totally, 88 cases were registered in the year 2010, which increased to 120 in 2014. The highest number of cases in Sivaganga district was registered under Cruelty by husband category (51) in the year 2014, which was only 35 in the 2010. The lowest number of cases was registered under the Sexual Harassment category, which was almost nil in the reference years. Other than Dowry Death, all other cases recorded an increase in the number during the period 2010 to 2014.

Conclusion

Provision of monetary benefits to the target population through the social security initiatives of the Government infuses confidence among the population, specially the aged and the vulnerable sections. From the given chapter, it can be seen that the total share of the above 60 years of the district was one per cent above the State's level. In terms of the shares of male and female, while the State's level male share was lower than that of female share, it was the other way round in the district.

In terms of financial assistance to the aged and vulnerable sections of the society, only under the Indira Gandhi National Old Age Pension Scheme, the number of beneficiaries showed an increase, while under all the other financial assistance schemes, the number of beneficiaries witnessed a decline in 2013-14 compared to 2012-13. So, it is necessary to analyse whether the number of beneficiaries had reduced or it was due to some other reason and appropriate steps needs to be initiated to spread awareness in this regard. Likewise, in financial assistance given to the differently abled categories, the number of male was high when compared to female, so awareness regarding the same needs to be disseminated through proper channels such as SHGs and NGOs regarding the same.

Health and education of female population had been taken care of admirably as shown by the number of beneficiaries under marriage and maternity assistance program. But, the security of female needs to be improved since crime against women data showed increase in the number of cases from 2010 to 2014. The data may be only a tip of the iceberg as only registered cases would show up, while unregistered crime against women would be hidden. So, in order to provide security to women who form nearly half the population, more number of women police stations needs to be started in the district.

CHAPTER 8

INFRASTRUCTURE

Chapter - 8

Infrastructure

Introduction

Infrastructure forms the backbone of development in any country. Public infrastructure facilities provided by the State forms the basis for any other private players to enter into this sector. Infrastructure includes transport, housing, electricity, telecommunication, public utility centers like banks, parks, libraries, temples, auditoriums, museums, zoos and recreational places. Private organizations also play a major role in development of infrastructure but the basic structure has to be provided by the State and this would attract private companies to invest more and a public private partnership would be ideal in the ensuing years for maintenance of the facilities.

Transport forms a major component of infrastructure and it includes road, rail, air and waterways. Connectivity through roads, public transport even to small remote corners of the State, maintenance of roads and the public vehicles are best in Tamil Nadu as compared to other States. Over the past decade there has been a substantiable increase in highways, BT roads, and new roads to places all over the state. The frequency and status of the public transport is commendable and it runs throughout the state without leaving any village unconnected. Indian Railways are the best in the world in relation to distance covered, workforce and quality of service. Tamil Nadu is also well connected with railways that even very small towns have railway stations. For the district of Sivaganga, Tiruchirappalli or Madurai is the nearest airport, both international airports with commendable facilities and well connected with international and national destinations. Water transport is absent in this district due to lack of huge waterways and sea coasts. Energy formed the next major component of infrastructure and electrification was near cent per cent in the State. On telecommunication front the advent of cellular phones and the gradual disappearance of land lines can be seen in the State as well as the district.

Roads

One of the major aspects of connectivity is roads - the means of transportation of millions of Indians. In this aspect, National Highways and State Highways pass through a length of 54.5 km and 237.71 km respectively through the district connecting the district to the various parts of the State and the Nation. Next comes the 322.90 km of urban roads covered by the Municipalities. The Panchayat Union and Town Panchayat roads stretched to a length of 2084.64 km and 1175.93 km respectively providing connectivity to the rural population of the district. Other than road connectivity, the district is connected by the Indian Railways with a total route length of 142.05 kms. The district has 13 railway stations out of which two are major junctions.

Table 8.1 Distribution of Total Road Length

(in Km)

Sl. N	Blocks/District	Mud	WBM	Saralai Road	Metal Road	BT	CC	Total
1	Sivaganga	93.3	0	25.9	28.1	382.3	7.9	537.7
2	Kalaiyarkovil	50.5	0	36.0	38.7	564.6	0	689.8
3	Manamadurai	0	0	10.0	5.6	103.5	0.2	119.3
4	Thiruppuvanam	7.2	16.5	4.3	0.0	155.1	3.4	186.5
5	Ilaiyankudi	89.0	0	42.7	32.1	395.9	2.4	562.2
6	Devakottai	87.6	0	24.2	81.3	405.0	20.3	618.5
7	Kannangudi	22.2	0	15.4	33.5	199.2	3.6	274.0
8	Sakkottai	219.1	0	49.7	105.5	664	33.0	1071.0
9	Thiruppathur	2.1	0	5.4	3.8	47.1	0.6	59.1
10	Singampunari	80.9	0	4.7	14.3	184.6	10.7	295.4
11	S.Pudur	13.0	0	9.2	19.4	87.0	0.2	128.8
12	Kallal	34.1	0	22.3	30.2	201.6	0	288.3
	District*	699.0	16.5	249.8	392.5	3,389.9	82.4	4830.6

Source: District Statistical Handbook, Sivaganga (2013-14); *Statistical Handbook of TN 2013

The Table 8.1 presents the details of the various categories of road in the various blocks of Sivaganga district for the year 2013-14. The Table points out the total road length of the Sivaganga district to be 4,830.6 km during the year 2013-14. Of the total road length, 699.0 km was mud road, 16.5 km was WBM road, 249.8 km was Saralai

Road, 392.5 km was Metal Road, 3,389.9 km was BT road and 82.4 km was CC road. Block-wise analysis revealed that Sakkottai block accounted for maximum road length of 22.17 per cent of the district road length followed by Kalaiyarkovil (14.38 per cent). The lowest road length was found to be in Thiruppathur (1.22 per cent) followed by Manamadurai (2.47 per cent). No Mud Road was found in Manamadurai, while the maximum was found in Sakkottai (219.1 km). Except Thiruppuvanam, none of the other blocks had WBM Road. In the Saralai Road category, Sakkottai had the longest road length of 49.7 km, while Thiruppuvanam, Singampunari, Thiruppathur and S.Pudur had below 10 km of Saralai Road. In terms of Metal, BT and CC Roads, Sakkottai had the longest lengths of 105.5 km, 664.0 km and 33.0 km respectively, while Thiruppuvanam (zero km), Thiruppathur (47.1 km), and Kalaiyarkovil and Kallal (zero km) had the lowest road length in the respective categories. Though Sakkottai had the maximum share of roads in the district, 20.46 per cent (219.1 km) of the roads in the block were Mud Roads. Higher percentage of BT roads (70.18 per cent) shows rapid improvement in conversion of mud roads and other roads to bitumen roads in the district, but still nearly 15 per cent mud roads were found to exist in the district.

Electricity

Electricity is another major service by itself other than being an enabler to 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. In terms of rural electrification, according to the Statistical Hand Book of Tamil Nadu 2013, all the 512 villages in Sivaganga were provided with electricity. The household electricity consumption stood at 232.59 kwh., which was higher than that of the consumption of agricultural sector consumption, industrial consumption and Commercial consumption, which are 153.85 kwh, 97.42 kwh and 48.89 kwh respectively. The electrified pump sets in the district accounted to 24,373.

Table 8.2 Status of Electrification (in no.)

Sl.No	Blocks/District	Revenue Village	Hamlets	Towns	Population Covered	No. of Street Lights
1	Sivaganga	51	219	1	1,60,345	5,770
2	Kalaiyarkovil	70	365	1	1,09,089	6,489
3	Manamadurai	43	162	1	1,03,355	3,465
4	Thiruppuvanam	46	153	1	1,18,928	4,783
5	Ilaiyankudi	55	234	1	1,13,149	6,695
6	Devakottai	66	352	1	1,25,176	4,036
7	Kannangudi	25	196	0	32,455	2,010
8	Sakkottai	38	263	6	2,48,188	6,354
9	Thiruppathur	42	108	2	1,14,182	5,398
10	Singampunari	25	148	1	78,846	5,712
11	S.Pudur	16	108	0	47,451	2,613
12	Kallal	44	207	0	87,937	8,057
	District	521	2,515	15	13,39,101	61,382
Source: District Statistical Handbook, Sivaganga (2013-14) and Census 2011						

Electrification data provided in Table 8.2 gives a complete block-wise picture of the district during the year 2013-14. The district was spread out into a total number of 15 towns and 521 revenue villages, which had 2,515 hamlets. The district also had a population cover of 13,39,101. Totally, 61,382 street lights had been provided throughout the district during 2013-14, which accounted to about 22 persons per street light. Block-wise analysis revealed that even though Sakkottai had the maximum population of 2,48,188, the maximum number of street lights was found to be in Kallal (8,057) with apopulation of 87,937 and so, it works out to 11 persons per street light in Kallal, while it works out to 39 persons per street light in Sakkottai. Block-wise, the lowest number of street lights was observed to be in Kannangudi (2,010) followed by S.Pudur (2,613).

Communication System

Table 8.3 Telecommunication System

Sl. No	Blocks/District	No. of Tel. Exchange	No. of pco	No. of Land Line	No. of HH with Connection	Number of Mobile Phone Towers	Pop. Covered
1	Sivaganga	8	94	2,682	7,457	17	1,60,345
2	Kalaiyarkovil	5	42	625	3,410	15	1,09,089
3	Manamadurai	3	75	937	3,817	14	1,03,355
4	Thiruppuvanam	2	29	475	3,115	9	1,18,928
5	Ilaiyankudi	3	32	778	4,325	11	1,13,149
6	Devakottai	5	94	2,652	8,432	29	1,25,176
7	Kannangudi	4	35	492	1,418	9	32,455
8	Sakkottai	7	122	7,282	37,115	47	2,48,188
9	Thiruppathur	9	94	2,652	6,817	15	1,14,182
10	Singampunari	7	75	842	3,110	12	78,846
11	S.Pudur	2	17	128	1,407	5	47,451
12	Kallal	3	29	785	6,035	10	87,937
	District	58	738	20,330	86,458	193	13,39,101

Source: BSNL, Sivaganga (2013-14)

In the world of information technology revolution, communication has become even more significant. The details of the telecommunication sector in the various blocks of Sivaganga district have been provided in Table 8.3 for the year 2013-14. As can be seen from Table 8.3 the telecommunication sector shows a shift towards mobile phones as against conventional landline connections. The total number of telephone exchanges was 58, PCOs was 738, landline connections was 20,330, HH with connections was 86,458 and mobile towers was 193 in the district as a whole. Here again Sakkottai with the maximum population, had the maximum HH connectivity of 37,115, mobile towers (47), PCO (122) and landline connections (7,282). S.Pudur and Kannangudi with least population had lesser connections. Devakottai stood second in the number of mobile towers (24) followed by Sivaganga (17). Thiruppathur with the maximum number of telephone exchanges (9) followed by Sivaganga (8). Increasing mobile towers exemplify a shift in communication from traditional landline to mobile. HH connectivity depicts the usage of internet by more people, which is an effect of globalization. But, postal communication still plays a very vital role in the Indian Economy. It not only provides

communication facilities, but also performs multiple tasks such as banking. In this regard, the total number of Post Offices in the district was 672, i.e., 56 Post Offices per block at an average.

Financial Institutions

Moving on to the next imperative 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 Sivaganga district in the year 2013-14. The total number of co-operative institutions was 125, of this Ilaiyankudi block had the maximum number of 19 co-operative societies followed by Manamadurai with 15, while the least number of co-operative societies were found in Kannangudi (5) followed by Sakkottai and S.Pudur (6). A total of 3,47,653 persons were enrolled as members in the co-operative societies in the district during 2013-14.

Table 8.4 Commercial and Co-operative Banks

Sl. No	Blocks/District	Number of Co-Operative Societies	Number of Members	Commercial Banks	Number of Account Holders
1	Sivaganga	13	35,493	32	62,155
2	Kalaiyarkovil	13	36,060	22	54,155
3	Manamadurai	15	36,295	16	32,152
4	Thiruppuvanam	12	51,919	14	31,142
5	Ilaiyankudi	19	44,343	13	25,815
6	Devakottai	8	17,453	21	37,744
7	Kannangudi	5	11,391	3	18,121
8	Sakkottai	6	20,590	57	65,421
9	Thiruppathur	12	33,377	22	28,194
10	Singampunari	9	21,485	13	42,184
11	S.Pudur	6	15,226	9	24,182
12	Kallal	7	24,021	22	64,155
	District	125	3,47,653	244	4,85,420

Source: LDM, and District Statistical Handbook, Sivaganga (2013-14)

Block-wise analysis revealed that Thiruppuvanam had the maximum number of members in the co-operative societies (51,919) followed by Ilaiyankudi (44,343), while the lowest was found in Kannangudi (11,391) followed by S.Pudur (15,226). In terms of commercial banks in the district, a total number of 244 were functioning during 2013-14, with a total of 4,85,420 account holders at an average of about 2000 account holders per bank. Among the blocks, Sakkottai had the highest number of commercial banks (57)

followed by Sivaganga (32), while the lowest was in Kannangudi (3) followed by S.Pudur (9). In terms of the number of account holders, Sakkottai was first again with 65,421, followed by Kallal (64,155), while the lowest was found in Kannangudi (18,121) followed by Ilaiyankudi (25,815). In terms of the number of account holders per bank, Kannangudi had the highest ratio of about 6,040 account holders per bank, while the same in all the other blocks was about 2,000. There was a shift from society to banks, which was more visible in urbanized blocks like Sakkottai and Sivaganga.

Insurance

The phenomenon of 'risk' as calculable and insurable uncertainty pervades economic and social life everywhere. Now-a-days, risk of death is much higher, viewing the rapid changes in lifestyle, particularly the changes after the economic reforms were ushered in have 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, has put them more at stress leading to high risk. In this circumstance, insurance forms a crucial weapon providing security against risk and uncertainty.

Table 8.5 Insurance Companies

Sl. No	Name of the Companies	No. of Branches	Polices Issued
1	LIC	8	64,432
2	PLI	315	570
3	New India Insurance	5	5,980
4	Oriental Insurance	1	9,000
5	National Insurance	1	12,799
6	United India Insurance	1	7,182
Source: District Statistical Handbook, Sivaganga (2013-14)			

Table 8.5 lists out the insurance companies and policies issued data in Sivaganga district during 2013-14. A total of six insurance companies were present in the district during 2013-14 and had issued a total number of 99,963 policies during the same year. The maximum presence in terms of branches was found to be Peerless Life Insurance (PLI) with 315 branches, but in terms of the number of policies issued LIC topped the chart with 64,432. The New India Insurance, Oriental Insurance, National Insurance and United India Insurance were the other insurance companies in the district. If we take life insurance coverage in the district, it was only 4.85 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.

Transport Facilities

Sivaganga district is well connected by road within the district and outside with all major cities of the State. National Highway 85, 226 and State highway 34 runs through the district to provide more connectivity. State Transport Corporation buses provided services round the clock connecting all towns in the State of Tamil Nadu. The town of Sivaganga had a railway station which forms a stop- over for many trains running within and outside the State. Several Express trains and passenger trains were passing through the town connecting with the cities like Karaikudi, Rameshwaram, Ramanathapuram, Tiruchirappalli, Coimbatore, Erode, Tirupur, Chennai Egmore, Thanjavur, Villupuram, Cuddalore, Pudukkottai, Virudachallam, Varanasi, Bhuvaneswar, etc. The nearest airport is Madurai which is 40 km away and the next is Tiruchirappalli which is 130 km distance from Sivaganga.

Conclusion

This chapter reveals that the quantity of roads, provision of street lights, details of the communication system, quantity of Co-Operatives and commercial banks and insurance companies, which provide a vivid picture of the status of infrastructural facilities in the various blocks of the district. Block-wise analysis reveals that though Sakkottai had the maximum share of roads in the district, 20.46 per cent (219.1 km) of the roads in the block were Mud Roads. Higher percentage of BT roads (70.18 per cent) shows rapid improvement in conversion of mud roads and other roads to bitumen roads in the district, but still nearly 15 per cent mud roads were found to exist in the district. Except Thiruppuvanam, none of the other blocks had WBM Road, Thiruppuvanam (zero km) and Kalaiyarkovil and Kallal (zero km) had the lowest road length in the CC categories.

In terms of the provision of street lights, all blocks had more than 3,000, except Kannangudi and S.Pudur. So, the number of street lights in these blocks need to be increased. Increasing mobile towers exemplify a shift in communication from traditional landline to mobile. HH connectivity depicts the usage of internet by more people, which is an effect of globalization. In terms of the number of account holders per bank,

Kannangudi had the highest ratio of about 6,040 account holders per bank, while the same in all the other blocks was about 2,000, which implies that Kannangudi is in need additional branches. If we take life insurance coverage in the district, it was only 4.85 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. But the far-fetching cry of people in the district is for safe drinking water. The government should take appropriate steps to start desalinization units for converting sea water to drinkable water in the district in the near future. Infrastructure development is proportional to standard of living and this is proportional to high human development. Hence, any expansion or improvement in infrastructure is always welcome and the district, which can be classified as a backward district in the State has a huge appetite for the same.

CHAPTER 9

SUMMARY AND WAY FORWARD

Chapter - 9

Summary and Way Forward

Introduction

The Sivaganga District is divided into two revenue divisions, viz., Sivaganga and Devakottai and 12 blocks, viz., Sivaganga, Kalaiyarkovil, Manamadurai, Thiruppuvanam, Ilaiyankudi, Devakottai, Kannangudi, Sakkottai, Thiruppathur, Singampunari, S.Pudur and Kallal. The Sivaganga district consists 445 Village Panchayats and 521 Revenue Villages.

- Sivaganga (usually called as 'Sivagangai' in Tamil) is an administrative district of Tamil Nadu located in Southern India. Sivaganga District was carved out from the composite Ramnad District on 6th July, 1984 and the District started functioning on 15th March, 1985.
- According to Census 2011, the population of Sivaganga stood at 13.39 lakh, which was 1.85 lakh greater than the population of Census 2001 (11.54 lakh). The decennial growth rate of population in 2011 was 16.07 per cent. When compared to 2001, the decennial growth rate has increased just above three fold.
- In order to understand the agricultural situation, it is important to know the land use classification. The total geographical area of the district was 4,189 sq. km., which was 3.22 per cent of the total geographical area of Tamil Nadu.
- The total GDDP of the district was Rs. 6,02,986 lakh, out of which the contribution of the primary sector was Rs. 66,075 lakh, the contribution of secondary and tertiary sectors were Rs. 1,36,380 lakh and Rs. 4,00,531 lakh respectively in the year 2011-12.
- The per capita income of the district increased by around Rs. 24,000 during the period 2004-05 to 2011-12 and stood at Rs. 50,466 in 2011-12, while the State per capita income increased by around 30,000 during the same period and stood at Rs. 63,996 in 2011-12.

- The literacy rate in the district stood at 79.86 per cent in 2011, which was marginally lower than the State literacy rate 80.33 per cent.
- The female literacy rate was 71.85 per cent, which was much lower than the male literacy rate of 87.92 per cent. The gender gap in literacy was 16.28 between the male and female literacy rate.
- The rural literacy rate was 75.73 per cent in which the rural male literacy rate was 85.35 per cent and the rural female literacy rate was only 66.19 per cent. Here the gender gap in literacy rate was 19.16 per cent.

Human Development Status

Human Development Index (HDI)

- HDI of Sivaganga district, which comprises of 12 blocks, reveals that Devakottai block tops the table followed by Ilaiyankudi, Thiruppathur, Sakkottai and Kallal with index values of 0.829, 0.697, 0.677, 0.665 and 0.577 respectively.
- While the bottom five blocks are S.Pudur, Kalaiyarkovil, Sivaganga, Manamadurai and Thiruppuvanam with index values of 0.508, 0.509, 0.521, 0.526 and 0.536 respectively.
- Devakottai block secures the first position in terms of HDI as it performs best in terms of two health indicators, viz., MMR and U5MR; it performed second best in terms of five indicators, viz., Access to Cooking Fuel, Access to Toilet Facility, IMR, Literacy Rate and GER Primary; and it also performs above the district average in terms of Access to Electricity, Access to Pucca House and GER Secondary.
- But, it performs below the district level in terms of Access to Drinking Water (88.24 per cent).
- Ilaiyankudi secures the second rank in terms of HDI ranking as it performs well in all the health indicators, i.e., best in two health indicators, viz., IMR (5.2) and MMR (zero) and second best in terms of U5MR (2.1); it also performs better than the district level in terms of Access to Toilet Facility (93.56 per cent) and Access to Drinking Water (90.84per cent).
- So, even though Ilaiyankudi performs below the district level in all the other indicators, it is able to secure the second rank in terms of HDI as it performs very well in all the three health indicators and tops the Health Index (0.962).

- S.Pudur block, which is rural based, stands last in terms of HDI ranking as it performs most poorly in terms of Literacy rate; second lowest in terms of Access to Toilet Facilities, Access to Electricity, Access to Pucca House and U5MR (3.5 – second highest); performs much worse than the district level in terms of IMR (16.30) and Access to Cooking Fuel (28.20 per cent).
- But, it is astounding to notice that the block has zero MMR (2013-14) and has 100 per cent coverage in terms of Access to Drinking water.
- Kalaiyarkovil block stands at the second last position in terms of HDI ranking as it performs poorly in terms of Access to Toilet Facility (37.52 per cent) and second last in Access to Drinking Water (87.14 per cent); it also performs worse than the district level in eight indicators.
- The analysis of the HDI reveals that Devakottai secures the first rank with an index value of 0.829 indicating better development and departs from all other blocks in the district.
- All other blocks can be classified under the moderately developed blocks with HDI values in the range 0.500 – 0.799. Ilaiyankudi, Thiruppathur and Sakkottai blocks fall in the range 0.601 – 0.700 and can be classified as better developed within the moderately developed blocks.
- Some blocks that were expected to secure better ranks fell back and the cause could be attributed to health indicators that have a strong influence on the HDI ranking. The much urbanized blocks seem to perform poorly in terms of these indicators. One reason may be better reporting in such blocks compared to the rural based blocks.
- The rural based blocks are able to secure top positions due to better health indicators, but these blocks perform poorly in the other indicators such as education and standard of living. The standard of living indicators particularly are at low levels in the rural based blocks, which need immediate attention.
- Especially, Access to Cooking Fuel and Access to Toilet Facility seem to be on the lower side in all the blocks. The district level itself in this regard is not very encouraging.

Gender Inequality Index

- In terms of the GII of Sivaganga district, it can be seen that the top five blocks were S.Pudur, Manamadurai, Kallal, Singampunari and Devakottai with scores of 0.006, 0.008, 0.016, 0.016 and 0.020 respectively.
- While the bottom five blocks were Sivaganga, Sakkottai, Kalaiyarkovil, Thiruppuvanam and Thiruppathur with the scores of 0.091, 0.074, 0.073, 0.058 and 0.049 respectively.
- S.Pudur block secures the first place in terms of the GII ranking as it has zero MMR, and performs second best in terms of Share of Institutional Deliveries and Female WPR. It also has the lowest gender gap in Agricultural Wage Rate and second lowest gender gap in the Female WPR in Non-agricultural Sector.
- Manamadurai secures the second place in terms of the GII ranking as it also has zero MMR, and performs second best in Female WPR in Non-agricultural Sector (39.65 per cent).
- Sivaganga block gets the last position in terms of GII ranking as it has the highest MMR, below average Share of Female Children, Share of Female Elected Representatives in RLBs and ULBs and Female WPR. It also has high gender gap in the Literacy Rate, WPR, WPR in Non-agricultural Sector and Agricultural Wage Rate.
- Sakkottai block gets the second last position in terms of GII as it has the lowest Female WPR, second highest MMR and below average Share of Female Elected Representatives in RLBs and ULBs. It also has high gender gap in terms of WPR and WPR in Non-agricultural Sector.
- The analysis of the GII reveals that rural based blocks perform much better than their more urbanized counterparts with S.Pudur block securing the top rank. This is as expected. The rural blocks would have larger female WPR and lower gender gap in many indicators.
- But, what is to be kept in mind is that the difference among blocks in this regard has been strongly influenced by a single indicator, which is MMR; in terms of all other indicators there seems to be not much variation among the blocks.
- On the whole improvement in female achievements needs more emphasis in terms of basic infrastructural facilities, especially health.

- Hence, in general the Sivaganga administration may identify strategies to particularly improve the MMR, which can be seen to be able to strongly influence the GII rankings. All the blocks figuring in the top five spots in terms of GII ranking have zero MMR, on the other hand the bottom five blocks have very high MMR.
- The female WPR also needs to be improved in many blocks and strategies to reduce the gender gap in wages should be formulated. Some women do not participate in the labour force given their social conditioning and the support systems available for their participation.
- The State may have to function within such limitations and accordingly concentrate on areas where it would be possible to influence through its intervention reduce the gender inequality.
- There is need for prioritizing stratagies to address the existence of relatively higher MMR, which will have spiraling effects on the other achievements including Health and Empowerment indicators such as representation of women in local bodies.
- It was a vicious cycle, where poverty contributes to poor health of women, which further influences the MMR, and poor health affects the child health in terms of malnourishment, which in turn would affect the IMR and U5MR.
- Hence, it is necessary to improve the Health and Education indicators taking them as priority areas, which will in turn influence the achievements with respect to other indicators. Such a focus will ultimately improve the GII values.

Child Development Index

- The top five blocks in terms of CDI rankings are Devakottai, Thiruppathur, Kallal, Sakkottai and S.Pudur with index values of 0.704, 0.673, 0.637, 0.623 and 0.610 respectively.
- While the bottom five blocks are Thiruppuvanam, Kalaiyarkovil, Manamadurai, Kannangudi and Singampunari with index values of 0.288, 0.420, 0.441, 0.457 and 0.457 respectively.
- Devakottai block secures the first position in terms of CDI ranking as it performs best in two indicators, viz., U5MR (1.8) and Children Never Enrolled in Schools.

- Thiruppathur block secures the second position in terms of CDI ranking as it performs the best in Children Never Enrolled in Schools and it below average U5MR, low Percentage of Malnourished Children, above average GER Primary, above average GER Secondary and above average Transition Rate from Upper Primary to Secondary.
- Thiruppuvanam block is placed in the last position of in terms of CDIranking as it has performs above average in terms of U5MR (3.3), has highest Percentage of Malnourished Children (21), below average GER Primary (102.01 per cent), above average Children Never Enrolled in Schools (0.002 per cent), below average Transition Rate from Primary to Upper Primary (99.04 per cent) and above average Transition Rate from Upper Primary to Secondary (99.67 per cent).
- Kalaiyarkovil block is placed in the second last position of in terms of CDIranking as it has above average U5MR (3.3), low Juvenile Sex Ratio (946), below average GER Primary (102.10 per cent), below average GER Secondary (106.46 per cent) and below average Transition Rate from Upper Primary to Secondary (99.59 per cent).
- The CDI analysis suggests that the top six blocks get index values 0.500 – 0.799 and can classified under moderately developed blocks in this respect, which are Devakottai, Thiruppathur, Kallal, Sakkottai, S.Pudur and Ilaiyankudi.
- The remaining six blocks fall under the less developed category, amongst them Thiruppuvanam needs special attention as it gets very low index value of 0.288.
- The Health indicators, where the variations were more among the blocks need to be addressed rather than the Education indicators.

Multi Poverty Development Index

- The MPI of Sivaganga district ranges from 0.249 to 0.617. Sakkottai block has performed better by having a low index value of 0.264 and S.Pudur block has performed the least by having a high index value of 0.685.
- The top five better performing blocks are Sakkottai, Devakottai, Ilaiyankudi, Manamadurai and Sivaganga with index values of 0.264, 0.309, 0.483, 0.486 and 0.497 respectively.

- Whereas, the bottom five blocks are S.Pudur, Thiruppathur, Thiruppuvanam, Singampunari and Kallal with index values of 0.685, 0.617, 0.615, 0.578 and 0.564 respectively.
- Sakkottai block secures the first position of in terms of MPI ranking as it performs best in terms of Dropout in Secondary (0.41 per cent), Access to Cooking Fuel (50.77 per cent) and Access to Pucca House (90.20 per cent). It also has below average IMR (11.8), below average High Order Birth Rate (7.2), below average Percentage of Malnourished Children (8), above average Access to Toilet Facility (68.80 per cent) and above average Access to Electricity (95.53 per cent).
- Devakottai block secures the second position of in terms of MPI ranking as it has below average IMR(10.8), lowest High Order Birth Rate (3.9), low Percentage of Malnourished Children (4), below average Dropout in Primary (0.45 per cent), below average Dropout in Secondary(0.47 per cent), above average Access to Cooking Fuel (40.34 per cent), high Access to Toilet Facility (69.13 per cent), high Access to Pucca House (85 per cent) and above average Access to Electricity (93.74 per cent).
- S.Pudur block is placed in the last position in terms of MPI ranking as it has high IMR (16.3), Highest High Order Birth Rate (18.6), above average Percentage of Malnourished Children (13), second highest Dropout Secondary (0.71 per cent), low Access to Cooking Fuel (28.20 per cent), below average Access to Toilet Facility (44.26 per cent), low Access to Pucca House (68.09 per cent) and lowest Access to Electricity (89.11 per cent).
- Thiruppathur block is placed in the second last position in terms of MPI ranking as it has above average High Order Birth Rate (10.9), highest Dropout in Primary (0.66 per cent), highest Dropout in Secondary (0.72 per cent), low Access to Cooking Fuel (28.19 per cent), below average Access to Pucca House (73.60 per cent) and lowest Access to Electricity (89.11 per cent).
- The Standard of Living parameter tends to influence the ranking more, and the issues pertaining to access to cooking fuel, toilet and Pucca house needs to be addressed in all the blocks of Sivaganga district.
- The analysis of the MPI reveals that Sakkottai block secures the first rank in this regard with a very low index value of 0.264 followed by Devakottai (0.309). All other blocks had index values ranging between 0.483 – 0685.

- Here, the Standard of Living indicators seem to have more influence on the ranking, subject to average or above average performance in the Health indicators. All the blocks with higher values of MPI need to address issues related to basic infrastructure like cooking fuel and toilets.
- The health infrastructure also needs to be spruced-up in the district in all blocks. So, all the blocks except Sakkottai and Devakottai need to put huge effort in this direction.

Overall

- From the discussions regarding HDI, GII, CDI, and MPI it can be known that the outcome is mixed. Blocks which secured better ranks in terms of one index have not been able to secure the same kind of positions in the other indices with the exception of Devakottai and to some extent Sakkottai blocks.
- The reason seems to be the mixed achievement of the blocks in various indicators. None of the blocks are able to perform consistently in all the indicators under different parameters. Blocks that perform well in terms of the health parameter perform poorly in terms of the education or standard of living parameters.

Employment, Income and Poverty

- Sakkottai registered the highest percentage change of total workers followed by Devakottai by 27.50 per cent. The least percentage change was observed in Kannangudi with 4.84 per cent, which was followed by Kallal with 7.51 per cent.
- A wide range of percentage change was found among the blocks in the category of marginal workers, i.e., it ranged from -104 per cent to 276.33 per cent. Manamadurai block's percentage change was negative for non-worker, which showed that the employment had an upward trend.
- The difference in the rate of growth of female WPR in urban and rural areas was higher than the difference of male and total WPRs. The percentage change of male population was three times greater than the percentage change of male WPR between 2001 and 2011. Whereas, the percentage of female population was 12 times greater than the percentage of female WPR.
- Availability of employment opportunities had a positive impact on WPR, while availability of educational services will have negative impact on WPR, because the former attracts more youth and retain them in education and prevents from

going for employment. The extent of urbanization (that influence people to take up job and to earn money) was slightly larger in Sivaganga, Manamadurai, Devakottai and Thiruppathur blocks.

- But, the real cost of such employment opportunities should be understood and youth should be guided in the right direction of opting for higher and better education.
- In the cultivators' category, only Singampunari showed an increase over the period 2001 to 2011. Another block registering an increase in the cultivators' category was Devakottai with 6.31 per cent for female. All the remaining blocks recorded a decline in this category.
- Singampunari recorded the highest increase in the percentage share of cultivators from 2001 to 2011, male cultivators (32.56 per cent) and female cultivators (36.88 per cent). The lowest increase was recorded by Sakkottai with 3.23 per cent for male and 5.22 per cent for female.
- The contributions of Primary, Secondary and Tertiary GDDPs were Rs.41,811 lakhs, Rs. 74,171 lakhs and Rs. 1,92,630 lakhs in 2004-2005 respectively, which have substantially increased to Rs. 66,075 lakhs, Rs. 1,36,380 akhs and Rs. 4,00,531 lakhs in 2011-12 respectively.
- As a percentage of total job seekers registered, the number placed was very small at around one per cent on an average. So, certainly something has to be done to improve this situation. Other than registration and placement, the Sivaganga district Employment Exchange was engaged in many training activities and implementing Government schemes like Unemployment Relief Scheme, Job Mela, Study Circle, etc.
- Large proportion of households have got job through MGNREGA in Kallal (96.64 per cent) and S.Pudur (89.97 per cent) blocks. This proportion is very low in Sakkottai (23.21 per cent) and Thiruppathur (28.22 per cent). The district level in this regard was 50.93 per cent in 2013-14 and two other blocks, viz., Manamadurai and Singampunari.
- The most important impact of the MGNREGA has been on rural wages, which have seen the daylight in the past six to seven years.
- The increase has not only been in nominal terms, but also in real terms, which is a heartening fact in terms of benefits trickling down to the poor rural masses.

- The wage increase for female labourers is quite remarkable and the women are able to bargain for higher wages, thanks to MGNREGA, which should be continued and expanded.
- The per capita income of Sivaganga district was Rs. 26,325 in 2004-05, which grew by an average annual growth rate of 9.83 per cent and stood at Rs. 50,466 in 2011-12.
- At the same time, the State's per capita income was higher at Rs. 33,998 in 2004-05 and Rs. 63,996 in 2011-12, and grew at an average annual growth rate of 9.52 per cent.
- It can be seen the average poverty level of the district was 26.75 per cent during the year 2013-14. Among the blocks, S.Pudur registered the highest percentage of BPL HHs with 53.99 followed by Kannangudi with 39.55 and Kalaiyarkovil with 41.38. This trend was quite alarming.
- Sakkottai block alone had 22.65 per cent of total family cards in the district, followed by Sivaganga block with 11.52 per cent. In absolute numbers also Sakkottai had the highest number of family cards (95,755) followed by Sivaganga block with 48,719 family cards.
- In terms of the percentage of family cards to total households in the blocks, Kalaiyarkovil ranked first with 158.76 per cent followed by Sakkottai with 152.40 per cent. Except Singampunari, in all other blocks, the number of family cards was higher than the total number of households in the district.
- Proper accounting of households is needed in order to get the true picture regarding the family cards. If these things go well, nearly 25 per cent of the PDS products would be saved and simultaneously the inclusion of needy would automatically take place.
- Block-wise details regarding the different categories of lands for two points of time (2001-02 and 2013-14) reveal that in all the blocks, there was no change in the area under forest.
- In majority of the blocks, the area of barren and uncultivable land had slightly shrunk between the reference years. Maximum decline in this regard can be noticed in Manamadurai block from 1077 ha. in 2001-02 to 81.7 ha. in 2013-14. Except three blocks, viz., Kalaiyarkovil, Manamadurai and Kannangudi, in all the blocks, the area put to non-agriculture purpose has widened.

- The analysis of cropping intensity of Sivaganga district revealed that the net cropped area and the gross cropped area were the same in 2001-02, i.e., cropping intensity was one. In 2013-14 the cropping intensity recorded a negligible increase and stood at 1.002.
- In terms of irrigation intensity also the same picture as of cropping intensity was reflected. All the blocks had an irrigation intensity of 1.0 in both the reference years.
- The major and persistent problem of Sivaganga district was backward dry farming. Some private bore-well irrigation sources had come up, thanks to the efforts made by the government agencies. But, they were not sufficient, for, they had their own drawbacks. Hence, investment to irrigate dry lands is urgently required.
- A new scheme with camp based approach may be through Kaushal Kendras to be held in every block to give information about skill training options, outline possible career paths and their income generation potential.
- Exploring skills among youth in villages, to create awareness about skill acquisition and certification through live demonstration of skills supplemented by communication packages via local social media will bear fruits in increasing employment elasticity rates in blocks of the district.
- So, development in this district required some big-push, a large public sector investment, which was missing since the beginning.

Demography Health and Nutrition

- Sivaganga had a population of 11,53,747 in 2001 and it increased to 13,39,101 in 2011 with a decennial growth of 16.1 per cent. As a percentage of the State's population, Sivaganga district population was 1.9 per cent in 2001 and remained the same in 2011 also.
- Among the blocks Sakkottai registered the highest increase of 19.95 in 2001 and 18.53 in 2011 respectively. In most of the other blocks population growth between 2001 and 2011 was 8-12 per cent. Kallal and S.Pudur blocks registered the lowest growth rates of population between the reference years.

- It can be observed that CBR had declined between the years 2009 and 2014 from 16.3 to 14.2. In the year 2014, the CBR of the district was lower than the State level of 15.9.
- Among the blocks, CBR was the highest in S.Pudur block (19.5) during 2014 and it is the only block to have recorded an increase between the reference years.
- The lowest CBR was recorded in Sakkottai and Ilaiyankudi blocks (13.4), closely followed by Manamadurai block (13.6). Other than these three blocks, Kalaiyarkovil block had CBR lower than the district level.
- Most of the blocks in the district registered a negative sex ratio for the years 2001 and 2011 except Manamadurai and Sivaganga which increased from 989 to 1000 and 982 to 999 respectively.
- Notable decline among blocks was seen in Kannangudi and Devakottai of 10.36 and 9.25 percentages during the reference years.
- In Sakkottai block, Sex Ratio remained the same (1,004) during the reference years. In overall terms, the Sex Ratio was satisfactory in the 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 960 in 2011, which was higher than the State level.
- Among the blocks, Ilaiyankudi block had the highest Child Sex Ratio of 1,005. The Child Sex Ratio was 922 for Singampunari block, which was the lowest among all the blocks of the district.
- The Child Sex Ratio in Sivaganga block was 946 in 2011, which was less than the sex ratio in the district.
- Even though the population in the district expanded, the Child Sex Ratio in the district had decreased in many blocks.
- The lower level of Child Sex Ratio in certain blocks reflected low girl preference in the blocks and increased level of private medical practices, where the chances of female feticide existed, and 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 no valid proof of Female Infanticide were available.
- Anyhow, it could not be denied that there was preference for boy was widespred in the district, which could be changed only over the period of time with

incessant and insistent statutory and non-statutory measures to be ministered by GOs and NGOs.

- Life expectancy of district has improved from 64.0 years to 68.8 years among male between the reference years. There was an improvement of 4.8 years during the reference years. It also improved for female from 70.0 years to 72.3 years during the same period, which represents an improvement of 2.3 years.
- The combined life expectancy at birth of the district improved from 67.0 years to 70.4 years between the reference years.
- Ilaiyankudi recorded the lowest IMR of 5.2, while the highest IMR was recorded in Kannangudi (20.7) followed by Thiruppuvanam (19.4).
- Other than Ilaiyankudi four blocks, viz., Devakottai, Sakkottai, Thiruppathur and Kalaiyarkovil had IMR below the district level. All the other blocks had IMR higher than the district level.
- Poor health performance in such blocks, need adequate attention in protecting child health in the district. Post-natal mortality was higher than the Neo-Natal Mortality in the district showing that there was not enough child care for the new born. Adequate counseling to married couples and pregnant mothers would fetch desirable results in this regard.
- Seven blocks in the district registered zero MMR in 2013-14, while two blocks, viz., Sivaganga and Sakkottai registered the highest MMR among the blocks with 260 and 240 respectively in 2013-14. Other than these two blocks, Kalaiyarkovil block registered a high MMR of 120.
- But, nothing much can be said regarding the blocks in terms of the trend of MMR, as these seemed to be random occurrences and moreover the methodology of MMR uses maternal mortality per one lakh live births, which was not even close to the number of pregnant women in a block in a particular year. MMR at block level may not be worth studying at times where the numbers are too few.
- 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 to bring down MMR in such blocks.

- Sivaganga, Manamadurai, Ilaiyankudi, Devakottai and Singampunari recorded zero home deliveries, while there were one or two home deliveries in the other blocks.
- In terms of the share of deliveries in GH, Manamadurai topped the chart with 52.7 per cent followed by Sivaganga (48.6 per cent), while the least shares were recorded by S.Pudur (23.3 per cent) followed by Kannangudi (28.4 per cent).
- The highest Still Birth Rate was registered in Kannangudi (15.3), Kallal (14.4) and Sakkottai (14.1) blocks in 2007, while in 2014S. Pudur registered the highest Still Birth Rate of 18.3 followed by Ilaiyankudi (16.1).
- The lowest Still Birth Rate was recorded by Ilaiyankudi (1.2) in 2007 followed by S.Pudur (1.8), while the lowest Still Birth Rate in the year 2014 was recorded by Singampunari (5.4) followed by Devakottai (6.5).
- It was a sign of good health education among the people of the district that they had 100 per cent or more children immunized in the blocks except Kannangudi, which had recorded 99 per cent in this respect.
- Kalaiyarkovil, Devakottai, Kannangudi, Sakkottai, Thiruppathur and Kallal recorded lower rates of malnourishment than the district level among children in the age group 0-5 years during the year 2013-14.
- Water and Sanitation seemed inseparably intertwined to ensure sustenance of health in the State.
- Out of the twelve blocks, in seven blocks availability of water was covered in 90-100 per cent of its habitations and 100 per cent was covered by S.Pudur block closely followed by Singampunari (99.05 per cent). The block with lowest coverage was Kannangudi with 83 per cent followed by Kalaiyarkovil with 87.14 per cent.
- But, better leak detecting techniques and repair of broken hardware or replacement of the same, would improve the drinking water supply in the district.
- Out of the 12 blocks in the district, six blocks, viz., Sivaganga, Devakottai, Kannangudi, Sakkottai, Thiruppathur and Singampunari had percentage of HHs with toilet facility above the district level. Except a few blocks, all the blocks perform poorly in this respect.
- Moreover, the mere presence of toilets does not mean it is being used for the purpose it was built or even used at all. There are many toilets that are being

used as store rooms or sheds, many toilets are damaged beyond use and many toilets do not have water. These aspects are pervasive throughout the district in all the blocks.

- Open air defecation was very common in the district which made the people more prone to water related diseases. So, there is a pressing need for awareness regarding the use of toilets in all the blocks of the district which along with strict statutory measures alone could bring forth desirable results in this regard.
- The age group 40-49 recorded the second highest number of HIV positive cases in the year 2007-08 and 2013-14. In both the reference years, the incidence of HIV was noticed more among the male compared to the female.
- In the age group 25-29, the incidence of HIV was observed to higher for female compared to male in both the reference years. These issues need to be addressed with appropriate package of treatment, counseling and follow-up measures.
- Devakottai(233) followed by Sivaganga registered the highest number of TB cases (161) in 2007-08, while in 2013-14, the highest number of TB cases were registered in Sakkottai (241) followed by Sivaganga (177).
- Air Pollution caused by Granite Quarries was the major cause for increasing COPD, Bronchial Asthma related restrictive lung diseases and thereby increasing TB cases in the district. Corrective measures should be initiated to mitigate the problems.
- A major TB sanatorium supported by satellite sanatoriums need to be established in the district in order to arrest the growth such dreadful disease.
- The blocks Thiruppuvanam and Kannangudi recorded zero Leprosy cases during 2013-14. Three blocks, viz., Manamadurai, Sakkottai and Thiruppathur witnessed an increase in the number of Leprosy cases.
- 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 with speed.
- Integrated approaches between Health and Education Departments co-ordinated by the district authority would fetch better results. People Participatory Approach

and Peoples Movement initiated by NGOs and SHGs in safeguarding water bodies and environment and Health could make strides in Growth.

Literacy &Education

- Among the blocks, Sakkottai block stands at the top in male and total literacy rates, whereas in the female literacy rate, Devakottai stands first according to the Census 2011.
- In the year 2011 S.Pudur block scored last among the blocks in Sivaganga district.
- Though the female literacy rate of Sakkottai increased by 14.54 per cent and the total literacy rate by 4.2 per cent, the male literacy rate had a steep drop by 9.43 per cent in 2011 compared to 2001.
- Necessary steps to improve the literacy rate of the poor performing blocks need to be strengthened through life-long learning programmes and community colleges.
- The GER at the primary, upper primary and secondary levels were higher than 100 per cent in all the blocks, which is a very good achievement.
- S.Pudur had the highest total GER at the primary level with 103.74 per cent during 2013-14, followed by Devakottai (103.25 per cent), while the lowest was recorded by Ilaiyankudi (101.79 per cent) closely followed by Kannangudi (101.81 per cent) during the same year.
- The highest total completion rate at the primary level was witnessed in Kannangudi block with 99.54 per cent during 2013-14, closely followed by Ilaiyankudi (99.51 per cent), while the lowest was found in Thiruppuvanam (95.27 per cent) followed by Manamadurai (95.53 per cent).
- The lowest total dropout at the primary level was witnessed in S.Pudur with 0.24 per cent during 2013-14, followed by Ilyankudi (0.35 per cent), while the highest was registered in Thiruppathur (0.69 per cent) followed by Singampunari and Kallal (0.57 per cent).
- The highest GER at the upper primary level was recorded in Sivaganga block with 102.80 per cent followed by Kalaiyarkovil (102.38 per cent), while the lowest was registered in S.Pudur (101.76 per cent) followed by Thiruppathur and Ilaiyankudi (101.96 per cent).

- The total upper primary completion rate was highest in Kannangudi (98.51 per cent) during 2013-14, followed by Sakkottai (97.78 per cent), while the lowest was registered in Sivaganga (89.59 per cent) followed by Devakottai (90.31 per cent). So, much variation can be noticed among the blocks in this respect.
- The lowest total upper primary dropout rate among the blocks was recorded in Thiruppuvanam with 1.23 per cent during 2013-14 followed by S.Pudur (1.42 per cent), while the highest was registered in Kalaiyarkovil (2.12 per cent) followed by Manamadurai (2.05 per cent).
- The Government of Tamil Nadu has taken several steps in this regard and has been able to bring the dropout rates to very low levels. Yet much more has to be done to bring the dropout rates to the zero level.
- Migration accounted for dropout among the students in almost all the blocks. This was mainly happening due to the search for livelihood.
- The zero dropout blocks must be appreciated and rewarded periodically with recognition and award by the State.
- Hence, vocation and skill training should be linked at the high school and higher secondary level, which would be useful to retain students in schools. The migrant parents may be given option to leave their wards to continue education by establishing special hostels.
- Gender gap was 0.26 per cent in terms of the dropout rate at upper primary district level, however more gender gap in this respect could be noticed in the blocks.
- Gender gap against the girls was observed in nine blocks, the highest was found in Sakkottai with 0.99 per cent followed by Kallal 0.92 per cent, S.Pudur (0.74 per cent) and Thiruppathur (0.60 per cent), while in the remaining blocks block gender gap lower against the girls.
- Three blocks had gender gap against the boys, viz., Kalaiyarkovil, Manamadurai and Thiruppuvanam, and was in the range 0.02 per cent to 0.24 per cent.
- Among the blocks, Singampunari recorded the highest total transition rate from primary to upper primary with 99.48 per cent during 2013-14, closely followed by S.Pudur (99.46 per cent), while the lowest was recorded in Ilaiyankudi (98.81 per cent) followed by Sakkottai (98.91 per cent).

- The highest transition rate from upper primary to secondary was recorded in Thiruppathur (99.93 per cent) during 2013-14, closely followed by Manamadurai (99.88 per cent), while the lowest was registered by Kannangudi (99.19 per cent) followed by Thiruppuvanam (99.48 per cent).
- Sivaganga had the highest numbers of primary (118) and upper primary (39) schools during 2013-14, followed by Kalaiyarkovil (primary – 114; upper primary – 38), while the lowest were registered in Kannangudi (primary – 29; upper primary – 11) followed by S.Pudur (primary – 49; upper primary – 13).
- The number of schools were distributed in accordance with the number of habitations, but, the population in the district seems to be scattered and more importantly access to schools depend upon the distance to be covered to reach the school from the habitation.
- Among the blocks not much variation could be found in terms of the total secondary level GER during 2013-14. Only two blocks, viz., Thiruppathur (0.72 per cent) and S.Pudur (0.71 per cent), were away from the district level.
- Out of the 12 blocks, seven blocks, viz., Manamadurai, Ilaiyankudi, Devakottai, Kannangudi, Thiruppathur, S.Pudur and Kallal, achieved 100 per cent with respect to provision of girls' toilets, while Kalaiyarkovil and Thiruppuvanam were the blocks that needed urgent attention in this respect.
- The blocks which had schools without toilets, girls toilets, drinking water, desk and chair must be attended on priority basis as these were the basic facilities to improve Literacy and Education.
- Situation to provide better infrastructure, additional class rooms, etc., should continue. Though it was reported that schools have toilets, drinking water facility, etc., in several rural based blocks, the actual physical facility was absent.
- There is a need for monitoring and regular inspection as to whether the structures created, drinking water or sanitation or desk or computer are functioning.
- The government schools are perceived to be with poor infrastructure, sanitation facilities, etc., the concerned authorities link through the NABARD need to build quality infrastructure like in private schools.

- The lowest PTR at the primary level was recorded in Manamadurai (22.54) followed by Kalaiyarkovil (22.67), while the highest was registered in Sivaganga (24.56) followed by Thiruppuvanam (23.89).
- At the upper primary level, the lowest was recorded in Kannangudi (15.98) closely followed by Devakottai (16.56), while the highest was registered in Sakkottai (22.86) and Singampunari (22.78).
- The PSR at the primary level was highest in Manamadurai (81.61) during 2013-14, followed by Singampunari (78.06), while the lowest was registered by Kallal (64.22) followed by Sivaganga (56.90).
- In terms of the PSR at the upper primary level, the highest was recorded in Singampunari (322.30) followed by Sakkottai (229.27), while the lowest was registered in Kannangudi (78.09) followed by Thiruppathur (139.83).
- But, these figures are just averages at the block and district levels, at the individual school level, there certainly would be some mismatches like students with no teachers or teachers with no students, which needs to be addressed by the district authorities.
- One way of improving the PTR and PSR would be by giving the district level authorities more autonomy in all respects.
- Overall, only when their attitude towards education is changed, more children will join the education stream. Children oriented education rather than rote learning can be one step in this direction.
- Rather than competing for marks, students may be encouraged to question and learn. This would involve them in the teaching-learning process and help them continue schooling rather than dropping out.
- Education and literacy being the requisite for human capital formation, facilities in this regard need to be provided and strengthened to improve the educational and literacy status in Sivaganga district.
- There is a need to introduce more colleges and engineering institutions, as Sivaganga has only a few colleges and engineering institutes.
- Each block should have an Arts and Science College, which would help to improve the access to higher education.

Gender

- The female WPR in Sivaganga district ranged from 21 per cent to 47 per cent. Kannangudi block had the highest female WPR and Sakkottai recorded the lowest female WPR out of the 12 blocks in the district.
- Representation of women in Local Bodies and Assembly illustrates that Ilaiyankudi topped with 42.25 per cent followed by Kalaiyarkovil (40.32 per cent) Thiruppuvanam (40.32 per cent) and Manamadurai (39.62 per cent).
- The 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.
- Any scheme to empower women needs to concentrate on increasing the economic participation of women and recognition of such employment.
- Thanks to 33 per cent reservation in local bodies, this has driven up the percentage of women's political participation. Similarly, reservation in Assembly and Parliament alone will ensure more women to enter into politics.
- The SHG concept has gained momentum and gets spread to other areas by not overlooking some of the processes laid down by the Women Development Corporation. Such deviations by Micro Finance Institutions (MFIs) may not take the SHG women for capacity building.
- Mere credit operations alone may not ensure empowerment unless the money saved is invested in enterprise development. Access to credit is one step forward and proves that women are bankable.
- But, real empowerment lies in converting such capacity and capability into enterprise development, which would bring economic independence and create employment opportunities for women in local areas.
- The perception that women cannot manage financial resources must be given up as women have proved equally or excelled the performance of men in management through the successes in the SHG movement in particular.
- The State may integrate the line departments such as education, health, social welfare, women development, industries and labour, etc., so that the SHG women would have more opportunities to outsource the requirements of these departments.

- For instance (i) production and supply of sanitary napkin needs to be co-ordinated by health department and women development department, (ii) the nutrition and social welfare departments will be required to outsource products through SHGs such as rice, vegetable, pulses, oil, fuel, etc., (iii) service providers in the health department may incorporate the service to be provided to the volunteers in local areas through SHGs.
- In the globalization context, women were preferred by private corporates in service industries, self-employment, out sourcing opportunities, etc., which may all be used in women's favour.
- Large corporates may establish rural industries, where incentives and concessions may be offered by the State. Such initiatives will cater to more rural and female employment.
- Complete equality can be realized only when women participate in decision making particularly in politics, entrepreneurship, management etc. Representation of women in the gender sensitizing various committees must be made mandatory which will ensure the engendered policies.
- Engendering process will require both qualitative and quantitative interventions. Sivaganga district needed to implement such interventions for improving the work participation rate, literacy, education, political participation etc.
- The efforts taken by the district administration were appreciated. It should however be honored that the district has poor resource endowment and employment. Such poor resource endowment mainly accounts for gender gap the in achievement.
- Anyhow, while making the budgeting allocation it is necessary that sufficient budgetary provision be made and sanctioned on time, towards creating gender sensitivity and main streaming gender.

Social Security

- Provision of monetary benefits to the target population through the social security initiatives of the Government infuses confidence among the population, specially the aged and the vulnerable sections.
- Maximum beneficiaries were from Indira Gandhi National Old Age Pension Scheme, the number of beneficiaries of which increased from 28,155 in the year 2012-13 to 44,637 in the year 2013-14 (people of both sex), while in all other categories there was a decline so some enquiry is needed.

- Financial assistance was provided to 663 with the locomotor disability, 335 hearing impaired, 198 mentally retarded, 19 cerebral palsy, 132 visually challenged, 53 multiple disorder, 34 leprosy and 39 mental illness in the district during the year 2013-14.
- The marriage and maternity assistance was provided to 3,219women during 2013-14 in Sivaganga district, out of which 1,163 were graduates and 2,056 were non-graduates.
- Programs to sensitize female population about the marriage assistance scheme would lead to motivation of female education till schooling and further graduation.
- The crime against women increased from 88 cases in the year 2010 to 120 in 2014. The highest number of cases in Sivaganga district was registered under Cruelty by husband category (51) in the year 2014, which was only 35 in the 2010.
- So, in order to provide security to women who form nearly half the population, number of women police stations can be started in the district.
- Also empowerment of women through education and employment would bring down the crime rates further and lead to zero crime rate in near future.
- People living in arid areas like Sivaganga should be provided with more employment opportunities throughout the year keeping in mind social security needs of such people.

Infrastructure

- In Sivaganga district, the infrastructure facilities like roads, electricity, telecommunication, financial institutions and insurance companies registered almost an even distribution.
- Sakkottai block accounted for maximum road length of 22.17 per cent of the district road length followed by Kalaiyarkovil (14.38 per cent). The lowest road length was found to be in Thiruppathur (1.22 per cent) followed by Manamadurai (2.47 per cent).
- No Mud Road was found in Manamadurai, while the maximum was found in Sakkottai (219.1 km). Except Thiruppuvanam, none of the other blocks had WBM Road.
- Policies to increase the road length of S.Pudur, Thiruppathur and Manamadurai blocks along with conversion of mud roads into BT roads are need of the hour.
- Sakkottai had the maximum population of 2, 48, 188 the maximum number of street lights was found to be in Kallal (8,057) with a population of 87,937 and so,

it works out to 11 persons per street light in Kallal, while it works out to 39 persons per street light in Sakkottai.

- Provision of street lights was only a partial indicator of electrification. Non-conventional energy sources could be harnessed further to provide solar lamps to rural blocks in a large scale to accomplish total electrification.
- Provision of more street lights to blocks like S.Pudur and Kannangudi would pave way for more equitable development.
- Sakkottai with the maximum population, had the maximum HH connectivity of 37,115, mobile towers (47), PCO (122) and landline connections (7,282). S.Pudur and Kannangudi with least population had lower connections.
- With regard to telecommunication, there was a marked shift from land line telephone connections to mobile phones. Evidences suggest that in the last one decade, there had been significant decline in land-line connections.
- The new trend of switching over to cell phone connection was observed. Subsequently, there had been an increase in the number of mobile towers, mobile users, HH internet connectivity, which had an increasing trend in the last one decade.
- S.Pudur block particularly had very low number of mobile towers and consequently household connectivity was lower compared to other blocks.
- Incentives to private service providers who installed towers in rural far off areas would motivate more service providers to cover small towns and villages.
- Ilaiyankudi block had the maximum number of 19 co-operative societies followed by Manamadurai with 15, while the least number of co-operative societies were found in Kannangudi (5) followed by Sakkottai and S.Pudur (6).
- Thiruppuvanam had the maximum number of members in the co-operative societies (51,919) followed by Ilaiyankudi (44,343), while the lowest was found in Kannangudi (11,391) followed by S.Pudur (15,226).
- Sakkottai had the highest number of commercial banks (57) followed by Sivaganga (32), while the lowest was in Kannangudi (3) followed by S.Pudur (9).

- In terms of the number of account holders, Sakkottai was first again with 65,421, followed by Kallal (64,155), while the lowest was found in Kannangudi (18,121) followed by Ilaiyankudi (25,815).
- With regard to financial institutions, there was a shift from Cooperative Societies to Commercial Banks.There had been an increase in commercial banks and a decline in cooperative societies.
- However, small towns and villages registered a significant number of membership in cooperative societies. Cooperative Societies will have to be strengthened by means of bestowing financial autonomy and security by the State and Central Governments. Thereby the general public would gain confidence with the Cooperative Society of Financing.
- A total of six insurance companies were present in the district during 2013-14 and had issued a total number of 99,963 policies during the same year.
- The maximum presence in terms of branches was found be Peerless Life Insurance (PLI) with 315, but in terms of the number of policies issued LIC topped the chart with 64,432.
- Policies that take into view all the parameters and frame a comprehensive development plan would raise the standard of all blocks to the desired level.
- Development of industrial sector, which was not water intensive, would create more jobs for the people. Construction of canals and pipes to provide potable water throughout the year could be the best step taken for improvement of this district.

Conclusion

The District Human Development Report of Sivaganga district has made an attempt to analyse and understand the status of the human development in the various blocks of the district. In terms of the basic development indicator, i.e., Per Capita Income, the district seems to lag far behind the State level. In terms of the Literacy Rate, it seems to be marginally below the State level and exhibits gender gap substantially. The analysis of the HDI showed that some blocks that were expected to secure better ranks fell back and the cause could be attributed to health indicators that had large variations. The more urbanized blocks seemed to perform poorly in terms of these indicators. But, the rural based blocks performed poorly in the other indicators such as education and

standard of living. The standard of living indicators particularly are at low levels in the rural based blocks, which need immediate attention. Especially, Access to Cooking Fuel and Access to Toilet Facility seem to be on the lower side in all the blocks. The district level itself in this regard is not very encouraging. This district has a model block that stood out from others with high HDI, hence policies could be framed taking Devakottai as an example. Good education, health and employability locally or outside were the three prongs on which the standard of living could be raised. Other indices like female empowerment, safety of female, care for the old and destitute, equal opportunities to the physically challenged also contributed to its better performance.

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	Sivaganga	32.08	60.41	92.15	92.36	89.00	15.80	260.00	3.4	80.41	102.74	106.88
2	Kalaiyarkovil	27.80	37.52	87.14	92.36	72.00	12.90	120.00	3.3	77.23	102.10	106.46
3	Manamadurai	21.68	49.14	93.29	96.19	70.12	17.60	10.00	3.3	78.15	102.12	106.65
4	Thiruppuvanam	25.51	49.28	90.22	92.42	82.00	19.40	60.00	3.3	77.64	102.01	106.71
5	Ilaiyankudi	29.58	54.74	93.56	90.84	68.99	5.20	10.00	2.1	76.33	101.79	106.43
6	Devakottai	40.34	69.13	88.24	93.74	85.00	10.80	10.00	1.8	81.83	103.25	106.68
7	Kannangudi	33.53	85.62	83.67	92.64	68.81	20.70	10.00	2.9	79.65	101.81	106.38
8	Sakkottai	50.77	68.80	88.72	95.53	90.20	11.80	240.00	3.1	84.78	102.33	107.16
9	Thiruppathur	28.19	59.04	97.44	89.11	73.60	11.70	60.00	2.6	79.88	102.48	106.82
10	Singampunari	28.19	57.63	99.05	89.11	80.70	16.10	10.00	4.1	76.97	102.68	106.76
11	S.Pudur	28.20	44.26	100.00	89.11	68.09	16.30	10.00	3.5	69.60	103.74	106.78
12	Kallal	30.34	38.66	87.87	92.86	67.55	13.60	10.00	2.4	77.58	102.17	106.67
	District	33.58	56.82	90.79	92.72	79.21	12.50	70.00	3.00	79.90	102.43	106.70

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	Sivaganga	0.402	0.514	0.682	0.761	0.959	0.397	0.094	0.410	0.803	0.918	0.976
2	Kalaiyarkovil	0.265	0.072	0.479	0.760	0.381	0.562	0.601	0.446	0.659	0.865	0.939
3	Manamadurai	0.069	0.296	0.728	1.000	0.317	0.294	1.000	0.446	0.700	0.866	0.956
4	Thiruppuvanam	0.192	0.299	0.604	0.764	0.721	0.192	0.819	0.446	0.677	0.858	0.961
5	Ilaiyankudi	0.322	0.404	0.739	0.666	0.279	1.000	1.000	0.889	0.618	0.840	0.936
6	Devakottai	0.666	0.682	0.524	0.847	0.823	0.681	1.000	1.000	0.867	0.960	0.958
7	Kannangudi	0.449	1.000	0.339	0.778	0.272	0.118	1.000	0.594	0.768	0.841	0.932
8	Sakkottai	1.000	0.676	0.543	0.958	1.000	0.624	0.167	0.520	1.000	0.884	1.000
9	Thiruppathur	0.278	0.487	0.896	0.557	0.435	0.630	0.819	0.705	0.779	0.896	0.971
10	Singampunari	0.278	0.460	0.961	0.557	0.677	0.380	1.000	0.151	0.647	0.913	0.965
11	S.Pudur	0.278	0.202	1.000	0.557	0.248	0.368	1.000	0.373	0.314	1.000	0.967
12	Kallal	0.346	0.094	0.509	0.791	0.230	0.522	1.000	0.779	0.675	0.871	0.958

Table 2.3 Human Development Index

Sl.No.	Blocks	Standard of Living Index	Health Index	Education Index	Overall Index	Rank
1	Sivaganga	0.635	0.248	0.896	0.521	10
2	Kalaiyarkovil	0.306	0.532	0.812	0.509	11
3	Manamadurai	0.343	0.508	0.834	0.526	9
4	Thiruppuvanam	0.453	0.412	0.823	0.536	8
5	Ilaiyankudi	0.447	0.962	0.786	0.697	2
6	Devakottai	0.698	0.880	0.927	0.829	1
7	Kannangudi	0.503	0.412	0.844	0.559	6
8	Sakkottai	0.811	0.378	0.960	0.665	4
9	Thiruppathur	0.494	0.714	0.878	0.677	3
10	Singampunari	0.541	0.386	0.829	0.557	7
11	S.Pudur	0.379	0.516	0.672	0.508	12
12	Kallal	0.313	0.741	0.826	0.577	5

Table 2.4 Gender Inequality Index

Sl. No	Blocks	Data														
		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 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
	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	Sivaganga	260.00	100.00	108.93	73.79	86.90	48.60	51.40	34.42	65.58	32.31	56.09	36.20	53.19	134	282
2	Kalaiyarkovil	120.00	99.91	99.31	67.22	88.13	48.60	51.40	40.32	59.68	42.88	59.44	18.12	31.59	118	271
3	Manamadurai	10.00	99.82	97.99	69.24	87.07	48.82	51.18	39.62	60.38	35.47	55.77	39.65	50.61	121	236
4	Thiruppuvanam	60.00	99.90	103.49	69.06	85.85	49.21	50.79	40.32	59.68	37.45	57.39	35.02	47.89	106	248
5	Ilaiyankudi	10.00	100.00	97.66	66.94	86.01	50.12	49.88	42.25	57.75	42.57	59.23	13.89	36.52	109	239
6	Devakottai	10.00	99.28	100.00	75.46	87.95	49.01	50.99	39.28	60.72	33.40	60.92	28.93	51.25	131	293
7	Kannangudi	10.00	99.60	103.14	67.27	92.59	49.52	50.48	34.78	65.22	46.90	66.00	11.87	18.50	129	341
8	Sakkottai	240.00	100.00	104.11	80.05	89.49	49.14	50.86	37.83	62.17	20.48	57.67	70.90	83.33	171	267
9	Thiruppathur	60.00	99.63	104.92	71.34	88.62	48.94	51.06	33.33	66.67	32.85	58.72	35.72	50.19	126	273
10	Singampunari	10.00	99.19	100.54	68.97	84.81	47.98	52.02	35.00	65.00	38.34	59.18	31.20	42.39	133	301
11	S.Pudur	10.00	99.17	112.70	58.54	80.45	49.00	51.00	35.71	64.29	45.58	61.81	22.52	29.35	124	198
12	Kallal	10.00	99.90	97.84	70.29	84.96	48.90	51.10	35.00	65.00	36.18	59.22	33.99	76.78	137	257
	District	120.28	100	102.37	71.1	88.1	48.98	51.02	38.28	61.72	34.14	58.52	33.36	52.83	128.00	267.00

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	Sivaganga	0.038	1.000	1.089	0.738	0.869	0.486	0.514	0.344	0.656	0.323	0.561	0.362	0.532	0.510	0.639
2	Kalaiyarkovil	0.083	0.999	0.993	0.672	0.881	0.486	0.514	0.403	0.597	0.429	0.594	0.181	0.316	0.299	0.570
3	Manamadurai	1.000	0.998	0.980	0.692	0.871	0.488	0.512	0.396	0.604	0.355	0.558	0.397	0.506	0.346	0.356
4	Thiruppuvanam	0.167	0.999	1.035	0.691	0.859	0.492	0.508	0.403	0.597	0.374	0.574	0.350	0.479	0.139	0.430
5	Ilaiyankudi	1.000	1.000	0.977	0.669	0.860	0.501	0.499	0.423	0.578	0.426	0.592	0.139	0.365	0.181	0.374
6	Devakottai	1.000	0.993	1.000	0.755	0.879	0.490	0.510	0.393	0.607	0.334	0.609	0.289	0.513	0.472	0.705
7	Kannangudi	1.000	0.996	1.031	0.673	0.926	0.495	0.505	0.348	0.652	0.469	0.660	0.119	0.185	0.442	1.000
8	Sakkottai	0.042	1.000	1.041	0.800	0.895	0.491	0.509	0.378	0.622	0.205	0.577	0.709	0.833	1.000	0.545
9	Thiruppathur	0.167	0.996	1.049	0.713	0.886	0.489	0.511	0.333	0.667	0.329	0.587	0.357	0.502	0.408	0.585
10	Singampunari	1.000	0.992	1.005	0.690	0.848	0.480	0.520	0.350	0.650	0.383	0.592	0.312	0.424	0.502	0.754
11	S.Pudur	1.000	0.992	1.127	0.585	0.804	0.490	0.510	0.357	0.643	0.456	0.618	0.225	0.294	0.381	0.122
12	Kallal	1.000	0.999	0.978	0.703	0.850	0.489	0.511	0.350	0.650	0.362	0.592	0.340	0.768	0.556	0.486

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	Sivaganga	0.347	1.000	0.498	0.664	0.391	0.576	0.407	0.726	0.522	0.674	0.581	0.483	0.574	0.091	12
2	Kalaiyarkovil	0.436	1.000	0.509	0.647	0.285	0.475	0.398	0.675	0.501	0.718	0.578	0.380	0.540	0.073	10
3	Manamadurai	0.993	1.000	0.512	0.646	0.365	0.465	0.570	0.670	0.616	0.996	0.579	0.415	0.621	0.008	2
4	Thiruppuvanam	0.556	1.000	0.516	0.638	0.263	0.491	0.423	0.679	0.521	0.778	0.577	0.377	0.553	0.058	9
5	Ilaiyankudi	0.992	1.000	0.521	0.628	0.221	0.432	0.485	0.648	0.555	0.996	0.575	0.326	0.572	0.030	7
6	Devakottai	0.998	1.000	0.526	0.648	0.357	0.604	0.572	0.731	0.642	0.999	0.587	0.481	0.656	0.020	5
7	Kannangudi	1.009	1.000	0.488	0.673	0.291	0.496	0.523	0.694	0.596	1.005	0.580	0.394	0.612	0.026	6
8	Sakkottai	0.351	1.000	0.530	0.657	0.526	0.640	0.461	0.749	0.571	0.676	0.593	0.583	0.616	0.074	11
9	Thiruppathur	0.559	1.000	0.488	0.671	0.363	0.557	0.463	0.720	0.563	0.779	0.579	0.460	0.592	0.049	8
10	Singampunari	0.999	1.000	0.487	0.659	0.392	0.574	0.576	0.723	0.641	1.000	0.573	0.483	0.652	0.016	4
11	S.Pudur	1.038	1.000	0.468	0.641	0.339	0.281	0.548	0.565	0.556	1.019	0.555	0.310	0.560	0.006	1
12	Kallal	0.992	1.000	0.494	0.656	0.409	0.605	0.585	0.735	0.651	0.996	0.575	0.507	0.662	0.016	3

Table 2.7 Child Development Index

Sl.No.	Data								
	Blocks	Health			Education				
	Indicators	U5MR	Juvenile Sex Ratio (0-6)	Percentage of Malnourished Children	Enrolment in Primary	Enrolment in Secondary	Children Never Enrolled in Schools	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	Sivaganga	3.4	946	19.00	102.74	106.88	0.001	99.15	99.73
2	Kalaiyarkovil	3.3	946	4.00	102.10	106.46	0.001	99.13	99.59
3	Manamadurai	3.3	954	10.00	102.12	106.65	0.000	98.74	99.88
4	Thiruppuvanam	3.3	969	21.00	102.01	106.71	0.002	99.07	99.48
5	Ilaiyankudi	2.1	1005	14.00	101.79	106.43	0.000	98.81	99.71
6	Devakottai	1.8	961	4.00	103.25	106.68	0.000	99.04	99.69
7	Kannangudi	2.9	981	3.00	101.81	106.38	0.000	99.12	99.19
8	Sakkottai	3.1	966	8.00	102.33	107.16	0.000	98.91	99.81
9	Thiruppathur	2.6	958	4.00	102.48	106.82	0.000	99.06	99.93
10	Singampunari	4.1	922	15.00	102.68	106.76	0.000	99.48	99.66
11	S.Pudur	3.5	961	13.00	103.74	106.78	0.001	99.46	99.61
12	Kallal	2.4	957	4.00	102.17	106.67	0.000	99.30	99.78
	District	3.00	960	10.7	102.43	106.70	0.001	99.10	99.67

Table 2.8 Child Development Index

Sl. No.	Blocks	Indices									
		Health			Education						
		U5MR	Juvenile Sex Ratio (0-6)	Percentage of Malnourished Children	Enrolment in Primary	Enrolment in Secondary	Children Never Enrolled in Schools	Transition Rate from Primary to Upper Primary	Transition Rate from Upper Primary to Secondary	Child Development Index	Rank
1	Sivaganga	0.304	0.289	0.111	0.486	0.647	0.500	0.558	0.739	0.454	10
2	Kalaiyarkovil	0.348	0.289	0.944	0.159	0.109	0.500	0.524	0.539	0.427	11
3	Manamadurai	0.348	0.386	0.611	0.167	0.353	1.000	0.000	0.939	0.475	8
4	Thiruppuvanam	0.348	0.566	0.000	0.113	0.429	0.000	0.449	0.396	0.288	12
5	Ilaiyankudi	0.870	1.000	0.389	0.000	0.064	1.000	0.088	0.706	0.515	6
6	Devakottai	1.000	0.470	0.944	0.748	0.385	1.000	0.408	0.679	0.704	1
7	Kannangudi	0.522	0.711	1.000	0.010	0.000	1.000	0.510	0.000	0.469	9
8	Sakkottai	0.435	0.530	0.722	0.275	1.000	1.000	0.231	0.846	0.630	4
9	Thiruppathur	0.652	0.434	0.944	0.352	0.571	1.000	0.429	1.000	0.673	2
10	Singampunari	0.000	0.000	0.333	0.458	0.494	1.000	1.000	0.642	0.491	7
11	S.Pudur	0.261	0.470	0.444	1.000	0.513	0.500	0.973	0.575	0.592	5
12	Kallal	0.739	0.422	0.944	0.193	0.378	1.000	0.755	0.806	0.655	3

Table 2.9 Multidimentional Poverty Indicators

Sl.No.	Blocks	Health		Education			Standard of Living				
	Indicators	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	Access to 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	Sivaganga	15.80	12.3	19.00	0.41	0.47	32.08	60.41	92.15	89.00	92.36
2	Kalaiyarkovil	12.90	6.1	4.00	0.47	0.46	27.80	37.52	87.14	72.00	92.36
3	Manamadurai	17.60	6.6	10.00	0.35	0.47	21.68	49.14	93.29	70.12	96.19
4	Thiruppuvanam	19.40	9.7	21.00	0.47	0.47	25.51	49.28	90.22	82.00	92.42
5	Ilaiyankudi	5.20	6.4	14.00	0.36	0.51	29.58	54.74	93.56	68.99	90.84
6	Devakottai	10.80	3.9	4.00	0.45	0.47	40.34	69.13	88.24	85.00	93.74
7	Kannangudi	20.70	5.6	3.00	0.64	0.45	33.53	85.62	83.67	68.81	92.64
8	Sakkottai	11.80	7.2	8.00	0.49	0.41	50.77	68.80	88.72	90.20	95.53
9	Thiruppathur	11.70	10.9	4.00	0.66	0.72	28.19	59.04	97.44	73.60	89.11
10	Singampunari	16.10	13.8	15.00	0.62	0.41	28.19	57.63	99.05	80.70	89.11
11	S.Pudur	16.30	18.6	13.00	0.25	0.71	28.20	44.26	100.00	68.09	89.11
12	Kallal	13.60	7.9	4.00	0.54	0.46	30.34	38.66	87.87	67.55	92.86
	District	12.50	7.9	10.7	0.47	0.50	33.58	56.82	90.79	79.21	92.72

Table 2.10 Multidimentional Poverty Index

Sl.No.	Blocks	Indices											
		Health			Education		Living Standard						
		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	Access to Electricity	1 - Overall Average	Rank
1	Sivaganga	0.316	0.429	0.111	0.605	0.806	0.358	0.476	0.519	0.947	0.459	0.497	5
2	Kalaiyarkovil	0.503	0.850	0.944	0.469	0.839	0.210	0.000	0.213	0.196	0.459	0.532	7
3	Manamadurai	0.200	0.816	0.611	0.765	0.806	0.000	0.242	0.589	0.113	1.000	0.486	4
4	Thiruppuvanam	0.084	0.605	0.000	0.469	0.806	0.132	0.245	0.401	0.638	0.468	0.615	10
5	Ilaiyankudi	1.000	0.830	0.389	0.728	0.677	0.271	0.358	0.605	0.064	0.245	0.483	3
6	Devakottai	0.639	1.000	0.944	0.519	0.806	0.642	0.657	0.279	0.770	0.654	0.309	2
7	Kannangudi	0.000	0.884	1.000	0.037	0.871	0.408	1.000	0.000	0.055	0.499	0.525	6
8	Sakkottai	0.574	0.776	0.722	0.420	1.000	1.000	0.650	0.309	1.000	0.906	0.264	1
9	Thiruppathur	0.581	0.524	0.944	0.000	0.000	0.224	0.447	0.843	0.267	0.000	0.617	11
10	Singampunari	0.297	0.327	0.333	0.099	1.000	0.224	0.418	0.942	0.581	0.000	0.578	9
11	S.Pudur	0.284	0.000	0.444	1.000	0.032	0.224	0.140	1.000	0.024	0.000	0.685	12
12	Kallal	0.458	0.728	0.944	0.284	0.839	0.298	0.024	0.257	0.000	0.529	0.564	8

Table 3.1 (a) Land Utilisation Pattern (2001-02) (in ha.)

Sl. No	Blocks/District	Forest	Barren & Uncultura ble Land	Land put to Non-Agri culture Prupose	Cultival ble Waste	Permanent Pasture and Grazing Land	Land unde misc. Tree Crops and Groves not Included in the Net Area Sown	Current Fallow Lands	Other Fallow Lands	Net Area sown	Area sown more than once	Gross Area Sown	Total Geographica l Area
1	Sivaganga	1310.3	190	1135	1752	58	151	3449	30458.7	5763	270	6033	44537
2	Kalaiyarkovil	2298	347	20722	2311	46	1515	1899	12955.0	15787		15787	57880
3	Manamadurai	1037	1077	13301	1077	326	1640	190	7593.0	7896		7896	34137
4	Thiruppuvanam	650	24	9541	276	6	16	7692	7894.0	8450		8450	34549
5	Ilaiyankudi	0	701	9558	1590	48	3	0	12381.0	20285		20285	44566
6	Devakottai	689	54	11192	2594	538	456	376	7548.0	12462		12462	35909
7	Kannangudi	1855	0	8667	486	0	187	311	3086.0	7115		7115	21707
8	Sakkottai	1738	254	7571	4137	104	2810	5685	4675.0	7852		7852	34826
9	Thiruppathur	0	2074	9410	1435	121	62	315	11667.0	7136		7136	32220
10	Singampunari	1333	472	4438	120	14	49	2015	8669.5	5544		5544	22654.5
11	S.Pudur	1893.7	337	2303	173	8	12	1344	6686.9	3266		3266	16023.6
12	Kallal	3729	1273	9913	1821	112	1307	9179	4686.0	7871		7871	39891
	District	16533	6803	107751	17772	1381	8208	32455	118300.1	109427	270	109697	418900

Source: Department of Economics & Statistics, Sivaganga

Table 3.1 (b) Land Utilisation Pattern (2013-14) (in ha.)

Sl. No	Blocks/District	Forest	Barren & Uncultura ble Land	Land put to Non-Agri culture Prupose	Cultivalble Waste	Perma nent Pasture and Grazin g Land	Land Unde misc. Tree Crops and Groves not included in the Net Area Sown	Current Fallow Lands	Other Fallow Lands	Net Area Sown	Area sown more than once	Gross Area Sown	Total Geographic al Area
1	Sivaganga	1310.3	49.7	12795.7	3522.8	54.8	266.7	3901.1	17987.9	4648.0		4648.0	44537
2	Kalaiyarkovil	2299	321	17893.5	3271.1	122.2	620.4	2630.6	14807.9	15915.1		15915.6	57880
3	Manamadurai	1036.5	81.7	11597.7	752.7	256.4	189.0	877.3	13802.1	5543.9		5543.9	34137
4	Thiruppuvanam	650	47.3	9928.8	1302.1	4.6	194.9	4730.1	9082.8	6929.9		6929.9	34549
5	Ilaiyankudi	0	643	9779.5	1519.3	48.0	20.1	939.1	13034.6	18583.4		18583.4	44566
6	Devakottai	688.6	38.1	12223.3	2305.1	140.9	504.0	841.7	5908.8	13258.8		13258.8	35909
7	Kannangudi	1855.0	16.2	7571.2	892.1	397.6	112.5	43.4	3092.8	7723.1		7723.1	21707
8	Sakkottai	1737.6	0.0	12244.0	1501.0	91.1	2710.6	563.2	8633.7	7344.5	218	7562.1	34826
9	Thiruppathur	0.0	2074.2	9988.2	1825.2	121.6	37.0	5392.7	10456.8	4004.1		4004.1	32220
10	Singampunari	1333.2	472.1	5030.9	109.9	14.2	38.7	3816.4	6718.8	5117.6		5117.6	22654
11	S.Pudur	1893.7	335.8	2698.1	172.6	8.4	16.7	3468.3	4139.7	3289.8		3289.8	16024
12	Kallal	3729.2	631.1	10821.6	1142.4	107.6	1961.3	1513.0	14400.9	5584.3		5584.3	39891
	District	16533.1	4710.2	122572.4	18316.4	1367.5	6671.8	28716.6	122066.8	97942.4	218	109697	418900

Source: Department of Economics & Statistics, Sivaganga

Table 3.2 Cropping Intensity (in ha.)

Sl.No.	Blocks/ District	Gross Cropped Area		Net Cropped Area		Cropping Intensity	
		2001-02	2013-14	2001-02	2013-14	2001-02	2013-14
1	Sivaganga	6033	4648.028	6033	4648.028	1.0	1.000
2	Kalaiyarkovil	15787	15915.600	15787	15915.060	1.0	1.000
3	Manamadurai	7896	5543.895	7896	5543.895	1.0	1.000
4	Thiruppuvanam	8450	6929.939	8450	6929.939	1.0	1.000
5	Ilaiyankudi	20285	18583.385	20285	18583.385	1.0	1.000
6	Devakottai	12462	13258.797	12462	13258.797	1.0	1.000
7	Kannangudi	7115	7723.075	7115	7723.075	1.0	1.000
8	Sakkottai	7852	7562.080	7852	7344.530	1.0	1.030
9	Thiruppathur	7136	4004.115	7136	4004.115	1.0	1.000
10	Singampunari	5444	5117.565	5444	5117.565	1.0	1.000
11	S.Pudur	3266	3289.765	3266	3289.765	1.0	1.000
12	Kallal	7871	5584.280	7871	5584.280	1.0	1.000
	District	**109597**	**98160.524**	**109597**	**97942.434**	**1.0**	**1.002**
Source: Department of Economics & Statistics, Sivaganga							

Table 3.3 Irrigation Intensity (in ha.)

Sl.No.	Blocks/ District	Gross Cropped Area		Net Cropped Area		Cropping Intensity	
		2001-02	2013-14	2001-02	2013-14	2001-02	2013-14
1	Sivaganga	5493	3248.020	6803	3248.020	1.24	1.000
2	Kalaiyarkovil	13152	11861.905	13152	11861.905	1.00	1.000
3	Manamadurai	6286	5167.740	6286	5167.740	1.00	1.000
4	Thiruppuvanam	8198	6859.999	8198	6859.999	1.00	1.000
5	Ilaiyankudi	8785	8075.455	8785	8075.455	1.00	1.000
6	Devakottai	7905	7301.080	7905	7301.080	1.00	1.000
7	Kannangudi	3849	5847.565	3849	5847.565	1.00	1.000
8	Sakkottai	5529	5598.850	5529	5381.300	1.00	1.040
9	Thiruppathur	5636	2480.935	5636	2480.935	1.00	1.000
10	Singampunari	5390	3238.965	5390	3238.965	1.00	1.000
11	S.Pudur	2365	864.860	2365	864.860	1.00	1.000
12	Kallal	5857	4514.680	5857	4514.680	1.00	1.000
	District	78445.00	65060.054	79755	64842.504	1.02	1.003
Source: Department of Economics & Statistics, Sivaganga							

Table 4.1 Trends in CBR and CDR

Sl. No	Blocks/District	CBR		CDR	
		2009	2014	2009	2014
1	Sivaganga	16.10	15.70	6.60	5.9
2	Kalaiyarkovil	14.90	14.10	6.60	7.1
3	Manamadurai	15.30	13.60	6.30	5.3
4	Thiruppuvanam	16.90	15.40	5.60	4.3
5	Ilaiyankudi	15.40	13.40	7.00	6.6
6	Devakottai	17.30	14.40	6.70	6.6
7	Kannangudi	17.50	15.20	4.40	6.4
8	Sakkottai	16.80	13.40	6.00	4.9
9	Thiruppathur	17.30	15.80	6.30	6.6
10	Singampunari	16.30	14.30	7.20	6.5
11	S.Pudur	18.30	19.50	0.40	5.5
12	Kallal	16.70	14.40	7.70	7.3
	District	16.30	14.20	5.50	5.4
Source: Health Department, Sivaganga					

Table 4.2 Infant Mortality Rate

Sl.No	Blocks/District	IMR
1	Sivaganga	15.80
2	Kalaiyarkovil	12.90
3	Manamadurai	17.60
4	Thiruppuvanam	19.40
5	Ilaiyankudi	5.20
6	Devakottai	10.80
7	Kannangudi	20.70
8	Sakkottai	11.80
9	Thiruppathur	11.70
10	Singampunari	16.10
11	S.Pudur	16.30
12	Kallal	13.60
	District*	13.00
Source: Health Department, Sivaganga (2013-14)		

Table 4.3 Percentage of Institutional delivery (2013-14)

Sl.No	Blocks/District	Home	Sub-Health Centre	Primary Health Centre	Government Hospital	Private Hospitals	Percentage Share of Institutional Deliveries
1	Sivaganga	0.00	0.00	23.40	48.60	28.00	100.00
2	Kalaiyarkovil	0.01	0.01	34.10	43.70	22.10	99.91
3	Manamadurai	0.00	0.02	24.90	52.70	22.20	99.82
4	Thiruppuvanam	0.01	0.00	44.80	41.90	13.20	99.90
5	Ilaiyankudi	0.00	0.00	15.00	46.90	38.10	100.00
6	Devakottai	0.00	0.00	21.08	38.00	40.20	99.28
7	Kannangudi	0.04	0.00	25.00	28.40	46.20	99.60
8	Sakkottai	0.01	0.10	23.50	40.40	36.00	100.00
9	Thiruppathur	0.01	0.01	18.02	46.80	34.80	99.63
10	Singampunari	0.00	0.00	23.09	35.50	40.60	99.19
11	S.Pudur	0.01	0.02	46.05	23.30	29.80	99.17
12	Kallal	0.01	0.00	25.10	38.90	35.90	99.90
	District	0.01	0.50	23.70	43.00	32.80	100.00
Source: Health Department, Sivaganga							

Table 4.4 Immunization

Sl. No	Blocks/District	Total Number of Children below 5 year	Total Number of Children Immunised	Percentage of Children Immunised
1	Sivaganga	11668	11934	102
2	Kalaiyarkovil	11167	11737	105
3	Manamadurai	10155	10185	100
4	Thiruppuvanam	10956	11489	105
5	Ilaiyankudi	10743	10774	100
6	Devakottai	7050	7372	105
7	Kannangudi	2889	2858	99
8	Sakkottai	14321	14637	102
9	Thiruppathur	10365	10501	101
10	Singampunari	7427	7831	105
11	S.Pudur	4002	4193	105
12	Kallal	7166	8567	120
	District	127784	132272	104
Source: Health Department, Sivaganga				

Table 4.5 Trend in Nutritional Status of Children below 5 years

S.No	Blocks / District	2013-14				% of under weight (suw+muw)
		Overweight	Normal	Muw	Suw	
1	Sivaganga	16	7397	1780	3	19
2	Kalaiyarkovil	0	6698	339	3	4
3	Manamadurai	0	4045	466	2	10
4	Thiruppuvanam	41	5356	1444	2	21
5	Ilaiyankudi	7	5091	821	1	14
6	Devakottai	3	6360	314	0	4
7	Kannangudi	0	1727	54	0	3
8	Sakkottai	0	8098	758	0	8
9	Thiruppathur	0	6382	275	0	4
10	Singampunari	3	4312	754	1	15
11	S.Pudur	0	2929	441	2	13
12	Kallal	0	4809	183	0	4
	District	70	63204	7629	14	10.7
Source: Health Department, Sivaganga						

Table 4.6 Access to Drinking Water (2013-14)

Sl No	Blocks/District	% Habitations Covered Rural	Habitations Rural (no.)	Wards Urban (no.)	Total Habitations R + U (no.)	Rural Covered (no.)	Urban Covered (no.)	Total Covered Rural + Urban (no.)	% Habitations Covered R + U
1	Sivaganga	91.48	317	27	344	290	27	317	92.15
2	Kalaiyarkovil	86.82	478	12	490	415	12	427	87.14
3	Manamadurai	92.83	265	18	283	246	18	264	93.29
4	Thiruppuvanam	89.37	207	18	225	185	18	203	90.22
5	Ilaiyankudi	93.18	308	18	326	287	18	305	93.56
6	Devakottai	87.52	449	27	476	393	27	420	88.24
7	Kannangudi	83.67	245	0	245	205	0	205	83.67
8	Sakkottai	84.53	291	108	399	246	108	354	88.72
9	Thiruppathur	97.05	204	30	234	198	30	228	97.44
10	Singampunari	98.95	192	18	210	190	18	208	99.05
11	S.Pudur	100	124	0	124	124	0	124	100.00
12	Kallal	87.86	272	0	272	239	0	239	87.87
	District	91.105	3352	276	3628	3018	276	3294	90.79
Source: NRDWP									

Table 5.1 Literacy Rate

Sl. No.	Literacy Rate	2001			2011		
		Male	Female	Total	Male	Female	Total
1	District	83.06	62.27	72.43	87.92	71.85	79.85
2	State	82.33	64.55	73.47	86.81	73.86	80.33
Source: Census 2011							

Table 5.2 Arts and Science Colleges (in no.)

Arts & Science Colleges	
Government	4
Aided	0
Un Aided	11
Total	15
Source: District Statistical Handbook, Sivaganga (2013-14)	

Table 5.3 Engineering and Polytechnic Colleges (in no.)

	Engineering Colleges	Polytechnic Colleges
Government	0	0
Aided	0	0
Un Aided	9	9
Total	9	9
Source: District Statistical Handbook, Sivaganga (2013-14)		

Table 6.1 Self Help Group (2013-14) (in no.)

Sl. No	Blocks/District	Number of Self Help	Number of Members	Credit Availed
1	Sivaganga	1246	15575	3201.00
2	Kalaiyarkovil	558	6975	1462.50
3	Manamadurai	839	10488	2732.49
4	Thiruppuvanam	321	4013	800.29
5	Ilaiyankudi	216	2700	464.35
6	Devakottai	496	6200	1452.59
7	Kannangudi	36	450	79.55
8	Sakkottai	220	2750	610.00
9	Thiruppathur	195	2438	588.85
10	Singampunari	344	4300	891.00
11	S.Pudur	28	350	91.07
12	Kallal	678	8475	1537.00
	District	5177	64714	13910.69

Source: Project Officer, Mahalir Thittam, Sivaganga

Table 6.2 Female Work Participation Rate

Sl. No	Blocks/District	Female Work Participation Rate
1	Sivaganga	32.31
2	Kalaiyarkovil	42.88
3	Manamadurai	35.47
4	Thiruppuvanam	37.45
5	Ilaiyankudi	42.57
6	Devakottai	33.40
7	Kannangudi	46.90
8	Sakkottai	20.48
9	Thiruppathur	32.85
10	Singampunari	38.34
11	S.Pudur	45.58
12	Kallal	36.18
	District	34.14

Source: Census 2011

Table 7.1 Marriage and Maternity Assistance (2013-14)

Sl. No	Category	No. of women assisted	Graduate	Non Graduate
1	Marriage	3,219	1,163	2,056
2	Maternity Assistance	10,743	N.A.	N.A.
Source: Social Welfare and Health Departments, Sivaganga				

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 Rate (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

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

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

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

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

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

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

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.

Multidimensional Poverty Index

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**verag**e**

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- **G**ender **I**nequality **I**ndex

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

HHs- **H**ouseholds

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 **G**uarantee **P**rogramme

MGNREGA- **M**ahatma **G**andhi **N**ational **R**ural **E**mployment **G**uarantee **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 **S**chool **R**atio

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

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

SC- **S**chedule **C**aste

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

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

ST- **S**chedule **T**ribes

TB- **T**u**b**erculosis

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 Fund

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

WBM- **W**ater **B**ounded **M**ud **R**oads

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

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

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