CHAPTER I

INTRODUCTION

Economics of health has emerged as an important branch of knowledge in the case of human capital revolution of 1960s. Health is in the nature of a merit good, characterized by peculiarities of its own, so it is not easy to define demand and supply of this commodity\(^1\).

Julie Ratchliffe\(^2\) said that all public sector health care systems are faced with decisions about how to allocate scarce resources across different health programmes. If the aim is to improve efficiency by increasing health benefits to the commodity from available resources, then an economic approach should be adopted when determining health service priorities. Economics is a social science concerned with how scarce resources are or should be allocated, it is often split into principles and concepts of micro economics and macro economics\(^3\). Improvement in the health status of the people has been one of the major thrust areas for the social development

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progarmmes of the country like India. Over the last ten Five Year Plan periods, India has invested much on health infrastructure and manpower. Prime Minister Shri Atal Bihari Vajpayee has fixed, “Health Well Being”, as the goal of Tenth Five Year Plan. Based on the Tenth Plan and the National Health Policy of 2002, India’s health sector started its reform in order to join with developed countries in terms of human development indices.

David Brindle\textsuperscript{4} depicts that “According to the World Health Organization, the US ranks a Sickly Twenty Four (24) in a global table of Healthy life expectancy, compared with most other advanced countries. The author further stated that ‘You die earlier and are more prone to disability in the land of the free’, about US. The UK placed an unremarkable fourteen (14) in the table; the first such rankings produced by WHO although that falls a long way short of the picture of life in Japan, the healthiest country on the earth by some margin”. India ranks 127\textsuperscript{th} position in the Human Development Index (HDI) as per UNDP Report 2003. It should be changed with proper policy and strategies to compete with developed countries. Hence, it is very necessary to know the health scenario in global, then India and its states.

\textsuperscript{4}David Brindle, Guardian, 5\textsuperscript{th} June 2000.
INTERNATIONAL HEALTH PROGRAMMES

Health and diseases have no political or geographical boundaries, which was depicted by in a beauty words by Paul Russell as, ‘nothing on earth is more international than disease’ which helps us to know about the health as world wide one.

TABLE 1.1
HEALTH INDICATORS AND DETERMINANTS OF SELECTED COUNTRIES - 2006

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Country</th>
<th>Population (Millions)</th>
<th>Average Annual Growth Rate (%)</th>
<th>Total Fertility Rate</th>
<th>Infant Mortality Rate (per 1000 Live Births)</th>
<th>Life Expectancy at Birth (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>China</td>
<td>1393.6</td>
<td>0.6</td>
<td>1.72</td>
<td>32</td>
<td>70.6</td>
</tr>
<tr>
<td>2.</td>
<td>DPR Korea</td>
<td>22.6</td>
<td>0.4</td>
<td>1.95</td>
<td>43</td>
<td>61.1</td>
</tr>
<tr>
<td>3.</td>
<td>Japan</td>
<td>128.2</td>
<td>0.1</td>
<td>1.35</td>
<td>3</td>
<td>78.9</td>
</tr>
<tr>
<td>4.</td>
<td>Republic of Korea</td>
<td>48.0</td>
<td>0.3</td>
<td>1.19</td>
<td>3</td>
<td>74.2</td>
</tr>
<tr>
<td>5.</td>
<td>Indonesia</td>
<td>225.5</td>
<td>1.1</td>
<td>2.25</td>
<td>36</td>
<td>66.2</td>
</tr>
<tr>
<td>6.</td>
<td>Malaysia</td>
<td>25.8</td>
<td>1.7</td>
<td>2.71</td>
<td>9</td>
<td>71.6</td>
</tr>
<tr>
<td>7.</td>
<td>Myanmar</td>
<td>51.0</td>
<td>0.9</td>
<td>2.17</td>
<td>69</td>
<td>58.4</td>
</tr>
<tr>
<td>8.</td>
<td>Philippines</td>
<td>84.5</td>
<td>1.6</td>
<td>2.94</td>
<td>25</td>
<td>69.1</td>
</tr>
<tr>
<td>9.</td>
<td>Singapore</td>
<td>4.4</td>
<td>1.2</td>
<td>1.30</td>
<td>3</td>
<td>77.3</td>
</tr>
<tr>
<td>10.</td>
<td>Thailand</td>
<td>64.8</td>
<td>0.8</td>
<td>1.89</td>
<td>18</td>
<td>67.7</td>
</tr>
<tr>
<td>11.</td>
<td>Vietnam</td>
<td>85.3</td>
<td>1.3</td>
<td>2.19</td>
<td>27</td>
<td>69.5</td>
</tr>
<tr>
<td>12.</td>
<td>Afghanistan</td>
<td>31.1</td>
<td>3.5</td>
<td>7.18</td>
<td>144</td>
<td>46.9</td>
</tr>
<tr>
<td>13.</td>
<td>Bangladesh</td>
<td>144.4</td>
<td>1.8</td>
<td>3.04</td>
<td>52</td>
<td>63.3</td>
</tr>
<tr>
<td>14.</td>
<td>India</td>
<td>1119.5</td>
<td>1.4</td>
<td>2.85</td>
<td>62</td>
<td>62.7</td>
</tr>
<tr>
<td>15.</td>
<td>Iran</td>
<td>70.3</td>
<td>1.6</td>
<td>2.04</td>
<td>29</td>
<td>69.7</td>
</tr>
<tr>
<td>16.</td>
<td>Nepal</td>
<td>27.7</td>
<td>1.9</td>
<td>3.40</td>
<td>58</td>
<td>62.4</td>
</tr>
<tr>
<td>17.</td>
<td>Pakistan</td>
<td>161.2</td>
<td>2.1</td>
<td>3.87</td>
<td>73</td>
<td>64.0</td>
</tr>
<tr>
<td>18.</td>
<td>Sri Lanka</td>
<td>20.9</td>
<td>0.8</td>
<td>1.89</td>
<td>15</td>
<td>72.2</td>
</tr>
<tr>
<td>19.</td>
<td>Australia</td>
<td>19.5</td>
<td>1.0</td>
<td>1.75</td>
<td>5</td>
<td>78.3</td>
</tr>
<tr>
<td>20.</td>
<td>More Developed Regions</td>
<td>1214.5</td>
<td>0.2</td>
<td>1.58</td>
<td>7</td>
<td>72.4</td>
</tr>
<tr>
<td>21.</td>
<td>Less Developed Regions</td>
<td>5325.8</td>
<td>1.3</td>
<td>2.79</td>
<td>59</td>
<td>62.5</td>
</tr>
<tr>
<td>22.</td>
<td>World</td>
<td>6540.3</td>
<td>1.1</td>
<td>2.58</td>
<td>54</td>
<td>63.9</td>
</tr>
</tbody>
</table>

The table 1.1 depicts that Life Expectancy at Birth (years) was 86.1 for female in Japan and 78.9 for male in 2006 which is very far away to India’s 66.1 for female and 62.7 for male. India has to travel a long way to reach this level. But India is very near to world average of 68.4 for female and 63.9 for male. India’s population and total fertility rate are higher compared to Japan and Australia. The positive indicator of health status, life expectancy at birth was 47.3 for female and 46.9 for males of Afghanistan which was the lowest among all the selected countries in 2006. China’s population was higher than India even though, the female life expectancy at birth was 74.2 and for male it was 70.6 which was above the world average.

The first, International Sanitary Conference was held at Paris on 1851. The main participants were European countries and four sovereign states. (France, Austria, Great Britain, Greece, Portugal, Russia, Spain, Turkey and the four sovereign states – Sardinia, the two sicilies, the papal state, Tuscany). The objective of this conference was to introduce uniformity into quarantine measures which was varied from country to country. The result of the conference was not succeeded. Ten more
conferences took place between 1851 and 1902, which were also unable to reach an agreement on quarantine measures.

The next milestone in international health work was the establishment of Pan American Sanitary Bureau (PASB) in 1902, which was the world’s first international health agency. The office namely International ‘D’ Hygiene Publique (DHP) generally known as the ‘Paris office’ was created to disseminate information on communicable diseases and to supervise international quarantine measures in 1907. Sixty countries including British India joined to DHP and exist till 1950 by which time, the responsibilities were taken by World Health Organisation borned in April 1945 (WHO) at Geneva. The Constitution of WHO came into forces on 7th April 1948, which is celebrated every year as ‘World Health Day’. The objective of the WHO is, ‘to attain the highest level of health by all level of people’. The current objective of WHO is the attainment of health by all people of the world by the year 2000 AD that will permit them to lead a socially and economically productive life.

The WHO divided the whole world into six regions, in order to meet the special health needs of different areas. The classification of the regional organisation and its head quarters are as follows (table 1.2).
TABLE 1.2

REGIONAL CLASSIFICATION AND ITS HEALTH QUARTERS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Region</th>
<th>Head Quarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>South East Asia</td>
<td>New Delhi (India)</td>
</tr>
<tr>
<td>2.</td>
<td>Africa</td>
<td>Brazzaville (Congo)</td>
</tr>
<tr>
<td>3.</td>
<td>The America</td>
<td>Washington (U.S.A.)</td>
</tr>
<tr>
<td>4.</td>
<td>Europe</td>
<td>Copenhagen (Denmark)</td>
</tr>
<tr>
<td>5.</td>
<td>Eastern Mediterranean</td>
<td>Alexandria (Egypt)</td>
</tr>
<tr>
<td>6.</td>
<td>Western Pacific</td>
<td>Manila (Philippines)</td>
</tr>
</tbody>
</table>

Source: http://who.in.

The South East Asia Regional Office (SEARO) consists of eleven members which were joined in various period into SEARO as follows.

TABLE 1.3

MEMBERS OF SEARO

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Year of Joining</th>
<th>Name of Members Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>19th May 1972</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>2.</td>
<td>1st July 1948</td>
<td>Burma</td>
</tr>
<tr>
<td>3.</td>
<td>12th January 1948</td>
<td>India</td>
</tr>
<tr>
<td>4.</td>
<td>23rd May 1950</td>
<td>Indonesia</td>
</tr>
<tr>
<td>5.</td>
<td>19th May 1973</td>
<td>Korea (Democratic People and Republic)</td>
</tr>
<tr>
<td>6.</td>
<td>5th November 1965</td>
<td>Maldives islands</td>
</tr>
<tr>
<td>7.</td>
<td>02nd September 1953</td>
<td>Nepal</td>
</tr>
<tr>
<td>8.</td>
<td>7th July 1948</td>
<td>Sri Lanka</td>
</tr>
<tr>
<td>9.</td>
<td>26th September 1947</td>
<td>Thailand</td>
</tr>
<tr>
<td>10.</td>
<td>8th March 1982</td>
<td>Bhutan</td>
</tr>
<tr>
<td>11.</td>
<td>27th September 2002</td>
<td>Timor-Leste</td>
</tr>
</tbody>
</table>

Source: http://searo.who.int/section.
The comparative study of health delivery system of India and China by M.A. Quresi and V.P. Khanbanda\textsuperscript{5} revealed that the both countries aimed to solve their rural health problems by adopting various approaches. India got great success in its approach through the community health volunteers who created the health awareness to the people, link the people with doctors and make propaganda regarding the small family norms. In case of China, bare foot doctors were chosen to cope up the needs of 700 million people living in rural areas. But the success was partly in implementing rural health scheme.

The table 1.4 explains that, the life expectancy at birth which was low in most countries of the region in the early sixties; showed dramatic improvement in Burma, DPR Korea, Sri Lanka, Thailand and India over the decades. The common feature regarding the vital statistics in the countries of South East Asia Region is the high birth rate and medium to low death rate combination. Infant mortality rate continued to remain high in countries like Bhutan, Nepal, Bangladesh and India. The highest infant mortality rate at Bhutan might be due to the lack of transport, and the existence of traditional methods of delivery. In general, there has been a decreasing trend in the crude death rate and infant mortality rate. As per the latest information available on expectation of life at birth in the SEAR countries shows that 70 per cent of member countries still have a life expectancy below 60 years. The positive side of this statistics reflect aging population might be low in SEAR countries, which results low level of gastric problems. But there is no statistical evidence available to justify it.

Budi Utoma and et.al.\(^6\) said that Indonesia the fifth most populated countries in the world, showed a downward trend of IMR during the decades (1961-1980).

The table 1.5 depicts the health indicators and determinants of the countries in the Asiatic region. It helps to understand the proper placement of India and how far it is behind in the life expectancy, population access to health care services, safe drinking water and sanitation.

HEALTH PROGRAMMES IN INDIA

An overview of the development of health care system in India during the post independence period, with two phases – the pre Alma Ata phase and the post Alma Ata phase showed the improvement in the Health status of people in India during post Alma Ata Phase.

The Alma Ata conference on primary health care in 1978 provides a discussion of the development of health care system in India, in the post Independence period. The declaration of the Conference Committee on primary health care to all, by the end of the century provoked the world over, a change in the approach. The first report was the study group set of jointly by Indian Council of Social Science Research (ICSSR) and the Indian Council of Medical Research (ICMR), THE HEALTH FOR ALL – An Alternate strategy in 1981.
The second was the National Health Policy of the government of India 1982 which was passed in the parliament in 1983.

The pre Alma Ata phase and post Alma Ata phase both emphasised on three aspects namely (i) health care planning (ii) growth of health infrastructure and expenditure on health and (iii) health status of people.

In the pre Alma Ata phase (1951-1979), modern medicine called allopathy used to fight against plaque, malaria and small pox. The First Five Year Plan (1951-56) focused on creating facilities for delivering health services to all in the country. Preventive health care measures were taken through basic health units (later called as PHCs) and mobile health units. The other tasks were Control on Malaria, provision of health services for mothers and children, provision of water supply and sanitation, and population control.

The Second Plan emphasised on investment in public health infrastructure. During Third and Fourth Plan periods efforts were made to build up infrastructure and man power to deal with family planning and population control. The Fifth plan (1974-79) which was the end of pre Alma
Ata phase brought programmes namely Minimum Need Programme (MNP) and Community Health Workers Scheme (CHW 1977).

In the pre Alma Ata period two committees were appointed by government. The first one was under the chairmanship of Dr. A.L. Mudaliar who submitted his report namely, “Report of the health survey and planning” in 1961. The second report under the chairmanship Dr. J.B. Srivastva submitted on 1975 under the title “Report on health services and medical education: A programme of immediate action”.

The achievements in health care during pre Alma Ata phase ended with Fifth Five Year plan which gave a mixed picture. The PHCs or basic health units only 67 in the First Plan period increased to 2565 in the Second Plan and 4631 in the Third Plan. The sub-centres also were about 44532 at the end of Fifth Plan. The amount expenditure on health in First Plan period was Rs.65 crores which was increased to Rs.141 crores and in Third Plan further increased to 226 crores in Fifth Plan.

The Alma Ata conference in 1978 was an important event in health. The Sixth Five Year plan identified a number of disquieting features of health care delivery system. The negligence of important issues like
nutrition, water supply, dieting requirements and habits; which had a bias of resource distribution and an imbalance created in the supply of doctors, nurses and other paramedical services. The study conducted by ICSSR and ICMR in 1981 reported that the present health care system was benefited to the practitioners, the clinicians, the pharmacists and the drug manufactures.

The Alma Ata declaration of 1978 aimed at attaining Health for All by the year of 2000, “The National Health Policy adopted by the Parliament in 1983 reiterated the India’s commitment to attain the slogan of Health for all by 2000 A.D”. The target and achievement under “Health For All by 2000 A.D” was given in the following table.

**TABLE 1.6**

<table>
<thead>
<tr>
<th>INDIA’S TARGET AND ACHIEVEMENT UNDER HEALTH FOR ALL BY 2000 A.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Expectancy at birth</td>
</tr>
<tr>
<td>IMR</td>
</tr>
<tr>
<td>Death Rate</td>
</tr>
<tr>
<td>Birth Rate</td>
</tr>
<tr>
<td>MMR</td>
</tr>
</tbody>
</table>

Source: Statistical Handbook of Tamil Nadu.
The table 1.6 explains that death rate and maternal mortality rate gone down and it gave a positive signal for increasing life expectancy at birth. The life expectancy at birth has shown a continuous improvement from 50.3 years during 1970-75 to 62.3 years during 1995-2000. In reality 65 per cent of the Indian population did not have the access to essential drugs in 1999. This implies that 645 million persons were without efficient medical care cover, which reduced the survival rate in India. But, now life expectancy at birth reached to 67 (2001-2007). It is meant that health sectors has improved its supply of health services.
India’s health indicators reveal a continuous improvement in life expectancy, infant mortality rate, maternal mortality rate though public expenditure on health has been pitiable low at less than one per cent of GDP. In nutshell, it may be stated that HDI of India has improved from 0.406 in 1975 to 0.577 in 2000 but India still has miles to go for enter into the group of high human development countries.

The plan expenditure on health during various Five Year plans is depicted in Table 1.7. In addition with the expenditure on health, expenditure on water supply and sanitation, family welfare were also given in the table 1.7 to understand the expenditure pattern.

The increased plan outlay for health and its related fields family welfare, water supply and sanitation taken India to the 127th position in human development index as per UNDP Report 2003.
The table 1.8 reveals that IMR is 58 (2005) which was the goal of India that is “Below 60” has been achieved. India attained its goal in IMR. The death rate goal of 8.1 populations per 1000 is to be achieved but India’s crude death rate was 7.6 in 2005. If these two negative indicators are declined means, the health status of India is towards the prosperity. In depth each and every states in India represented their full efforts to enhance health status through public spending after Alma Ata declaration which was given in table 1.9.
The table 1.9 reveals that public health expenditure in India has been increased over the period. The total expenditure for all states shown only a little change during 2000-01 to 2001-02, that was from Rs.24672 crores to Rs.24892 crores. In simple words, public health expenditure has been doubled during the period 1997-98 to 2002-03. Tamil Nadu stood in the fourth place. The first three places were occupied by Maharashtra, Rajasthan and Andhra Pradesh respectively over the period.

Rawi S.J. Asaid in his theory provided an equal curtailment of individual liberty to improve the well being of all. But in India, the article 47 of the Constitution of India states that, ‘the state shall regard rising the level of nutrition and standard of living of the people and improvement of public health among its primary duties. This was to be achieved through improving the access to and utilisation of health, family welfare and nutritional services. Over the last five decades, India has built-up vast health infrastructure and manpower at primary, secondary and tertiary cares in government, voluntary and private sectors.
CURRENT STATUS OF PRIMARY HEALTHCARE SERVICES

The government funded primary healthcare institutions in 2000 included the rural modern medicine primary health centres created by the states in total subcentres 137271 (1/4579 population), primary health centre 922975 (1/27964 population), community health centre 2935 (1/214000), 5435 rural family welfare centres, 871 urban health posts, 1083 urban family welfare centre, 550 district post partum centers and 1012 sub-district post partum centers funded by the Department of Family Welfare, 22104 dispensaries, 2862 hospitals under the Department of Indian System of Medicine and Homeopathy (ISM & H).

The stepwise study of global, national and its states concluded with some of inferences by the researcher. India’s population is less than China which is the highest populated one (nearly 1/5 of world population) obtained the low infant mortality rate of 32 and high life expectancy at birth for males as 70.6 and 74.2 for females. It is very clear that health management strategy at China able to meet the demand of growing population, which is an example for India cannot blame about the growth of population for any programme implementation and its results.
In case of state-wise public health expenditure in India Tamil Nadu stood in fifth place and Tamil Nadu’s population placed in sixth place as per 2001 census. The health status indicator Infant mortality rate of Tamil Nadu was at the fourth place among other states (37) and coincided in total fertility with Kerala (1.7). It is understood that Tamil Nadu has to travel a very short to reach the first place in health status and its other integrated variables. A proper holistic approach will lead the optimum level of resource utilization in order to reach the high level of health status in Tamil Nadu.

STATEMENT OF THE RESEARCH PROBLEM

The researcher to analyze the health status in Tamil Nadu, use both primary and secondary sources of information. The secondary source was taken for the period from 1985-86 to 2006-07. The primary data were collected from a district namely Dindigul by random sampling method.

There are four indicators to define the health status. In that, life expectancy at birth, crude birth rate are positive indicators while the infant mortality rate and crude death rate are the negative indicators.
The present study aims to find out the economic and non-economic factors which are influencing the health status in the state of Tamil Nadu and confined to case study of Dindigul district. Tamil Nadu has already spent about 15 years of National Health Policy for Health sectors since 1983 and has important player among the other states in the present liberalization scenario. In addition Tamil Nadu received 20.77 percentage of central assistance for its sixth plan (1980-85), and it was 27.16 percentage in seventh plan (1985-90), it was to increased 38.39 percentage in Eighth plan (1992-97) and reduced to 33.98 percentage in ninth plan (1997-2002) and in Tenth plan (2002-2007) it was 37.52 percentage. This central assistance and state receipt have to be distributed in all sectors including health and family welfare sectors. It was confirmed that after Alma declaration and National health policy, the central assistance was below 39 percentage. Hence it is relevant to analyse the trend of Health status and find out the influence of economic and non-economic determinants on health status in an empirical method in Tamil Nadu state.

Dindigul was carved out of the composite Madurai district after sixth plan and started its execution from seventh plan. This district is bound by state Kerala on the west. Hence, there is exist a high mixture of life style
and educationally leading by credit of two universities specially women university. Dindigul has been concentrated with Lock manufacturing, Leather Tanning, flourishing handloom industries, perfume extractors, Gold ornamental making, Granite factories, Agro processing Industries and Tourism Industry people movements from various districts, states even overseas are high towards Dindigul because of these sectors. Hence it is very essential to study in detail at micro level the health status of a district namely Dindigul. The pre Alma Ata phase and Post Alma Ata phase both emphasized Health Status of the People as one out of their three main aspects. But this health status of the people is very much in the hands of doctor or consultant when the people are sick. The patient do not have the supply of relevant information about the technical issues of health care. This asymmetrical information situation in the market of health care forced the researcher to choose this topic for research.

The production of health care involves not only doctors, hospitals, equipments and nurses, but the whole gamut of human activity such as agriculture, education, industrialization, urbanization, migration and human relation every thing\textsuperscript{7}. Hence, it is not possible to do all that is desirable for

\textsuperscript{7}V. Ramankutty, \textit{A Primer of Health Systems Economics}, Allied Publishers Limited, 1999.
the improvement of the health of population. If the resource are used in one way, the opportunity is lost for using them in some other way. It is an essential one to increase the quality of healthy population, but what is the way to reach equal access the health care. To answer these question different methods of economic analysis was tried in this research study.

Health is an output of the health sectors, this output and health status is narrow down as status of health, which will direct the present research study. Human beings are treated as human capital, throughout the analysis of this research.

**REASONS FOR THE CHOICE OF THE RESEARCH PROBLEM**

People who are sick cannot involve in economic activity or enough earning to buy their needs. Sick and hungry people are ignorant because in their lethargy they cannot learn. The vicious circle of disease underproduction – ignorance squalor- malnutrition – and more disease. Hence one would have thought that this was fairly self evident, that the burden of sickness hinder economic development.
A. Ashokhan\textsuperscript{8} depicted about the “Economic reforms and health sector in India; Missing and Possibilities”. In that article the author aimed at examining the implications of the economic reforms on the health care sector in India. During the last one and half decades the political preferences and development choices of the governments in India showed a directional slant clearly towards the market disregarding distributional and equity considerations. More specifically, the budgetary allocations to health care sector across the Indian states have been consistently coming down since the initiation of economic reforms. Moreover, the unethical medical practices and physician induced treatment patterns and diagnostic tests have increased the cost of medical care service substantially. The dominance of technology intensive and the individual /patient oriented health care services have further increased social exclusion and economic deprivation accentuating morbidity and co-morbidity deteriorating their health status further. The decreasing role of state, increasing privatisation of health care services and the relatively higher morbidity prevalence rates, particularly of long standing ones, have increased the out – of- pocket health care expenditure enlarging the web of misery and deprivation of the rural poor and other

vulnerable sections of the population. Hence, revitalizing the public health care sector shall increase the utilization of public health care services, and reduce the incidence of real and economic burden. The existing health care delivery system in government, private and voluntary sectors faces paradoxical situation where in they are not having appropriate manpower, diagnostic and therapeutic services and drugs. Availability and utilisation of health care services are poorest in the most needy remote rural areas in many states and districts. Some hospitals over crowded; many were under utilised.

The period for the research study was taken as 1985-86 to 2006-07. This period starts immediately after the announcement of National Health Policy by Indian Government 1983 came into implementation after restructuring its health management strategies. Hence evaluation of health status in this period is very significant to assess the level of National health policy success too.

Tamil Nadu has a population of nearly 6.6 crores which is essentially a rural-urban mix in nature. Urban population is relatively larger in Tamil Nadu. (33918000) for 2008 projected. 2001 census India stated that the rural population, 36781354 million of 1991 Shrink to 34921681 million in 2001.
Even though there exist changes in rural population, health sector in Tamil Nadu not absorbs total population. Meanwhile rural population depends on public health service only. In many respects Tamil Nadu appears to have achieved high level of human development in India. Tamil Nadu has been one of the fastest growing states, ranking second in the contribution of the manufacturing sector to NSDP\textsuperscript{9}. In addition, Tamil Nadu truly represents the low level of Infant mortality rate (37) and birth rate (16.5) compared with other states as on 2005 which forced to study the analysis of health status in Tamil Nadu.

Hence to study the existing disparities, trends in health indicators and its determinants will lead the government policy makers to make a people plan in health sector. In turn, this will help the people to have an access to quality of health and to bring India closer in human development index to developed countries. Keeping this core, the researcher interested to study the economic aspects of health status in Tamil Nadu.

This study is also based on secondary data covering the period of 22 years from 1985-86 to 2006-07. The main sources of this secondary data are statistical hand book for Tamil Nadu. An Economic Appraisal, Economic

Survey, Census of India, Chennai, published by Government of Tamil Nadu. In addition, primary data were collected from Dindigul district based on simple random sampling method with help of schedule by interview method.

**OBJECTIVES OF THE STUDY**

The present study is aiming to identify the main determinants of health status in the state of Tamil Nadu during the period 1985-86 to 2006-07 and thereby to suggest ways and means to endeavour the health status of the state. Thus the general objective of the present study is to identify the economic and non-economic determinants of health status in the state of Tamil Nadu and a case study method is adopted to study the availability, accessibility, utilization and of the health status in the state by selecting Dindigul district as the study unit.
Therefore the specific objectives of the present study are the following.

1. To compute the growth rate of health indicators and health determinants of Tamil Nadu during 1985-86 to 2006-07.

2. To analyse the factors which are influencing the health indicators in the state for the study period 1985-86 to 2006-07.


4. To study the availability, accessibility, utilization of health care services and assess the existing health status in the selected Dindigul district during 2008-09.

5. To give suggestions to the policy makers from the findings of the study so as to enhance the health status in the state in the future.
HYPOTHESES OF THE STUDY

Hypothesis is a statement of generalisation and assumption that has to be tested empirically. Hypotheses are framed based on the objectives of the study:

The following are the hypotheses framed to test in the study.

1. The female literacy rate and infant mortality rate are negatively related.

2. The couple protection rate and birth rate are positively related.

3. Public health investment and Health status of the population is directly correlated

4. The Net state domestic product at constant price and the public health expenditure on health and family welfare are positively correlated.

5. Size of the family and public health expenditure are inversely related.
LIMITATIONS OF THE STUDY

- The study includes only the health care services of public sector.
- The study attempted to analyse the inter district analysis of health status only in 12 major districts with Medical Institution was considered out of 31 districts in the state. These 12 districts are having the highest number of beds and doctors allocation.
- The researcher did not cover the food expenditure, clothing expenditure etc of the respondents in the study area, strictly narrow down to health care expenditure (that is expenditure in the medical service or medicines).
- The researcher did not cover the promotive and rehabilitative health care services of public health sector in the study area.
CHAPTERISATION

This research work is divided into seven chapters.

The first chapter presents a vivid picture of the present health situation at global, national and states level. The significance of the study, objectives, hypothesis and limitations of the study are presents in this chapter.

The second chapter depicts the bloom of health economics, marketing for health care, the role of health sector in the economy, investment for consumption and history of health production. The categories of health indicators are elaborated.

The third chapter relates to the review of literature on health status.

The fourth chapter deals with methodology of the study. Concepts and terms used in the study. The health profile of Tamil Nadu and Dindigul districts are also highlighted in this chapter.

The fifth chapter gives an analysis on health status in Tamil Nadu by using secondary data.

The sixth chapter elaborates the analysis of primary data.

The seventh chapter summarises the findings, the suggestions and conclusion of the study.
## TABLE 1.4
HEALTH STATUS IN THE SOUTH EAST ASIA REGION DURING 1960-2005

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<thead>
<tr>
<th>Country</th>
<th>Infant Mortality per 1000 live births</th>
<th>Life Expectancy at birth (in years)</th>
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<td>160</td>
<td>149</td>
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<td>Bhutan</td>
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<td>--</td>
</tr>
<tr>
<td>Burma</td>
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<td>62.6</td>
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<td>DPR Korea</td>
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<td>125</td>
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<td>Maldives</td>
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<tr>
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<td>Thailand</td>
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### TABLE 1.5

**HEALTH EXPENDITURE AND DISEASES IN SEARO IN 1990**

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<thead>
<tr>
<th>Countries</th>
<th>HDI</th>
<th>Public Expenditure on Health (as per cent of GDP)</th>
<th>Measles Cases Immunized (in per cent)</th>
<th>Malaria Cases (in lakhs.)</th>
<th>Tuberculosis Case Immunized (in per cent)</th>
<th>Access to Water (in per cent)</th>
<th>Access to Sanitation (in per cent)</th>
<th>Life Expectancy at Birth (in years)</th>
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<td>69.0</td>
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<tr>
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<td>84</td>
<td>--</td>
<td>87</td>
<td>97</td>
<td>99</td>
<td>70.2</td>
</tr>
<tr>
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<td>3150</td>
<td>86</td>
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## TABLE 1.7
PATTERN OF INVESTMENT IN HEALTH AND FAMILY WELFARE (PLAN OUTLAYS) DURING DIFFERENT PLAN PERIODS IN PUBLIC SECTOR, CENTRE, STATES AND UNION TERRITORIES
(Rs. in crores)

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<td>Outlay</td>
<td>% of Outlay</td>
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<td>74</td>
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### (Table 1.8 contd....)

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**Source:**
2. Column 3, 4, 5 = 2001 Census

**Note:**
1. TFR for smaller States and UTs are three year moving average.
2. Infant mortality rates for smaller states and Union Territories are for the period 1999-2001.
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* Accounts, ** Revised Estimates *** Budget Estimates.