

**AN ENQUIRY INTO THE ROLE OF THE STATUS OF WOMEN
IN KERALA'S DEMOGRAPHIC TRANSITION**

*Dissertation submitted to Jawaharlal Nehru University
in partial fulfilment of the requirements
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MASTER OF PHILOSOPHY*

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CERTIFICATE

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TO MY
PARENTS AND SISTER

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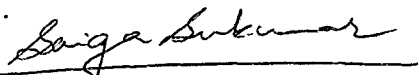
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INTRODUCTION

INTRODUCTION

Kerala, a small state in the south west of India, comprises about 1.2 per cent of the country's total area and supports around 3 per cent of its population.¹ It has the second highest density of population (747 persons per sq.km) among all the Indian states.² Its demographic trends stand in marked contrast to the rest of India with a high but rapidly declining rate of population growth, a relatively low and declining mortality rate, a high age at marriage and a high level of family planning practises. The population is fairly well advanced with regard to high literacy especially female literacy rates.³ While India aims to realize the replacement level (Net Reproduction Rate of 1) by the year 2000 A.D., Kerala in 1985 had nearly achieved this demographic goal.⁴

The demographic trends and the achievements in the health status of the people in Kerala seized the attention of demographers and social scientists as it represents something of a paradox. This study makes an attempt to obtain an overview of the process of demographic transition in Kerala and, its determinants focussing on the role of the status of women.

The Kerala situation received much attention, because inspite of its poor industrial development, faltering

production of food grains, low per capita income and low caloric intake, demographic transition to a low birth and death rate has taken place.⁵ The per capita income of Kerala was around Rs.1312 in 1980-81, which was lower than average Indian per capita income of Rs.1,571.⁶ The relatively low fertility appears to defy what could be expected on the basis of the observed patterns of the demographic transition in developed countries as well as in a number of developing countries. Generally, this transition has been preceded by improvement in income, industrialization and urbanization.⁷ Yet in India there are many states more industrialized and urbanized than Kerala which continue to have fertility levels higher than that in Kerala. Kerala therefore, presents a unique and perplexing demographic scenario. Demographic transition is a description of the observed long-term trends in fertility and mortality, and a model attempting to explain them.⁸ Blacker (1947), in his exposition of the theory of demographic transition has identified 5 stages of demographic evolution. The first stage is characterized by a high birth rate and a high death rate which cancel each other out so that the population remains stationary. India was in this stage till 1920. In the second, the death rate begins to decline, while the birth rate remains unchanged. In the third stage, the death rate declines still further

and the birth rate tends to fall. The population continues to grow because births exceed deaths. India appears to have entered this phase. The fourth stage is characterized by a low birth and low death rate with the result that population becomes stationary. Finally, the population begins to decline because birth rate is lower than the death rate.⁹

The first stage, which is said to be characteristic of an agrarian low-income economy, is marked with a relatively stable birth rate at the maximum fertility level found in societies not using birth control measures; the death rate is found to fluctuate in response to conditions of prosperity or dearth, famines, epidemics and other disasters. Then as the economy progresses to become more complex, specialized and market dominated and with the generation of agricultural surplus, the average death rate begins to decline. This is attributed to the impact of better organization and improved medical knowledge and care, however, the birth rate continues to remain almost stable at the earlier level. This, then leads to an increasing growth rate of population which is called the early expanding stage. As the death rate continues to decline with further improvements in living conditions, the birth rate also starts declining, initially slowly and later, at a faster speed. This is called the 'late expanding stage'. In the fourth stage when further reduction in death rate become

harder to obtain, the death rate stabilizes at a low level (between 8 and 12 per 1000 persons), the birth rate approaches equality with the death rate and a more gradual rate of growth is re-established. Both birth and death rates are low but birth rate fluctuates somewhat from year to year in response to voluntary decisions of the people. In the last stage the birth rate has declined even below the replacement level and there may not be enough people in the next generation to replace the present one.¹⁰

The "theory" of demographic transition does not, however, provide an adequate framework for the study of contemporary societies. It could hardly do so, since it is rather mechanistic and, in addition, is beset by too many apparent deviations as well as by major gaps in essential information.¹¹

The precise timing of the demographic transition has varied with respect to both date of onset and duration in the different countries experiencing it. Further, improved availability of data on both historical and contemporary populations have revealed considerable weaknesses in the classical formulation. Some countries for example, France, demonstrated low fertility while still at low levels of industrial and social development and little urbanisation. Both fertility and mortality declined more or less simultaneously. Other countries, most notably Britain

attained high levels of development in all respects before any noticeable fertility control took place.¹² A final caveat is that Demographic transition does not constitute a theory, but a description of observed changes in the western countries. Nonetheless two factors are important in its formulation. These are: (1) population is a dependent variable responding to social structural factors, and (2) a large number of factors are interlinked with changes in demography.

The experience in the Third World has further led demographers to question the validity of transition theory. It is clear, for example, that substantial declines in fertility have occurred in a number of countries with only a limited amount of development, and often with quite low average incomes. Sri Lanka, Thailand and China, are all cases of salience, all are overwhelmingly rural and poor and yet they all exhibit certain marked developmental characteristics: education (for both sexes) is well established, health care has improved, extra-familial welfare institutions exist to a minimum level, and all have good communication and transport.¹³ Similar is the case of Kerala also. It appears therefore that the pattern of determination of transition theory does not take into account of historical and cultural diversities of other societies. Each society would, of course, be something of a

special case regarding cultural and historical diversities. Nonetheless the examination of demographic events in the light of these factors would allow generalizations regarding causal factors. In fact, as the contemporary evidence suggests, the interpretation of the change in demographic variables in Kerala and its determinants, has swung away from that put forward by the Demographic transition theory.

Kerala is way ahead of other states in terms of infant mortality rate, crude birth rate and death rate. The other remarkable features which make Kerala distinct are a high rate of literacy as compared to other Indian states, particularly very high rates of female literacy, reasonably effective implementation of measures for land reforms, a high sex ratio, high age at marriage and high hospital bed population ratio. Indeed Kerala is also distinguished by a long history of public health movement under the enlightened rule of the maharajas in the pre-independence period.¹⁴

Kerala's fertility decline was considered anomalous given the economic progress of the people. However, it is anomalous only if a high level of income, urbanization, industrialization etc. are considered necessary conditions for fertility decline. Some authors (Zachariah, 1983, Panicker, 1975) are of the opinion that there is nothing paradoxical in the Kerala situation and that the above mentioned aspects need not be necessary and sufficient for

fertility decline. Zachariah's analysis corroborates the 'reappraisal' of theories of fertility decline; fertility declines takes place in response to increase in the cost of bringing up children relative to the benefits from them and through exposure to contraceptive knowledge and services. Increases in the cost of bringing up children can come about in several ways. In Kerala, it came through the increase in survivorship and the need to educate children to increasingly higher levels of skill achievement. These changes can be distributed among the majority of the population in several ways, in Kerala it was achieved through an egalitarian distribution of government services without a very high per capita income, or urbanization or industrialization.¹⁵

While going through the studies in this particular area one finds that Kerala's anomalous demographic trends are not the result of direct interventions meant to influence health and fertility levels, but they evidently reflect a broad social response to various factors.¹⁶ The first major attempt to study the Kerala phenomena was by the C.D.S. This study attributes that improved health situation to the distribution and effective utilization of health services. Over time there was a shift in the focus of studies and various other determining factors have been studied. However it is not easy to identify and assess the relative

importance of the socio-economic factors affecting the proximate determinants which are responsible for present the demographic trends.

Another variable that needs to be considered is mortality. Kerala's fertility decline was preceded by a long term decline in mortality. Investigators of Kerala's demographic transition generally accept the logic and premises of the western theory of demographic transition and conclude that Kerala's fertility decline as a consequence of such mortality reduction in combination with the spread of education.

Recent studies, however, gives more importance to women's status in Kerala. The social situation of women in Kerala shows a better picture in terms of literacy, sex ratio, infant mortality and life expectancy.

The status of women, it is pointed out, is closely related to the level of education which in turn initiates concomitant changes in the age at marriage, employment status, income levels, utilization of health care and in the attitude towards the practice of family planning. Birth and infant mortality rates are negatively correlated with all these factors.¹⁷

Although, various studies focus on different aspects responsible for Kerala's demographic trends, it is still not clear as to what the causal factors and mechanisms

underlie the decline. Statistical evidence also often does not support certain explanations, to cite an example, the decline of birth rate associated with female education and age at marriage. Another issue worth analysing is the contradiction in the view point of different authors. Further, most authors tend to be unicausal in explaining the timing and onset of transition. Considering the above mentioned issues this study has been divided into five broad areas. The first chapter examines important demographic variables in Kerala. Census, S.R.S and Yearbook data are mainly used for statistical evidence. Interregional disparities in demographic indicators are also looked into briefly.

The subsequent two chapters i.e., the second and the third chapters deal with review of studies. A brief analysis of socio-economic, political and historical aspects of Kerala is also given, in order to understand the likely impact of various determinants and concomitant reduction in the demographic variables. A comprehensive picture of the various determinants in relation to the changing demographic scenario is thus brought out. The shift in the focus regarding proximate determinants then becomes very evident.

The fourth chapter focusses on studies on various aspects of women's status in Kerala and its impact on changing demographic trends. A critical enquiry is made

into the role of women's status in Kerala in bringing down the fertility and mortality levels. An attempt has been made to scrutinise indicators of women's status in relation to demographic variables in the context of the changing socio-economic structure of Kerala's society.

The final chapter raises the salient issues brought out by our review and draws attention to conceptual and empirical grey areas in understanding the demographic scenario in Kerala. An attempt has been made to arrive at tentative conclusions based on our earlier analysis.

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CHAPTER I

DEMOGRAPHIC TRANSITION IN KERALA

"The process of demographic transition is a result of the interaction of a number of diverse aspects of psychological, social, economic, technological and institutional factors."¹ It involves a shift in the attitude towards a small family norm from a large family size norm. The earliest explanations attributed this shift to modernization, urbanization and industrialization.² However, Kerala is neither industrialized nor urbanized to the extent necessary to explain the decline in their birth rates. There has been a trend of decline of mortality and fertility levels in Kerala which challenge some well known propositions about demographic transition. It is, therefore, seems important to look into such changes in mortality and fertility levels associated with high indices of poverty and malnutrition.

The modern state of Kerala was formed in 1956 by merging the erstwhile princely states of Travancore Cochin and the Malabar district of Madras province.³ With a population of 290.11 lakhs (1991 census) in an area of 38,864 sq.km. the state is extremely densely populated. The density of population is the second highest in India i.e., 747 persons per sq.km. (1991 Census). This is more than four times higher than what it was in the beginning of this

Inspite of this, in educational attainment and literacy

rates, the state ranks first; further the gap between the sexes and rural and urban areas is quite narrow. There are fourteen districts in the state with population size varying from 0.67 million in Wayanad to 2.94 million in Trivandrum.

The active element in the demographic transition in Kerala till the 1960s was mortality with fertility remaining fairly constant.⁴ In the 1960s fertility began to decline. Till 1971 Kerala's population growth was higher than that of India, mainly because of a substantial drop in the mortality rates, without a corresponding decline in fertility rate. Between 1901 and 1981 Kerala's population grew by 292 per cent while that of India grew by 187 per cent.⁵ The state recorded a significant decline in death rate from around 29 in 1930s to 9 in 1970s whereas the birth rate declined from 40 to only 31 during the same period. However, during the subsequent period, there was a substantial decline in birth and death rates, the decline in birth rate being more than twice as steep, measured in terms of percentage points, than that of death rates. While the birth rate declined from 31 in 1971 to 19.9 in 1988, the decline in death rate during the same period was from 9 to 6.3 only, thereby registering for the first time a lower rate of population growth than at the all India level.⁶ Data reveal that Kerala's achievement in the health field is not of very recent origin. A better picture is obtained by considering

different aspects of the situation from the turn of the century. Population Size and Growth

Since 1901, not only the population but the rate of growth itself has been increasing in Kerala. The population which was 64.0 lakhs in 1901 reached 290.1 lakhs in 1991. The increase in population was slow till 1921. But after that period the increase was substantial.

Table 1.1
Population of Kerala 1901-1991

<u>Year</u>	<u>Population in lakhs</u>
1901	64.0
1911	71.5
1921	78.0
1931	95.1
1941	110.3
1951	135.5
1961	169.0
1971	213.5
1981	254.0
1991	290.1

Source: Census of India, 1991, Kerala.

In 1941 the population of Kerala was 110.3 lakhs. Thus during the period of the first 40 years the population increase was less than double the population of 1901. But in the next 30 years (1941-1971) the population almost

doubled.

Table 1.2
Growth Rate of Kerala

Period	Growth Rate
1901-91	353.57
1951-91	114.12
1981-91	13.98

Source: Census of India, Kerala, 1991.

Till 1971, Kerala had the highest growth rate in India and thereafter it showed a declining trend. The decennial growth rate of 1981-91 in the state is only 13.98 per cent.

Since 1901 the population in Kerala has increased by 353.57 per cent as against an increase of 114.12 per cent since independence and 71.63 per cent after the formation of Kerala state. In 1981 Kerala had a population of 254.54 lakhs as against 290.11 lakhs in 1991, registering an absolute increase of 35.57 lakhs. During this decade, population growth rate is 13.98 per cent as against 19.24 during 1971-81.

Among the districts in the state, the growth rate is highest in Malappuram district with 28.74 and lowest in Pathanamthitta district with only 5.45 per cent. The decline is more evident in the southern districts of the

state as compared to the northern districts. Three districts have growth rates of less than 10 per cent. Eight districts have growth rate ranging between 10 and 19 per cent, while only 3 districts have registered an increase of over 20 per cent i.e., Malappuram (28.74 per cent), Kasargod (22.67 per cent) and Wayanad (21.15 per cent).⁷

Table 1.3

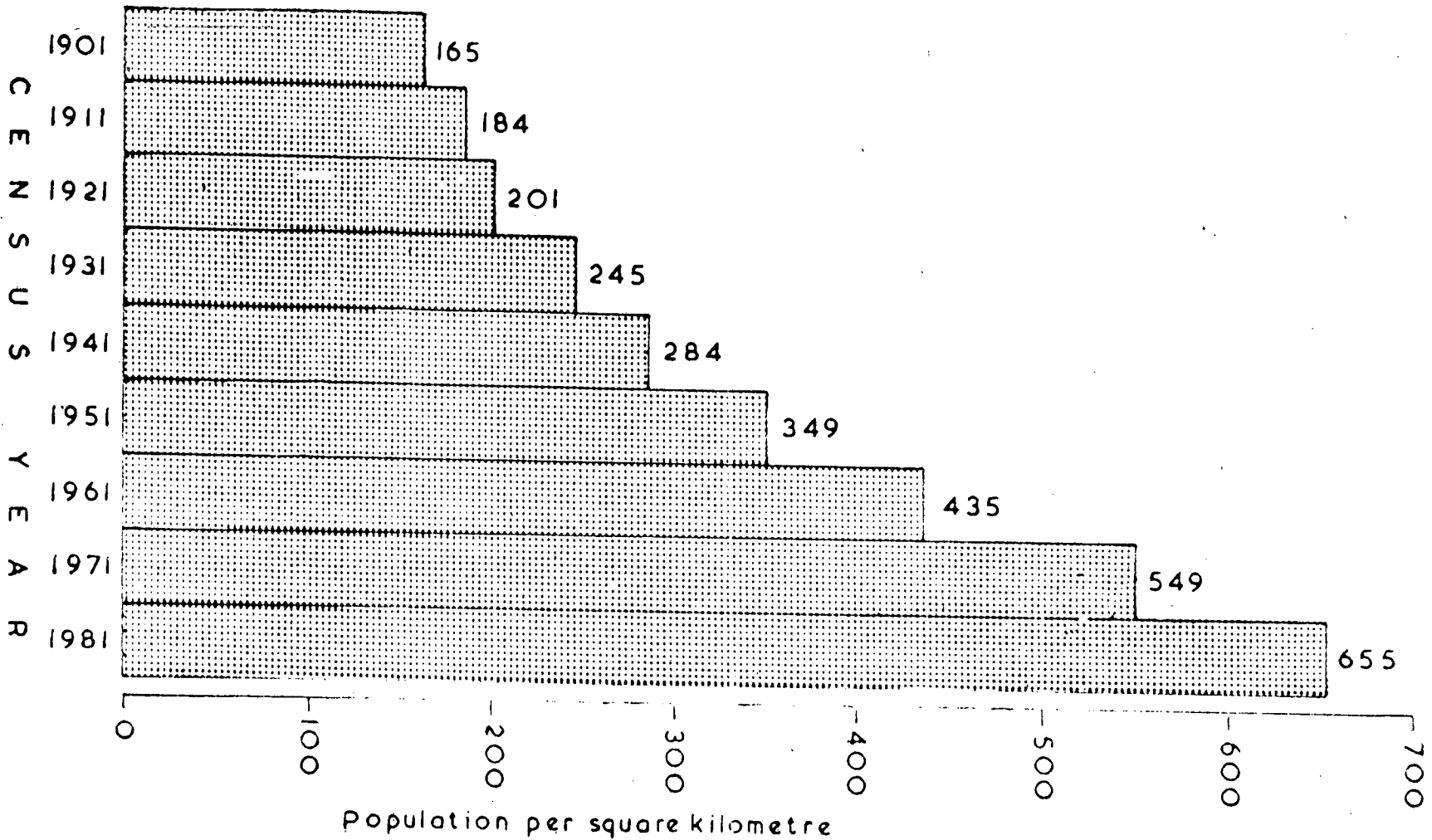
Decadal Variation in Population Since 1901

Period	Decadal Variation
1901-11	+11.75
1911-21	+ 9.16
1921-31	+21.85
1931-41	+16.04
1941-51	+22.82
1951-61	+24.76
1961-71	+26.29
1971-81	+19.24
1981-91	+13.98

Source: Census of India, Kerala 1991.

KERALA

DENSITY OF POPULATION 1901-81



DECENNIAL GROWTH OF POPULATION KERALA 1901-91

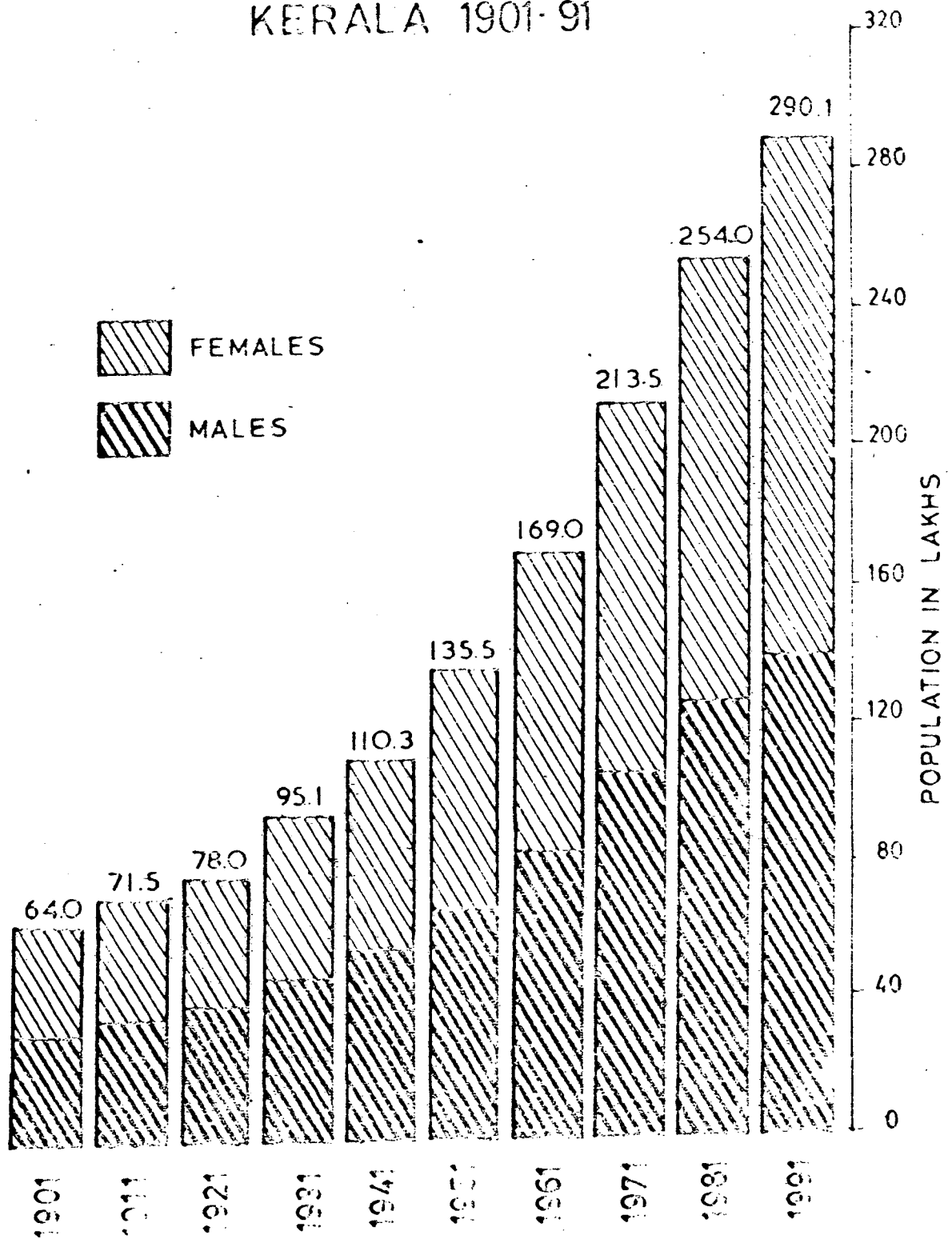


Table 1.4

Population Growth Rate from 1901-1981

Census Year	Inter-Censal Growth ratio
1901	-
1911	1.11
1921	0.88
1931	1.98
1941	1.49
1951	2.06
1961	2.21
1971	2.31
1981	1.75

Sources: (1) India Registrar General (1985), Kerala Bureau of Economics and Statistics, 1977;
(2) Bhat and Rajan 1990.

Density: It is an important indicator on the pressure of population on land. Barring the state of West Bengal, the density of population is highest in Kerala. The density thus worked out for the state is 747 per sq.km in 1991 census as against 655 in 1981. In other words, during the last decade, 92 persons have been added to every sq. km. in the state. The density has shown a steady increase over the decades from 165 persons per sq. km. in the state in 1901

showing an increase of 4.5 times in the last 90 years.

Table 1.5

Density of Population in Kerala

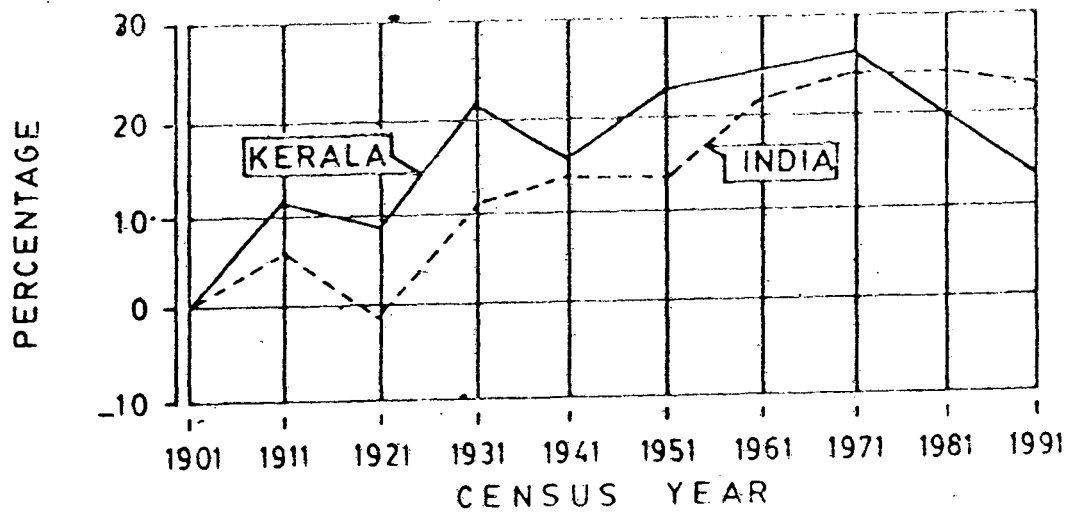
<u>Year</u>	<u>No.of persons</u>
1951	349
1961	435
1971	549
1981	655
1991	747

Source: Census of India, Kerala 1991.

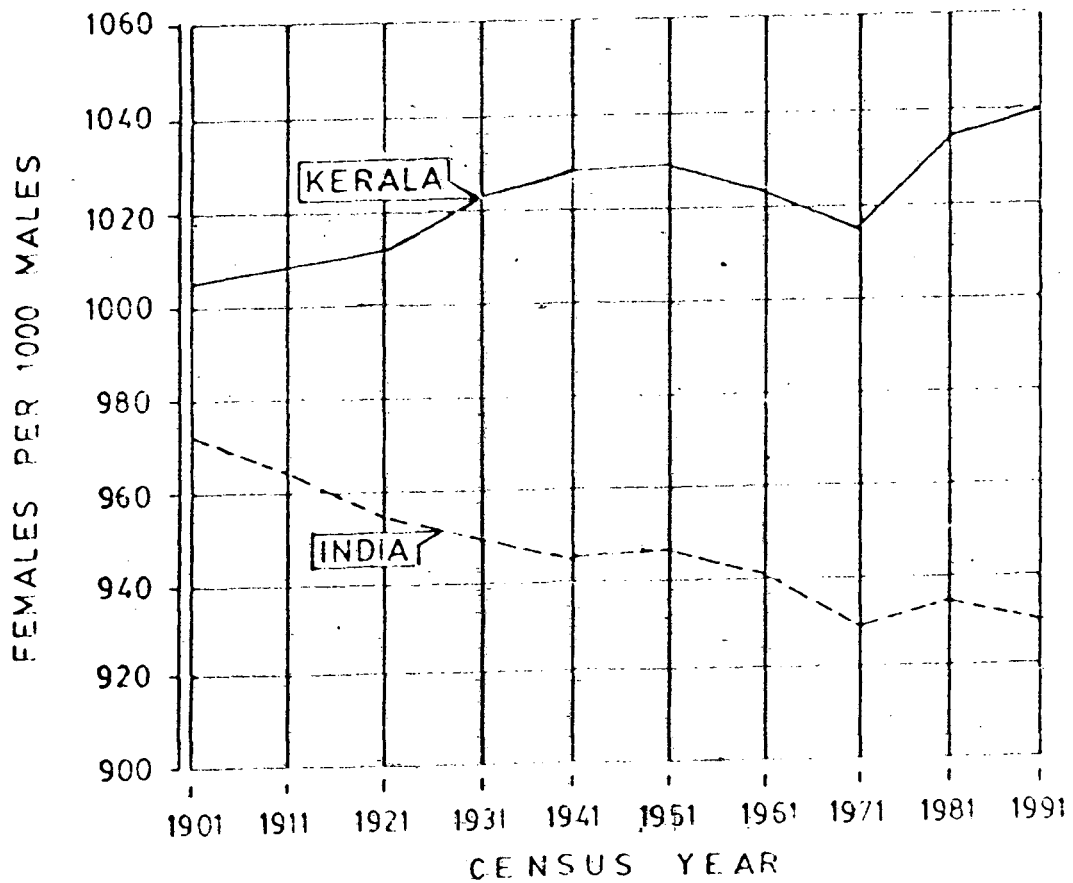
Regarding the regional variation in density, the district of Alleppey (1408), T.V.M. (1341), Ernakulam (1162) and Kozhikode (1115), have more than 1000 people living in a sq.km. The districts with low density are Idukki (214) and Wayanad (315) both lying in the hilly areas. Only in Idukki the population density is below the national average of 267 persons per sq. km.⁸

Sex Ratio: The sex ratio of a population is the result of the interplay of several demographic factors such as the sex ratio at birth, sex differential in mortality, sex differential in migration and sex differential in population enumeration.⁹

DECENNIAL PERCENTAGE GROWTH RATE OF POPULATION 1901-91 KERALA AND INDIA



SEX RATIO 1901-91 KERALA AND INDIA



Kerala is also unique because of its unusual sex ratio that favours women. This is expressed as the number of females per 1000 males. In all the previous census, female outnumbered males in Kerala which is significantly different from the all-India pattern. At the turn of the century, the sex ratio of the state was 1,004 females per 1000 males and till 1971, it showed a fluctuating trend. Since then it has shown a steady increasing trend and has reached a maximum in 1991 with 1,040 female per 1000 males.

Table 1.6

Sex Ratio in Kerala

<u>Year</u>	<u>Sex ratio</u>
1901	1,004
1911	1,008
1921	1,011
1931	1,022
1941	1,027
1951	1,028
1961	1,022
1971	1,016
1981	1,032
1991	1,040

Source: Census of India, Kerala, 1991.

The district of Wayanad (949), Idukki (963) and Ernakulam (998) have more males than females. The districts of Trissur (1088) have the highest sex ratio in the state. In all the districts the sex ratio is above the national average of 929 females per 1000 males.⁹ The above figures indicate inter regional disparities in sex ratio.¹⁰

Although out migration of males might have been a contributing factor, the main reason for the favourable sex ratio must be the higher longevity of Keralite woman. The age specific mortality rate for females shows that Kerala has the lowest figure in the country. Differential mortality mainly influences the sex ratio. Life chances enjoyed by females in Kerala appear to be better than those anywhere else in India.¹¹

Trends in Mortality Decline

The growth rate of population in Travancore had always exceeded that in almost all other states. Even during the period 1891-1901, the population of this state increased by 15.4 per cent when the population in several other states registered a decline and the growth rate for India as a whole came to only 1.6 per cent. During the first four decades of this century, Travancore population increased by 16.2, 16.8, 27.2 and 19.1 per cent respectively, against an increase of 6.7, 0.9, 10.6 and 15.0 per cent respectively

for the country as a whole.¹² The growth rate of population of Cochin also, as in the case of neighbouring Travancore, has been substantially above that of India as a whole over most of the period under review. The rate of increase is fairly close to that registered in Travancore, although unlike Travancore, the increase is not steady. In the case of Malabar, the growth rate of population in Malabar is more akin to the rate in Madras Presidency, of which it used to form a part then, than to that in the two neighbouring princely states. Moreover, here the trend is affected by a higher degree of fluctuation than in Cochin and Travancore.

The substantially higher and more steady growth of population in Travancore and Cochin than in the rest of India in the early decades of this century should imply a lower death rate in this region. More direct evidence is that, the census commissioner for Travancore 1921, estimated the death rate for 1911-21 at 20. A vital statistics enquiry was conducted in a few selected villages along with the 1941 census, the crude death rate on the basis of the results of the above was estimated to be 15 per mille. The superintendent of census operations for Travancore-Cochin in 1951 worked out the "Statistics of death rates" which came to 14.8 in 1931 and 14.6 in 1941.¹³ For Kerala as a whole, death rates for the fifties are estimated at 16.9 implying a significantly lower rate in Travancore-Cochin areas.

The northern districts of the state have had a higher death rate in the earlier period. The death rate for Travancore Cochin in 1941 was 14.6. As against this, the death rate for Kerala as a whole during 1941-50 is placed at 22.3. This shows a significantly higher mortality rate in the Malabar region. After 1956, the interregional disparity has been considerably reduced as reflected in the much lower average rate for the state as a whole in recent years. Thus it seems that Kerala had already entered the first phase of demographic transition by the middle of the fifties when the present state was born.¹⁴

The following figures indicate that the decline in death rate during 1951-60 was significant.

Table 1.7

Decline in the Death Rate During 1951-60

Period	Birth Rate	Death Rate
1921-30	26.92	14.18
1931-40	23.36	12.69
1941-50	24.91	11.52
1951-60	23.80	7.80

Source: Census 1961, vol.VIII, Kerala Part 1 A(1), General Report, pp.122. The data were obtained from the Civil Registration.

Further this decline seems to have been confined mainly to the second part of the fifties.¹⁵

Unlike the other states of India, there is not much rural urban disparity in death rates in Kerala. Thus death rates in the rural and urban areas of Kerala at the beginning of the seventies came to 9.1 and 8.3 respectively, as against 16.1 and 8.3 respectively for India as a whole. The rural and urban death rates in Kerala and India during 1970s are given below.

Table 1.8

Crude Death Rate in Rural and Urban Areas

Period	Rural		Urban	
	Kerala	India	Kerala	India
1970-72	9.3	17.6	8.3	10.1
1972-74	8.7	17.3	7.3	9.7
1974-75	8.2	16.5	7.5	9.7
1976-78	7.6	15.9	7.1	9.3

Source: Panikar and Soman, 1984.

Table 1.9

Crude Birth Rate in Kerala and India

Decade	Crude Birth Rate	
	Kerala	India
1951-61	43.9	47.1
1961-71	37.1	43.0
1971-81	28.1	37.2

Source: Bhat and Rajan, 1990.

By the beginning of the present century the mortality rate in Kerala had started their downward trend. The crude death rate in Kerala (rural) had come down to a little over 10 per mille by the close of the sixties. The decline, though initially slow, accelerated since the fifties. The crude death rate was estimated to be about 25 in the 1930s and about 7 in 1979. Much of the decline took place before 1970.

Table 1.10

Estimates of Crude Death Rate and Expectation of Life at Birth for Kerala and India during 1951-1981

Decade	Crude Death Rate	
	Kerala	India
1951-61	19.7	28.2
1961-71	12.2	20.6
1971-81	8.6	15.3

Decade	Expectation of Life At Birth			
	Kerala		India	
	Males	Females	Males	Females
1951-61	44.3	45.3	36.4	35.7
1961-71	54.1	57.4	44.1	43.6
1971-81	60.6	62.6	51.6	50.2

Source: Kannan et al (1991).

In the 1930s life expectancy at birth in Kerala was at

the same level as in India (32-33 years). Now Kerala's life expectancy of 67 and 70 for males and females respectively is about 12 years higher than that of all India average. Indeed it compares favourably to in the more developed countries. The expectation of life at birth is higher for females than males. This is in contrast with India where, till very recently, females had a lower expectation of life at birth.¹⁵

Table 1.11

Crude Death Rate Kerala and India 1931-81

Period	Kerala	India
1931-40	25.0	31.2
1941-50	20.0	27.4
1951-60	16.1	22.8
1961-70	13.5	19.0
1971	9.2	14.9
1981	6.9	12.5

Sources: Zachariah 1983, S.R.S.Bulletin, 1982, Panicker 1984.

The estimates of crude death rates and life expectancy suggest that Kerala and India had about the same level of mortality during 1931-41 which is the basis for the contention that Kerala has done remarkably well since that

period.¹⁶

Table 1.12

Estimation of Expectation of Life at Age 5

Decade	Kerala		India	
	Male	Female	Male	Female
1951-61	50.9	49.6	45.1	44.1
1961-71	58.1	57.7	51.3	51.2
1971-81	59.6	61.5	56.3	57.0

Source: Bhat and Rajan, 1990.

Kerala's advantage in mortality seems to be less pronounced at ages above five compared with the difference in the expectation of life at birth. This indicates the extremely low levels of infant and child mortality in Kerala, as compared to the rest of India.

In other words, the largest gains of mortality was for children. Reliable estimates of the infant mortality rate for earlier periods are lacking, until the inception of the S.R.S. in the mid-1960s. For earlier periods estimates were available from the Civil Registration system and National Sample Surveys, but were too low to be relied upon.

As per the estimates of Bhat and Rajan (1990) under five mortality rates declined almost linearly from around 250 per 1000 live births at the time of independence to around 75 in the late 1970s. According to the S.R.S., it has fallen further to 40 in 1986. The infant mortality rate

declined from about 160 in 1947 to 45 in the late 1970s and the S.R.S. suggests that it has declined further to 27 in 1985-86. It should be noted that the estimates for 1947 refer only to Travancore-Cochin a region of relatively low mortality within Kerala.¹⁷ Therefore the magnitude of decline in infant and child mortality may be even larger than what the estimates suggest.¹⁸

Table 1.13
IMR of Kerala and India

Year	Kerala	India
1911-20	242	278
1921-30	218	228
1931-40	175	207
1941-50	153	192
1951-60	128	140
1961-70	66	114
1971	61	129
1981	37	110
1989 (S.R.S. provisional)	22	96

Source: K.P.Kannan, et al (1991); and Health Profile, Kerala 1989, Department of Health and Family Welfare, Government of Kerala.

The above table shows the IMR of Kerala and India as a whole from 1911 to 1989. Even in the very early period of this century IMR was lower in Kerala. But this difference

was not that significant. In 1921-1930, I.M.R. in Kerala was 218 which was close to the all India average of 228. This pattern continued till 1951-1960. But during the next decade 1961-70, the difference in IMR became more pronounced, 66 in Kerala as against 114 in India. There has been a higher rate of decline in IMR in rural areas as compared to all India.¹⁹

Fertility Transition in Kerala

Reliable estimates of fertility levels for periods before 1951 are not available. But the levels were much higher than that of 1951-67.²⁰ A common measure of fertility, especially where adequate vital statistics and other types of direct information are lacking, is the ratio of children under 5 year of age to women in the child bearing ages as computed from Census data on the total population. Even though such ratios are only very crude pointers of fertility as they are affected by death ratio and inaccuracies in age returns, they will show the high correlation between fertility and population growth. The below data gives the number of children under 5 years per 1000 women aged 15-44 years for Travancore Cochin and the annual percentage of increase of population.

Travancore-Cochin

<u>Year</u>	<u>Children per 1000 woman</u>	<u>Annual increase %</u>
1951	647	2.12

The high fertility index for the state points to a correspondingly high rate of growth of population.²¹

There was some fall in fertility in Kerala between 1951-61 and 1961-71, it has been falling very rapidly indeed after 1961-71. The estimates do not give enough information on the onset of rapid fall in fertility.

Table 1.14

Comparison of Estimates of Crude Birth Rate and Total Fertility Rate of Kerala and India

<u>Decade</u>	<u>Crude Birth Rate</u>		<u>T.F.R.</u>	
	<u>Kerala</u>	<u>India</u>	<u>Kerala</u>	<u>India</u>
<u>Census Analysis</u>				
1951-61	43.9	47.1	5.6	6.3
1961-71	37.1	43.0	5.0	6.0
1971-81	28.1	37.2	3.4	5.2
<u>Sample Registration System</u>				
1966-70	34.7	-	-	-
1971-75	29.3	35.6	3.7	5.0
1976-80	26.3	33.6	3.1	4.5
1981-85	24.6	33.6	2.6	4.5
1986-83	21.2	32.0	2.3	4.2

Source: Bhat and Rajan, 1990.

Birth rates in Kerala in the period 1951-1961 stood at 44. By 1965 fertility has declined to 39 and by 1974 it had dropped 12 more points to 27. And again between 1974 and 1989, Kerala fertility continued its downward trend to another 8 points to 19, just 3 points above the United States (India, Registrar General 1989). In the World Bank's aggregative of low income economies and middle income economies the current birth rate is at 42 and 38 respectively.²²

Total fertility rate declined from 5.6 in 1951-61 to 2.3 births in 1986. Even in 1951-61, Kerala had lower fertility than the all India average. As fertility declined faster in Kerala the gap between the two has increased significantly.

In 1971 the birth rate in Kerala was 32 as against 37 for all India, in 1987 they were 21 and 32 respectively. The urban total fertility rate (TRF) is slightly lower than the rural TFR in 1971 and 1981. Between 1971-81 the percentage decline in TFR was 32 for all areas, 31 in rural areas and 37 in urban areas.

From the figures given in Table 2.15 we can see that fertility has declined in all age groups, however, most of the decline is in the higher age groups, that is, above the age group 20-24. Despite a sharp decline in the proportions married in the age group 20-24, the highest number of births

per women are occurring in this age group. Hence the peak fertility age group has shifted towards the younger age group.²³

Table 1.15
Age Specific Fertility Rate

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	TFR
1958-59	87.5	237.9	291.8	205.0	161.8	46.8	1.5	-
1968	63.7	227.8	224.9	188.9	147.5	53.1	7.0	4.6
1971	51.8	213.3	224.5	171.8	113.6	40.6	6.7	4.1
1976	45.2	192.4	196.6	132.1	76.6	43.9	5.8	3.4
1981	42.9	183.4	168.4	99.5	48.7	18.7	4.0	2.8
1988	29.8	155.5	130.3	56.8	22.8	5.8	2.7	2.0

Source: 1. Nair (1974); 2. Gulati and Rajan, 1988; 3. Kannan et al, 1991; 4. Eapen (1992).

Table 1.16
Age Specific Marital Fertility Rate

Age group	1971	1981	1988
15-19	287.7	303.6	285.1
20-24	332.1	317.0	298.9
25-29	262.4	201.5	164.3
30-34	197.8	113.6	65.3
35-39	133.5	56.0	26.5
40-44	51.5	22.9	7.1
45-49	9.2	5.2	3.5

Source: Eapen (1992).

A look at the age specific marital fertility rates (ASMFR) indicate that fertility has always been the highest

in younger age group. Nevertheless, the overall decline in family size and the lowering of the mean age of fertility implies that women on average complete family formation within a relatively shorter span of time.²⁴

Table 1.17
General Marital Fertility Rate (GMFR)

	<u>Rural</u>		<u>Urban</u>	
	1972	1978	1972	1978
India	190.8	170.2	172.9	143.6
Kerala	184.1	145.3	180.2	136.0

Source: Yearbook 1985-86.

Table 1.18
Total Marital Fertility

	<u>Rural</u>		<u>Urban</u>	
	1972	1978	1972	1978
India	6.8	5.4	6.0	4.6
Kerala	6.9	4.8	6.8	4.7

Source: Year Book 1985-86.

Regarding General Marital Fertility rate it is seen that even though a decline is evident in the case of India and Kerala, the rural urban difference is high in India and the relative decline is less when compared to Kerala.

Table 1.19
Gross Reproduction Rate

	Kerala			India		
	1981	1982	1983	1981	1982	1983
Rural	1.2	1.2	1.3	2.3	2.3	2.3
Urban	1.4	1.4	1.2	1.6	1.6	1.6
Combined	1.4	1.3	1.2	2.2	2.2	2.1

Source: Yearbook 1985-86.

Table 1.20 shows the percentage of the persons in broad age groups at the various censuses from 1901 onwards. It is clear from the table that variation is greatest in the age groups below 10 and 30-39.

Table 1.20
Percentage of the Persons in Broad Age Groups 1901-1951

Age group	1901	1911	1921	1931	1941	1951
Below 10 yrs	26.6	27.1	26.9	30.2	28.0	26.9
10-19	21.5	21.8	22.5	21.8	23.1	23.0
20-29	18.3	17.9	17.7	16.7	16.5	17.7
30-39	14.3	13.8	13.4	12.7	12.6	12.0
40-49	9.5	9.4	9.4	8.8	9.1	9.0
50 & over	9.8	10.0	10.1	9.8	10.7	11.4

The percentage distribution of the population by broad age groups for the period 1961 to 1981 shows that between 1961 and 1981 there has been a decrease in the age group of

0-14 years.

The population in this age group has decline from 42.6 per cent in 1961 to 40.3 in 1971 and 35 per cent in 1981. In the case of aged population there was an increase from 5.8 per cent in 1961 to 6.2 in 1971 and 7.5 in 1981. The proportion of population in the age group 60 and above also had increased in a much faster pace (27.6 per cent) compared to the working age of 15-59 (11.6 per cent) between 1961 and 1981. The increase in the proportion of the aged is much sharper than the decrease in the proportion of those in the age group 0-14. The percentage decrease in the age group 0-14 between 1961-71 was 5.5 and between 1971-81 this decrease was 13 per cent.²⁵

Kerala has nearly achieved the demographic goal of replacement level (Net Reproduction Rate of 1) in 1985 according to S.R.S. India is hoping to achieve this goal by the year 2000 A.D.²⁶

Thus Kerala have made a transition from high population growth rate, high birth and death rate to moderate population growth rate, low death rate, declining fertility rate and relatively low infant mortality rate.

This chapter brings out the demographic transition in Kerala giving a vivid picture of changing demographic variables from 1901 to the recent trends. The paucity of reliable data in the earlier periods is noted. Also the figures show marked inter-regional disparities even from the

beginning. Even though rural urban difference is not much, inter-regional disparities still exist and needs further probing.

The demographic transition which has occurred over the last four decades, is significant and at the same time paradoxical because of its many differences from demographic transition in the western countries. As described classically, fertility decline in the west has been preceded by a host of institutional factors together grouped under the rubric of modernization. These included industrialization, urbanization, growth of per capita income improvements in health with consequently, low levels of mortality. The falls in mortality were followed, after a lag by declines in fertility.

This is, we must note, a rather stylised description of the phenomenon. But although this was not a uniform pattern all over the west it came to be accepted by and large by demographers as the Demographic Transition Theory. Demographic transition occurred not because of family planning, but because motivation for children changed in response to social-structural factors. This social structural changes, its causes and time varies in different societies. In Kerala also various authors have looked into the underlying social structural changes related to Demographic transition which will be dealt in the next two chapters.

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CHAPTER II

REVIEW OF STUDIES: ROLE OF HEALTH CARE, EDUCATION
AND LAND REFORMS

Kerala's demographic trends represent a complex matrix of interrelationships between demographic, economic and socio-cultural variables. Many demographers and social scientists have tried to understand the phenomenon and cited many factors as causally responsible. Some of these are the distribution of health services, land reforms, matrilineal inheritance, political leadership committed to social welfare, high female literacy etc. The non-reliability of the data base and the uncertainty about the period of onset of declining trends in fertility and mortality rates, makes many of these explanations inadequate.

Furthermore, as many who wrote were not trained demographers, not enough attention was paid to the reliability of demographic data and the comparability of estimates from different sources. Only with the development of the Sample Registration System in the late 1960s has the quality of demographic data improved in the state. For the period before this, one has to rely on estimates based on decennial censuses which are sensitive to the underlying assumptions about infant and child mortality, completeness of censuses, and age misreporting. Therefore there are uncertainties about magnitude of the decline, and its date of onset. Due to these limitations many competing hypotheses about Kerala's demographic transition have flourished and remain untested for long.¹

In this chapter an attempt has been made to interpret the factors behind these changes referring to some of the earlier studies, articles as well as government documents. The main focus will be on investigating the validity of the explanations given by various authors by a careful scrutiny

of evidence provided by various data sources.

As the major attention of this study is on demographic transition in Kerala, its underlying factors - status of women in particular - the analysis is confined only to such issues. Further, this will be traced in a time perspective to understand the significance of the related factors with changing demographic trends.

To begin with, we will look into a the background document "Poverty, Unemployment and Development policy brought out in 1975". This work attempts to identify the most important factors that could have significantly influenced mortality rates in Kerala. It is asserted that the single most important factor to which better levels of health in Kerala can be attributed is the spread and accessibility of medical care in the state. Analysis was also made to show the regional differences and changes within Kerala itself regarding death rates, birth rates and life expectancy. The death rate was established at 20 in 1930 and this declined to 15 by 1941.² It is shown that life expectancy doubled in Kerala between the period 1921-1930 and 1971. A comparison of life expectancy in Kerala with that in India as a whole shows that the difference has widened over this period. Another interesting feature is that Kerala has higher life expectancy for females than for males, as in the developed industrial countries.³

Table 2.1
Expectation of Life at Birth, 1911-1971

Decades	Kerala		India	
	Males	Females	Males	Females
1911-1920	25.49	27.41	-	-
1921-1930	29.54	32.70	26.91	26.56
1931-1940	33.19	35.00	-	-
1941-1950	39.89	42.34	32.45	31.66
1951-1960	46.17	50.00	41.89	40.55
1971	60.57	61.16	48.20	46.00

Source: UN 1975.

It is shown that the major factor which brought about the decline in mortality rates in Kerala was the expansion and spread of health facilities. The study points out that female education could reduce fertility and birth rates by raising the age at marriage and also by enhancing the proportion of family planning acceptors in the married population. But this is not substantiated with the required data base.

Another aspect which this study brings out is the inter regional disparities in the extent and accessibility to medical care facilities. Health indicators show that much higher levels were attained in Travancore even in the earlier decades prior to the formation of Kerala State. The differences in health levels between the northern and

southern districts of Kerala have been almost eliminated within a period of about a decade and half. The bed per 100,000 population also shows that it was 2.4 times greater in Travancore Cochin area than Malabar in 1956-57. But this ratio declined to 1.5 in 1970-71. During the same period, the death rate declined from about 23 to 10.4. The death rate in Travancore-Cochin in 1970-71 was only 7.9 as against 12 in the mid-1950s. Thus differences in mortality rate it is contended, reflect the accessibility to, medical care facilities in these two regions.⁴

This study also stresses that the expansion of education made the people accept more readily the medical and public health programme of the government. But no evidence is given explaining how and when education made an impact on health status.

It is concluded that the spread of health care system to all areas resulted in raising the percentage of total population treated resulting in a higher utilization ratio. That the main reason responsible for a higher utilization of hospital services states is the smaller catchment area of a hospital in Kerala is refuted by Padmanabhan (1987). He asserts that in certain pockets of Kerala (like the high land region) death rates are higher than the state average. In these high mortality pockets the catchment areas of a hospital is very large.⁵

It is therefore necessary to look into the availability and accessibility of health care services in Kerala. Thereafter the educational scenario and its likely impact also have to be seen. The study also do not analyze the relationship between land reforms, matrilineal system, high age at marriage etc. and the health situation. Despite these they make a conclusion that the more proximate factors responsible for the decline were the development of health and educational services.

Educational Scenario

The place of Kerala in educational advancement is unique in India. It is the most literate state in the country. This has apparently helped to shape the demographic scenario of the state. This is particularly due to the expansion of primary education. While the state has almost reached the goal of universal literacy for both men and women, the rest of the country lags far behind. The factors that contributed to such a significant achievement are numerous. The process itself has been spread over a long period of time of about two centuries. According to the 1991 Census, the literary of Kerala state is 90.59 per cent for total population as against 81.56 in 1981 which gives a net addition of 9 points over the last decade.

Table 2.2
Literacy Rates in Kerala
(in Percent)

Census year	Persons	Male	Female
1961	55.08	64.89	45.56
1971	69.75	77.13	62.53
1981	81.56	87.74	75.65
1991	90.59	94.45	86.93

Source: Census of India, Kerala 1991.

Note: Literacy rates for 1961 and 1971 relate to population aged 5 and above. The rates for 1981 and 1991 relate to population aged 7 and above.

All the above mentioned figures indicate that Kerala has an enviable position in the country, almost reaching par with the most developed countries in the world.

The 1981 Census estimates of child mortality by educational level of mother brings out the relationship between the mothers educational level and child mortality. As the educational level of the mother advances, child mortality rates decline very sharply. For example, the number of deaths per 1000 live births by age 2, is 24 only to mothers who are matriculate but not graduates, while it is 37 for middle school educated mothers but educated below the matric. It is 55 for mothers literate, but below middle school education and 86 for the children of illiterate

mother. These figures reveal that educational level of the mother has a very strong and positive impact on the mortality of their offspring. Another interesting observation is that as the educational level of the mother advances the differential between male and female child mortality narrows down significantly.⁶

Social Factors and Educational Processes

There exists a wide spread notion among researchers on Kerala that this region had reached fairly high levels of literacy even before the modern educational system was introduced. There is, however, no reliable evidence to show what in fact those levels were or what the relative shares of the different sections of the population were, except the scant references in some reports of surveys conducted during the early decades of the 19th century by British officials. It is known that educational opportunities were not equally accessible to different sections of the population. Because Kerala society was highly stratified and caste ridden there were differences among communities in different socio-economic groups. For instance, the Brahmins who occupied the highest place in society and commanded vast material assets had their own institutions of higher learning. The Nairs with traditional ownership of land, a privileged position in public affairs and membership of the hereditary

militia of the chieftaincies, had their own Kolary which taught them language, literature, the sciences and the material arts. But, for the backward communities the facilities for education were quite limited. And for the depressed classes, no facility existed at all for education except by word of mouth from the elder to the younger generations on cultivation practices. The non-Hindu communities, who were engaged primarily in trade and commerce, had their own institutions i.e., the church school the madrasas for the Muslims.⁷

In the 19th century there were significant changes in the nature of education. Numerous factors were responsible for these changes viz., the economic, political, religious and social factors. The impact of these factors and the educational expansion that followed are significant, not so much in a quantitative sense, but in terms of the potential for further educational development they provided.⁸

In Travancore, the process of educational growth during the 19th and 20th centuries are interwoven with the structural changes brought about in the economy, mainly changes in land tenure, religious and political practises administrative and social reforms, growth of infrastructural facilities and technological changes in production.⁹

In 1813 the British government allowed European Christian missionaries to come to India and take up

residence here for educational activities. Missionary efforts had a significant effect on the development of education in the state.

In 1908 education at the lower primary stage was made completely free to all pupils irrespective of caste or creed. With the growth of education and the increase in awareness on the part of the administrators and the people, attention began to be bestowed, from the early 1920s, increasingly on matters connected with the physical and mental health and nutritional standards of students. The educational performance of Kerala during the post-1947 period has been impressive in terms of growth of institutions, enrolment of teachers, educational expenditure and development of tertiary stage of education. The achievement of the post independence period is also due to several favourable factors including the introduction of land reform legislation in the 1960s which brought about radical transformation in the structure of the state's agrarian economy, rapid expansion of infrastructural facilities like roads and public transport and the emergence of strong power groups in each locality capable of pressurizing the government on socio-economic demands including education.¹¹ It is obvious that the nature of health care system in such a society where people have fairly good basic education will be different from other

societies where the majority of the people are illiterate. But another aspect worth mentioning is that the impact of education on health or demographic indicators specific to Kerala was not studied in detail to assess the relative importance.

Again it is necessary to look into the health care system, its availability etc. in order to understand its impact on changing demographic variables and on the health of the people as a whole.

The development of health services in Kerala, especially its spatial spread and relatively high ratios in terms of area and population, has been a noted feature.¹² Data relating to health care institutions and man power under government sector are published annually, similar statistics for the private sector was almost unavailable till 1986. In 1986 the Directorate of Economics and statistics of the Government of Kerala conducted a survey on health care institutions in the private sector. The KSSP also conducted a comprehensive survey of health care institutions covering both the government and private sectors. But the coverage achieved was only 68 per cent of the total geographical area. Based on all these sources a broad picture of the quantitative dimensions of the health care systems in Kerala was given in the study carried out by the KSSP (1991).¹³

Table 2.3
Health Care Institutions in the Government
Sector: Modern Medicine

Year	Hospitals	Dispensaries	FHC	SHC	Others ^a	Grant in aid institutions	Total
1955-56	59	150	51	4	6	33	303
1965-66	101	217	155	1	3	13	490
1975-76	135	552	163	-	27	9	886
1985-86	151	520	294	-	34	23	1015
1987-88	135 ^b	188 ^c	572	79	67	25	1066

Source: Kannan, et al, 1991.

- a. includes MCH Centres, T.B.Centres and Clinics, Leprosy Centres and Community Health Centres.
- b. The decrease is due to the conversion of some hospitals into Community Health Centres.
- c. The decrease is due to the conversion of a number of Dispensaries into Primary Health Centres.

Table 2.4
Health Care Institutions in the Government Sector:
Ayurveda

Year	Hospitals	Dispensaries	Total
1960-61	37	172	209
1970-71	41	250	291
1975-76	63	376	459
1980-81	85	419	504
1985-86	92	463	555
1987-88	99	485	584

Sources: Kannan, et al, 1991.

Table 3.5

Health Care Institutions in the Government Sector:
Homeopathy

Year	Hospitals	Dispensaries	Total
1960-61	1	5	6
1970-71	2	45	47
1976-77	8	113	121
1980-81	17	159	176
1985-86	24	227	251
1986-87	24	255	279

Source: Kannan, et al, 1991.

The number and type of health care institutions in the government sector since the mid-fifties is given above. Till mid-eighties the increase in institutions has been largely contributed to by the increase in dispensaries and primary health centres.

Since mid-seventies a large number of dispensaries (catering only to out-patients) were converted into primary health centres. Conversion of a number of hospitals to community health centres and establishment of secondary health centres also was done. There was also an increase in the number of institutions under indigenous systems of medicine (mainly ayurveda).¹⁴

At the time of the formation of the state there used to be considerable inter-regional disparities in the

distribution of government allopathic institutions.¹⁵

The northern (Malabar) districts, had a relatively smaller proportion of these institutions. Thus, at the beginning of the sixties, out of the total 356 institutions, 300 were located in Travancore-Cochin area. Similarly, out of 13000 hospital beds, nearly 10,000 were in this area. Thus, the number of beds per one lakh population came to 93 in Travancore-Cochin portion, compared to 49 in the Malabar region.¹⁶

The inter-regional differences are seen to have gradually narrowed though the bed population ratio continuous to be significantly lower in the Malabar region. But then, it should be added that there are also considerable interdistrict variation in the Travancore Cochin part of the state also.

Regarding the private sector the data is taken from the 1986 survey conducted by the Department of Economics and Statistics, Government of Kerala. KSSP also had done a survey on the private health care sector, but the figures shows some difference due to the one year time lag between the two surveys.

Table 2.6

Health Care Institutions in Private Sector -
Travancore, Cochin, Malabar, 1961-1981

	1961		1971		1981	
	Travancore- Cochin	Malabar	Travancore- Cochin	Malabar	Travancore- Cochin	Malaba
Population (lakhs)	307.24	61.74	133.35	80.12	153.64	100.9
<u>Institutions</u>						
Hospitals	50	17	80	31	102	45
PHC	50	24	111	51	112	51
Dispensaries	112	60	138	98	316	247
Total	220	101	329	180	529	341
Beds	9946	3060	14042	5868	20644	8576
Red per lakh population	927	49.6	109.8	73.2	134.4	85.4

Source: Panikar and Soman, 1984.

Note: Private sector includes cooperative sector also.

Kerala also have a better health care facility for its rural population, as compared to other states in India. This is not entirely due to the contributions of the government sector but also due to the contribution of the private sector. Table 2.8 given below shows that the private sector has a substantial share of the in-patient requirements for health care in the rural areas. This may

be the result of the rapid expansion of private health care services in Kerala since the early seventies.¹⁷

Table 2.7
Comparative Statistics on Health Care:
Private Sector 1987

	Modern Medicine	Indigenous System of Medicine		
		Ayurveda	Others	Homeopathy
Institutions	3,565	3,925	95	2,078
Doctors	6,345	4,130	10	2,168
Beds	49,030	1,301	139	296
Paramedical staff	13,921	998	43	259

Source: Kanna et al, 1991.

Note: Private sector includes cooperative sector also.

Even though numerically the health care system shows quite an impressive picture, the quality of the services offered and whether they are reaching the majority of the people is yet to be understood clearly. Again, whether this availability of hospitals, staff etc. has resulted in high utilization and thereby increasing health status and improved demographic trends is not clear. The poor functioning of PHC's, the inadequate staff and non-availability of essential drugs etc. is pointed out by Padmanabhan (1987). It is also stressed that for more than half the people of the state the catchment area of a hospital is not the lowest in the country at all. In

addition the attempt to privatise the health services, brought out a deterioration in functioning of government health care system.¹⁸

Table 2.8

Share of Different Medical Systems Under the Government and Private Sector in Rural and Urban Areas.

	Government		Private	
	Rural	Urban	Rural	Urban
<u>Modern Medicine</u>				
Institutions	86	14	66	34
Doctors	33	67	49	51
Beds	25	75	53	47
Paramedical Staff	39	61	51	49
<u>Ayurveda</u>				
Institution	88	12	79	21
Doctors	60	40	77	23
Beds	12	88	79	21
Paramedical Staff	54	46	68	32
<u>Homeopathy</u>				
Institutes	80	20	80	20
Doctors	66	44	79	21
Beds	26	74	83	17
Paramedical Staff	60	40	75	25

Source: Kannan et al, 1991.

Nair (1974) in his study, which is one of the earlier attempts in understanding the declining birth rate in Kerala, has suggested that the continuous and significant decline in the birth rate in Kerala began in the early 1960s even before the full-scale launching of the Family Planning Programme. He concluded that this traceable to the cumulative impact of the health and educational facilities developed in the state. Birth rates would ultimately decline due to the possible effects of declining mortality rates - child and infant mortality rates particularly and increasing life expectation on the desired number of children. The study derived support for this from data on enrolment in the first year of primary school. It is mentioned that fall in the birth rate in the early 1960s could have been the consequence of the decline in infant and child mortality rates during the latter 1950s, following the extension of primary health centres and other public health measures over a period of time.¹⁹

It is also pointed out that on the basis of available data, the pattern of changes that might have taken place in birth rate, death rate and IMR from 1951 onwards, that such demographic evidence as there is for this period is not inconsistent with the trends actually observed in enrolment to the first year of primary schooling. On the assumption that a rapid decline in fertility rate should get reflected

in the rate of growth of enrolment in the first year of the primary school, Nair has studied the data on primary school enrolment covering the period 1956-1971 to see whether it is possible to identify approximately the period from which the birth rate in Kerala might have started declining perceptibly.

The rate of growth of enrolment showed a decline from 3.1 per cent per annum in the first few years after 1956, to 1.6 per cent per annum over the second half of the 1960s and the early years of 1970s. But during the first half of the sixties the annual rate of growth had increased. The study attributes this decline in the rate of growth in enrolment to a number of factors.

In Kerala the number of children enrolled in the first year of the primary school was in excess of the total population in the age group 5-6 even in 1956. In 1961 the Kerala government extended its midday meal programme to all children in primary schools, which could have only increased the percentage of enrolment. The analysis strongly suggest that continuous and significant decline in birth rate in Kerala began in the early 1960s. This study indicates that education together with wide spread public health facilities is an essential pre-condition for bringing down the birth rate; it does not have to await for substantial increase in per capital income.

Nair's study also draws attention to the proportion of married women and age at marriage of women in Kerala. It is indicated that the proportion of married woman to total female population has been lower in Kerala than elsewhere in India and that the age at marriage of women has been significantly higher. According to the results of the 16th round of the NSS, the percentage of married women to the total female population (during 1958-59) was 39.3 in Kerala as against 48.1 for India. Similarly, according to the 1961 Census, the age at marriage of women in the rural and urban areas of Kerala was 19.9 and 20.7 years respectively, while for the country as a whole the corresponding figures were 15.4 and 17.8 years respectively.

Though in terms of indices like per capita expenditure on public health, bed population ratio, percentage of population covered by primary and secondary health centres, etc. Kerala does not rank as high as some other states in India, it would appear that the facilities available in this state are more easily accessible to the population in the rural areas than in other states.²⁰

The decline in death rate seems to have been confined mainly to the second part of the fifties.

Table 2.9: Death Rate in Kerala 1921-1960

<u>Period</u>	<u>Death rate in Kerala</u>
1921-30	14.18
1931-40	12.69
1941-50	11.52
1951-60	7.80

Source: Census of India, Kerala, vol.VII, Part A(1), 1961.

Another piece of evidence in support of the decline in general mortality rate is provided by the expectation of life at birth during that period.

Table 2.10: Expectation of Life at Birth in Kerala 1956 and 1953

<u>Year</u>	<u>Expectation of Life at Birth in Kerala (Years)</u>	
	<u>Males</u>	<u>Females</u>
1956	49.5	47.1
1963	55.5	53.1

Source: Nair (1974)

The decline in mortality and the increase in expectation of life may have been due to the health programmes undertaken during the first and second plan period as claimed in the third plan document for Kerala. The health programmes undertaken during the first and second plan periods perhaps contributed in some measure to the general improvement in health conditions of the people as is reflected in the comparatively lower incidence of disease, decrease in IMR, general decline in death rate and increase in expectation of life. In the above mentioned study Nair (1974) does not consider other related factors which might

have contributed to such a situation. The impact of health programmes cannot by itself bring out such a change.

Panikar (1974) in his work points out that the development of public health measures contributed more to the early fall in mortality rates in Kerala than the extension of medical care delivery system. Death rates in Travancore-Cochin area of Kerala had begun to fall from a much earlier period than elsewhere in India. According to Panikar this fall in death rates was due to reduction in mortality from infectious diseases like plague, cholera and small pox. It is also pointed out that the decline in mortality from these infectious diseases may be traced to the various public health measures such as eradication and control of communicable diseases, sanitation, water supply, personal and environmental hygiene etc. rather than to the extension of the medical care delivery system.

During the earlier period when the declining trend is presumed to have set in, the western system of medicine had not made much headway. For that matter, even as late as 1961, the number of allopathic institutions and the hospital-population ratio was low in Kerala as compared to many other states.²¹

Hence, a look into the public health aspects in Kerala is essential. Medical care and public health claimed an increasing proportion of the state budget from early

times.²² In 1960s, the government of Travancore allotted a little over 1 per cent of its total expenditure to the health care sector. The amount spent on health care was doubled between the twenties and forties. By 1957-58, expenditure on health care as a proportion of the total expenditure of the state government had increased to 12.5 per cent.²³

It may be noted that the government health care expenditure increased at a greater rate than the increase in the total state government expenditure and state Domestic Product. Public expenditure on health care which came to a little over one per cent of the state income by 1957-58, rose to 2 per cent by the beginning of the seventies. This compares favourably with the position in most developing countries.²⁴

Kerala is known to have a better health care facility for its rural population, as compared to other states in India. One of the factor for such better facilities is the expansion of the private sector.²⁵

The quantitative expansion of health care services in Kerala has resulted in a wide coverage in terms of area and population. It ranks first among all the states in India in terms of number of hospital beds per lakh of population (292 beds as on 1989) and 106 institutions (as in 1989) per thousand sq. km. of area as against 12 for all India.²⁶

In 1982 Kerala had nearly four times as many hospitals and nearly twice the number of hospital beds per 100,000 people as the Indian average. The doctor patient ratio was 18 per cent above average and Kerala spent 35 per cent more per capita on health care.²⁷

In 1989 Kerala ranked fourth in per capita health expenditures among major Indian states, with 16 per cent above the all-India average.²⁸ Also Kerala had one doctor per 1,671 persons²⁹ in 1989 as against the all India average of 1 per 2,521 persons in 1988.³⁰ Hospital beds per 100,000 population were 126 in Kerala (1989)³¹ whereas for all India it is 77.³²

Despite all these favourable medical and health facilities morbidity rate is found to be very high. Even though other factors also influence high morbidity rate the likely impact of health services in bringing down birth and death rate is not made clear in the studies.

The earlier mentioned studies have stressed the expansion of medical and hospital facilities, the greater accessibility and utilization of medical care in explaining demographic transition in Kerala. They are inclined to attribute much of the decline in the mortality rate to these facilities which have accelerated since 1956. These studies fail to recognize and do not analyze various other factors

which might have influenced the declining demographic trends. These factors are identified in the later studies mentioned below.

Krishnan (1976) examines the recent trends in birth, death and infant mortality rates for Kerala and analyses the role factors like literacy, the age marriage, the availability of medical care facilities etc. in this demographic transition. He gives a picture of the birth rate in Kerala in relation to the rates prevailing in the other states, analyses the magnitude of the change in it in recent years and isolates the factors that might have contributed to its decline. Also the trends in mortality rates and the factors which might have contributed to their decline are analyzed. It is pointed out that Kerala has the highest utilization of medical care when compared to other states. The data presented demonstrate that accessibility to the medical care system is one of the important variables determining the level of mortality rates.

It is also shown that the major causes of reduction in birth rate in Kerala are rise in the average age at effective marriage brought about by changes in nuptiality and the decline in the mortality rates. He attributes the rise in average age at effective marriage to improvements in the levels of female education in Kerala.

A number of social and economic reforms also have

changed the traditional relations in family and land ownership. These changes have given rise to the emergence of small families in place of joint families. The possibility of increasing age at marriage of men having an impact on female age at marriage is also considered. The explanations offered is that, the lengthening period of education and employment increases the age at marriage of men and thereby increases the women's age at marriage.³³ But the age at marriage was high as 17.13 for females when compared to India's 13.2 for females at the turn of the century. For males it was 20.5 in Kerala and 23.3 in India in 1901. Therefore, it is clear that there are other aspects to unravel which is related to high age at marriage of women in Kerala. This aspect will be dealt in detail in the fifth chapter while analyzing the status of women in Kerala.

Gulati (1976) points out that in Kerala the increase in the age at marriage by itself did not bring down the number of children a women had. It was the reduction in infant mortality, due partly to the shift in the age of marriage but largely due to improvement in medical and public health facilities, which improved the child survival rate and that in turn seems to have influenced the number of children a woman wanted to have.³⁴

Gulati maintains that the age of marriage for girls

have been comparatively higher mainly because of certain clearly identifiable social and cultural factors. Matrilineal system is one such factor. The relatively high proportion of unmarried women in Travancore and Cochin is attributed to the influence of Christianity. Female education is also considered to have the strongest influence today on the age of marriage. Historically, in Kerala, the higher ages of marriage came first and the expansion of female education came much later. So it is to be noted that age at marriage is influenced by various other factors. But the role of education in pushing the age of marriage still further is emphasized.

Ratcliffe (1978) offers a much broader perspective on Kerala's Demographic Transition. According to him, Kerala's anomalous and unexpected demographic trends and levels are not the result of the direct interventions designed to influence health and fertility levels. They evidently reflect a broad social response to structural reforms in its political economy.

According to this "social justice theory" of demographic transition, demographic trends and levels reflect the degree to which existing political and economic institutions promulgate social justice. Kerala's political economy contrasts most sharply with those of other Indian states in exactly those areas that, in other contexts, have

been found to be associated with observed declines in fertility and mortality.³⁵

Ratcliffe points out that land reform, even though imperfectly implemented, has served to redistribute income within the state. Other factors operating to reduce income disparities include the high wage rates and the greater proportion of the labour force sharing the overall distribution of income. He asserts that education is the most telling difference that exists between Kerala and the rest of India.

He also attributes many facets of Kerala's social, political and economic context today to the legacy of a powerful communist influence on the state. Considering health services, it provides yet another example of how education and political involvement can act to determine the success or failure of a development strategy. It is shown with data that Kerala enjoys the highest utilization rate of health facilities among the Indian states for which data are available, even though eight other states spend more per capital on health services.

Political action has been mentioned as a critical factor in the successful implementation of all development strategies undertaken in Kerala. And the distributive political economy that distinguishes Kerala so clearly from other states has also been largely responsible for mortality

and fertility declines.

Ratcliffe also points out that mortality rates are more closely associated with income, education and broad nutritional levels than with the spread of health services.

Regarding female education, it not only bring women into the labour force, but also, because it remains at a relatively low level, such participation in productive economic activity evidently contributes to a more equitable income distribution. And female participation in the labour force, as well as more equitable income distributions, tend to be closely associated with fertility reduction.

Regarding land reform it is mentioned that one and half million tenants received full title to the rice fields they worked, the house compound land or both. Just before the 1969 reform, 8.1 per cent of the landowning households controlled 44.4 per cent of all rented land and 61.8 per cent of irrigated land.³⁶ Land reform certainly improved the vast majority of lives in Kerala to some extent. For tenants who received rice fields, the land is usually the source of at least half their basic food needs. But many new small land owners have suffered from the declining price of rice relative to other products. They often lack the necessary capital to plant more lucrative crops, such as coconuts or rubber. Consequently, the direct economic benefits of the land reform have been less than hoped for,

illustrating the difficulties of transforming a feudal system into small farmer private production when incomes stagnate and agricultural prices are unpredictable.

Zachriah (1983) is of the view point that the major impact of land reform on Kerala's fertility is yet to come, not through the medium of land transfers, but through the changes in the value system it has brought about in the Kerala society. Land reforms and the related redistributive policies have fundamentally altered the attitude of the Kerala population towards landed property, especially agricultural land, as a source of economic security. Land was replaced by personal attributes - education and health. This basic change in the value system has had a more longlasting effect on fertility control than the physical redistribution of land brought about through land reforms.³⁷

Banerji (1985) points out that, land reforms did not materially affect the landless labourers, particularly the Harijans, so it cannot explain the demographic behaviour of these sectors, who form a substantial proportion of the populations.³⁸ The impact of land reforms on the distribution of wealth and income has not been fully evaluated.³⁹ The impact of land reforms therefore is not that clear as the initial decline in birth rate and death rate started long before the land reform was introduced. As mentioned earlier death rate showed a sharp decline in the

later fifties and birth rate in the early sixties. whereas land reform was practically implemented in 1969.⁴⁰

Now we will look into the political aspects and its likely impact on demographic changes.

The first assembly election after the formation of Kerala in 1956, resulted in the rule of the state government by the CPI, which immediately took up legislation and implementation of land reforms as a centre piece of development strategy. The Kerala unit of CPI was formed in 1939.⁴¹ The Communist's tasks in Travancore was facilitated by a higher literacy level, greater caste oppression and the existence of unions. The Community Party leadership since the 1940s had a very significant role in the peasant movement in Kerala and thereby, in raising political awareness among the rural population.⁴²

It is indicated that in Kerala, literacy and education increase the awareness of not only the need for but also the right to use health facilities - an aspect of political awareness.⁴³ The higher literacy level and spread of primary education has contributed toward Kerala's low mortality by generating political awareness among its rural masses. The emphasis on rural, primary and female education - indicators of equity in educational services - has always been greater in Kerala. Also the circulation of newspapers and magazines in vernacular language has always been wider

in rural Kerala, which generated a higher degree of political awareness.⁴⁴

Apart from the role of political system in creating an awareness to the right to use health facilities, how it helped in the better utilization of health facilities or whether services are equitably distributed among the rich and poor are not adequately explained in the studies. Therefore the study of political dimensions in influencing the demographic changes is yet to be done convincingly.

Panikar (1979) points out the equal importance given to preventive and promotive measures like sanitation hygiene, immunization programmes, infant and ante-natal care, health education etc. as to curative medicine, for the better health status of Kerala. Another aspect he stresses is the spread of education, especially among women in the rural parts of Kerala. This was a crucial factor contributing to the high degree of awareness of health problems and fuller utilization of available health care facilities.

It is significant to note that in several countries (like Iran, Brazil, Mexico and Portugal) whose GNP per capital is several times that of the state Domestic Product per capital in Kerala the general and infant mortality rates are higher. Therefore a higher level of prosperity (as measured by per capital incomes) does not necessarily result in better health status of the population.⁴⁵

According to Panikar the significant achievement of Kerala lies in taking care of the health needs of the population groups at risks, i.e., rural population in general and the children and infant in particular. To understand how Kerala could accomplish such a situation, he looks into the resource position, pattern of morbidity in rural areas, causes of death affecting the particular group i.e., children under five, and also the financial outlays on preventive and promotive measures.

Panikar reveals that the higher rate of utilization of the facilities brought curative relief within the reach of the afflicted majority. But this cannot fully explain the mortality rates, especially in the case of children and infant. It is emphasized that the remedy for high morbidity and mortality among infant and children in the rural areas would seem to lie in preventive measures such as immunization programmes, supply of protected water, sanitation, nutrition and health education, rather than in curative medicine. Preventive and promotive measures such as provision of public latrines and disposal of rubbish under the town improvement committees and rural conservation establishment, supply of protected water through repairs, maintenance and disinfection of public wells and tanks, massive campaigns for the eradication of communicable diseases and public health education received high priority

from early times in the health care development in Kerala.⁴⁶ Though the importance of protected water supply and sanitation was recognized by the government in Kerala in the past, the fact remains that even today the proportion of the population covered by protected water supply and sewage in the rural parts of Kerala remains rather low.⁴⁷

According to Panikar, ante-natal care, the high proportion of institutional delivery, and infant care through the visits by the trained mid-wife have contributed to the lowering of maternal and infant mortality in Kerala. Another measure which contributed to the infant and child mortality consists of the immunization programme. Triple immunization, immunization of expectant mothers against typhus, prophylaxis against nutritional anemia and vitamin A deficiency, BCG vaccination etc. have been covering sizable proportion of the population at risks. It is also asserted that high level of literacy and education among females in Kerala is the one factor which has contributed most to the improvement of health status of women and children. The steady progress of education in Kerala has stimulated people's response to adopt healthy habits.⁴⁸ This aspect of education cannot be treated as the sole factor contributing to the healthy habits as it is mentioned in another study that culturally people in Kerala are more hygienic than the people from other states.⁴⁹

Even though the explanatory paradigm of earlier studies is on availability and utilization of health services, no sufficient data provides support their hypothesis relating to better demographic trends. Also the studies do not make an effort to examine the quality and distribution of resources among the poor majority. Another aspect they fail to recognize is the interrelation of various factors in changing demographic scenario. The explanations provided, alone do not account for the dramatic change in the demographic profile of Kerala.

After 1980s the focus of studies shifts mainly to literacy of women and their high status in Kerala society, however, some studies recognizes other factors also. The recent studies will be analyzed in the next chapter.

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CHAPTER III
AN OVERVIEW OF RECENT STUDIES

The studies carried out in the eighties appear to have a much broader perspective. They have looked into a number of factors related to the changing of demographic trends. The diverse conclusions reached by the social scientists and demographers therefore calls for a closer scrutiny of these studies.

Mencher (1980) has examined the conditions of life of agricultural labourers in Kerala, a significant section of the population. The aspects specifically examined are (1) health and fertility, (2) fertility and employment (3) land reform (4) nutrition (5) education and literacy and (6) other public facilities.

She has asserted that politicisation of people in Kerala has played a major part in affecting peoples health. It is also pointed out that a large amount of the decline in birth rate comes from the lowest section, i.e., the landless agricultural labourers.

Another argument she adduces is regarding the preference for fewer children among the agricultural labourers in Kerala in the beginning of the 1980s. The reason stated is that it is no longer economically advantageous to have them, because of the extensive pressures on employment which exists in the state as a whole and in agriculture in particular. Mencher attributes the decline in fertility to this preference for fewer children.

Mamdani and others have shown that in many areas, it is economically advantageous for the typical peasant household to have more children.¹

It is not maintained that decline in fertility among agricultural labourer is an indication of improvement in the quality of life. In the Kerala context, it can equally well be seen as a sign of greater poverty.²

Regarding land reform in Kerala she is of the opinion that it has not benefited the majority of agricultural labourers.

Mencher's study is marked by some limitations. First of all no data regarding fertility decline is provided. Secondly, the impact of land reforms and employment on fertility is not brought out clearly.

Pillai (1980) advances the view that changes in the age at marriage and marital fertility were preceded by more fundamental changes in attitudes and motivations.³ But how these changes were brought about has to be analysed from a historical and socio cultural point of view.

Panikar (1981) disagrees with the arguments made by Radcliffe (1979). According to him, while Radcliffe's argument that the role of the state government's policies in ensuring that the benefits of education and medical care reach the majority cannot be disputed, there still seem to

be some missing links in the phenomenon.⁴ He identifies these links as the emergence of the nuclear family system consequent to the break up of the Nayar *Tharavad*, fostering a positive the attitude to small family size, the low proportion of children in the labour force, the higher status of women and modernization of the rural masses. He is of the opinion that the spread of education has played a crucial role in bringing about these changes. It also changed the attitudes and motivations of couples so as to make them willing to accept family planning techniques. According to Panikar these developments were unfolded over the first half of the present century. The ground was thus prepared for the idea of family limitation and when simple and effective methods became widely available, people readily accepted them. Thus Panikar's argument points to the presence of several contextual factors which were in operation long before the observable shift in fertility change occurred. As stated earlier the variables identified by Panikar were the products of a peculiar social structure prevalent in Kerala for centuries.

Nag has carried out many studies regarding Kerala's demographic scenario in comparison with other states. Nag (1983) had made a comparative study of Kerala and West Bengal, which brings out the impact of social and economic development on mortality. It reveals that Kerala's

mortality level has been lower than that of West Bengal's at least since the early 20th century. The difference became sharper in the 1970s. It is stated that the differences in environmental and hygienic conditions, nutritional standards, per capital income, distribution of income and assets, industrialization and urbanization cannot by themselves explain the lower rate of mortality level in Kerala. Instead the wider distribution of health facilities in the rural areas of Kerala and their greater utilization are found to be significant factors.⁵ Two important reasons Nag adduces for the high utilization of health facilities are (1) a higher proportion of literates, particularly among women, (2) a higher awareness of their rights to use health and other public facilities among the rural poor. This differential awareness, he says, can be traced to the historical difference in the social and political movements in the two states. In general, Kerala has always been characterized by a higher level of social development and West Bengal by a higher level of economic development.⁶

An important aspect emerging from this study is that economic development is not a necessary precondition to bring down mortality rates.

Zachriah's study (1983) analyses the determinants of the fertility decline which took place in Kerala in recent years under seemingly unfavourable circumstances.

In the concluding observations he points out that even though Kerala's experience cannot be replicated in other states because of the critical part which historical developments played, there are few lessons which can be learned and will be useful in reorganizing the Indian Family Planning Programme and working out a long term strategy for ensuring a sustained fertility reduction in the other states of India.

His study attributes 40 per cent of the fertility decline (during 1968-78) to the Family Planning programme. The impact was more among the people in the lower strata. The programme has been more effective in Kerala than in the other states of India mainly because of the socio-economic conditions, especially lower mortality and higher females literacy.⁷ He avers that the sequence in which the determinants of fertility are applied to a population is as important as the determinants themselves.

Another point he makes is that in Kerala the determinants came, in the right order - a reduction in infant mortality followed by or along with an increase in female education, followed by land reforms and other redistributive policies and finally the official family planning programme. It is mentioned that the impact of Kerala's family planning programme would have been much smaller and less lasting had the programme been introduced

before a substantial and sustained reduction in the IMR.

Another aspect which is stressed is the changes in norms about family size which came through a reduction in IMR and the cost benefit ratio of surviving children. These changes occurred over a long period of time but were accelerated inadvertently through land reforms, minimum wages, etc.

The study attributes the major role in Kerala's fertility decline to the increase in age at marriage.

Even though the study adopts certain approaches for analysing the impact of the family planning programme on fertility levels, it is rather difficult to make a clear cut distinction that the major part of the fertility reduction is due to the programme. Nair (1974) is of the opinion that the drop in birth rate, rather than being initiated by official population control efforts was a response to "some kind of broad societal adjustment". The point he stresses is that the decline in Kerala's birth rate began in the early 1960s that is, before the intensification of the national family planning programme.

It may also be noted that the Seventh Five Year Plan (1985-90) Mid-term appraisal observes that "fertility behaviour depends on much more than the access to family planning services. Nearly half the decline in fertility levels that took place between 1961 and 1981 were due to

other factors, most notably a rise in the age at marriage". Fertility rates themselves are influenced by factors like female literacy and female employment.⁸ Therefore, the important role of the Family Planning Programme which Zachariah stresses has to be interpreted with caution.

Panicker (1984) examines the impact of non-health sectors on the health status of the people. The aspects he examined include employment, per capita income, food production, distribution of cereals, water supply, sanitation, housing, land reforms and education.

The picture emerging shows that development policies have made very little impact on the employment situation and level of income, contrary to the objectives in the successive five year plans. The employment situation has been deteriorating over the years. The price of rice, which is the staple food of the people, has remained the highest in Kerala among all the states in India.⁹

The distribution of cereals in Kerala through fair price shops has an effective coverage of almost all households, unlike the situation in other states where it is mostly confined to urban areas. It is stated that there is a substantial difference between open market prices and ration prices, thus the public distribution system amounts to an income supplement. Though the quantity distributed through fair price shops represents a not very significant

proportion, this nonetheless enables the lower income groups to purchase a certain amount of rice.¹⁰

According to official estimates in 1980-81, 28 per cent of urban and 71 per cent of rural population are not covered by safe water supply. The situation regarding sanitation and drainage is not better.¹¹

Panikar also attributes a greater degree of health consciousness to higher educational levels, especially among women. But this is not substantiated with required data.

According to Panikar land reform deserves special mention among the various economic policies implemented in Kerala. Overall, the contribution of the non-health sectors to the raising of Kerala's health status seems to be marginal.¹²

In Panikar and Soman's study (1984) on the health status of Kerala, it is pointed out that the spread of education, social reform movements and the organizations among the socially and economically backward classes have contributed to the eradication of the worst forms of social discrimination and economic exploitation which used to be rampant in traditional Kerala society. On the economic front there has been no perceptible improvement. The employment situation has worsened, thereby affecting the level of income and living standards of the masses. The food intake levels had shown no improvement over the years.

Expansion of medical care facilities leads to prompt curative intervention in the event of even minor illness.¹³

The picture emerging from a review of the mix of development policies, health strategies and the health related components of the non-health sectors is as follows. The impact of five year plans on increasing employment opportunities, rate of economic growth and the level of income has been negligible.

The accent of the health strategy especially in the first phase, was on controlling the major killers through preventive programmes, this did make a dent on the morbidity pattern and mortality rates. In the second phase, medical care facilities were expanded to bring them within easy reach of the majority, steadily narrowing the rural urban and inter-regional disparities. The extension of curative treatment facilities further accelerated the rate of mortality decline.¹⁴ The study does not attempt to analyse the various factors that might have brought down the mortality rates. They tend to focus their attention on health facilities in bringing down mortality rates. As for the non-health sectors the picture is rather mixed. On the one hand food supply has not responded to the policies and programmes for the agricultural sector which received a high proportion of the plan outlays. The per capita availability of food grains during the 70s hovered around

the same levels as in the sixties, varying with imports of food grains, particularly rice, from the rest of the country. On the other hand, policies in respect of certain other fields like land relations, public distribution of food grains, education and housing have made a positive impact. The programmes in these areas have contributed to reducing socio-economic inequalities and perhaps in facilitating better utilization of health care facilities.¹⁵

It is also pointed out that policies in respect of certain non-health sector did have a positive impact on the health status even though it is marginal.

Regarding morbidity, it is mentioned that the rate of morbidity is high and rising faster.¹⁶ Padmanabhan (1981) argues that the data provided to establish this is very weak and that it is still an open question. Therefore the morbidity situation needs more detailed examination.

According to the data presented, neither food intakes nor nutritional status of school going children nor the birth weight of babies in Kerala shows a clearcut improvement over time.¹⁷ Still they establish an improvement in the health status of the people in Kerala.

Adequate data is not provided to establish the relationship between education, health services and declining mortality. Also the interregional disparities in health services, mortality and morbidity patterns over time

were not analysed.

Nag (1984) compares Kerala and West Bengal mainly because there exist a few similarities which provide some control in explaining the demographic difference.¹⁸ They are the two densely populated states of India which share a historical tradition of emphasis on education. Also these are the only two states in India with considerably long periods of rule by left-oriented political parties.

Although in per capita income Kerala has always been behind West Bengal, this is not true for the total value of the household assets. According to a survey conducted by the Reserve Bank of India in 1962, the average value of the total assets in rural households (as of December 1961) was Rs.5,215 in Kerala and Rs.3,976 in West Bengal. The corresponding averages (as of June 1971) obtained from another similar survey was Rs.11,615 for Kerala and Rs.7,331 for West Bengal. In 1961 the values for both the states were lower than the all-india average (Rs.5,369) but in 1971 Kerala value surpassed the all-India average (Rs.11,311).¹⁹ This improved situation in Kerala, Nag attributes to land reforms, which for various historical reasons started earlier in Kerala than in other states.²⁰

Regarding education the main reason stated for the pre-eminence of Kerala in literacy is that at all times - pre-British, British and post-independence - primary level

education has been emphasized, whereas, the educational structure in West Bengal, particularly during the British rule, was elitist and urban-oriented.²¹ The greater emphasis on lower level education in Kerala is well reflected in the school enrollment figures. In 1978, 86 per cent of children of age group 6-10 were enrolled in Kerala, while in West Bengal only 68 per cent were enrolled.²²

It is also pointed out that Kerala's uniqueness in the educational status of women is partly due to the fact that a large section of the state's population was traditionally matriarchal. The causal mechanisms through which literacy affects fertility are not well understood. The educational effect on women's world view and on their decision making power within the household, rather than their increased participation in the labour force, may be more important in changing their fertility motivation and behaviour.

The greater improvement in economic condition of the poor in Kerala, as reflected in the absolute income and also in household assets is mentioned to be associated with a greater fertility decline of the poor in Kerala.²³ It also supports Radcliffe's contention that increase in the income of Kerala's landless poor is an important contributing factor to the state's fertility decline. This comparative study of Kerala and West Bengal suggests that the higher decline of fertility in Kerala is associated more with

greater equity in education and health facilities than with greater equity in income and assets.²⁴ The study gives no evidence to support Radcliffe's broader proposition that Kerala's fertility decline can be attributed to the equalitarian distribution of income and assets.

Panikar (1984) again in understanding fertility decline in Kerala brings out the determinant factors as improvement in education, especially female education, higher age at marriage, lower nuptial rates of women and fall in infant and child mortality rates.

He argues that the pattern of habitation and pulling down of caste barriers brought about a high degree of contacts and socialization between members of different socio-economic classes especially in recent decades. He concludes that there is nothing paradoxical in Kerala's demographic trends. The changes in institutions, values and attitudes among the Keralites did not have to be preceded by industrialization and urbanization. Nor did the infrastructural and institutional reforms which stimulated the attitudinal change have to wait till significant economic development was achieved.²⁵

Nayar (1986) attempts to relate Kerala's fertility behaviour to the fairly wide coverage of social welfare and social security programmes obtaining in the state and contributing to a more egalitarian societal base

facilitating better accessibility to and more efficient use of family planning services.

Two types of factors have been identified for the significant fertility decline - direct causal factors and indirect enabling factors. Massive programmes of educational and health care promotion (the latter includes Family planning programmes) have directly contributed to the fall in fertility. But the success of these programmes has been largely due to the states ecology and culture which produced a unique social structure which, in turn supplied the necessary infrastructure required for the quick absorption of the educational and health care inputs.²⁶

It is not argued in this paper that ecology is a necessary or sufficient factor in demographic behaviour. But in the case of Kerala, its influence cannot be minimised. It is argued that the existence of a sound social infrastrucutre, compared to the other states in India is largely the contribution of its ecology. Even though the role of ecology needs detailed analysis, this seems to be an important aspect unique to Kerala. Other factors he identifies include the favourable political climate, mass education, comprehensive health care system and low infant mortality rate. He emphasizes the importance of high status of women in Kerala. It is argued that education of women, which raised the age of marriage, affected fertility decline

in several ways. The author does not analyse the variables related to status of women and its impact on fertility decline. Therefore one has to rethink the aspect of status of women in Kerala in order to have a better understanding of the women's status as well as its relative importance among other determinants of fertility decline.

Kurup (1986) points out women's role as an important factor in reducing birth rate, along with other factors such as rural development and agricultural practices.²⁷ This article does not have a clear cut approach in understanding Demographic Transition.

Nag (1987) in another study examined the demographic situation in Kerala and Punjab for they have both achieved relatively greater demographic decline. Moreover the success stories of these two states challenge some well-known propositions about demographic transition.

Punjab has achieved a demographic decline even though the status of women in the state is apparently as low as in other states of northern Indian with strong patriarchal tradition and high vital rates.²⁸

It is shown that despite the greater contraceptive prevalence in Punjab, fertility level has remained higher than in Kerala. Fertility reduction through delayed age at marriage of women has occurred in Kerala to a greater extent than in Punjab.²⁹ There is no survey data regarding

Punjab's fertility decline and delayed age at marriage to assess its relative role. In spite of this limitation this article gives some evidence showing the relative importance of age at marriage to contraceptive prevalence. The author has come to a rather hasty conclusion here without recognizing the fact that age at marriage as well as contraceptive prevalence is influenced by various other factors. The mere finding that both these aspects are coexisting does not mean that age at marriage is the important factor determining contraceptive prevalence. Again the relationship between the status of women and demographic decline is not clear in the study. It is pointed out that Kerala's top position among other Indian states regarding indices of female status fits well with its lead in fertility and mortality decline. But Punjab's low position in some indices of female status raises questions about its influence on vital rates and about what the appropriate indices of female status are. Nag argues the relatively high status of women and greater political awareness are of special relevance for Kerala, whereas the relatively high economic development is of importance for Punjab.

Mahadevan and Sumangala (1987) studied the social development, cultural change and fertility decline in Kerala. An attempt was made in their study using both the

anthropological and survey approaches to explore a maximum number of variables which can explain fertility behaviour. The hypothesis confirmed here is that the educational status of both men and women is negatively associated with fertility behaviour. They argue that, since more Keralite women have a high level of emancipation and low fertility compared to their counterparts in the Andhra village, the emancipation of women per se has significantly contributed to the decline of fertility in the Kerala. Further they point out the importance of family planning as a major determinant of fertility decline. Also the levels of modernization, structural change and decision making were assessed. They arrive at the conclusion that there is high level of modernization in Kerala and high women's status which brought down a decline in fertility.³⁰

One has to think of modernization in a much broader perspective in order to generalize the hypothesis. So also is the status of women, which needs further examination placing in it a broader socio-economic, political and historical context.

The value of children and differential fertility in states have been studied by Mahadevan and Jayasree (1987). It is shown that value attached to the son significantly increases fertility among the states studied. The percentage of desiring a son is seen to be less in Kerala. This may

be due to the matriarchal background of Kerala society.³¹ It has to be noted that this matriarchal system deteriorated long back and yet son preference is less compared to other states.

Padmanabhan (1987) has reviewed the C.D.S. study (1974) and the Panikar and Soman's study (1984) on Health Status of Kerala. Regarding the C.D.S. study it is pointed out that it has not succeeded in proving that the morbidity level in Kerala is high. Hence there appears to be no justification in calling Kerala as a "Low mortality-High morbidity" state.

He observes that in Panikar and Soman's study the main reason responsible for a higher utilization of hospital services is said to be the smaller catchment area of a hospital in Kerala. Padmanabhan refutes this argument. It is also pointed out that the bed population ratio, catchment area, institution, population ratio etc. might be quite impressive, what is not so impressive is the quality of services offered by the government hospitals.³²

This review has tried to bring about the factual situation regarding health related aspects of Kerala. This makes one to look from a different angle the achievements of Kerala in the demographic trends.

Kumar (1989) has studied gender differential mortality and development in Kerala and pointed out that the reasons for the relatively greater sexual equality in Kerala are

complex, but the greater autonomy that women have gained over the years must be a major part of the explanations. There are important historical reasons for women's greater autonomy.³³ The age at marriage had always been high in Kerala without in fact any legislation designed for that purpose. The most likely influence, as Leela Gulati (1976) pointed out is the nature of familial organization in Kerala, i.e., the matrilineal system and the *marumakkathayam* system of inheritance where succession was traced through females. Therefore son preference has less of a hold. The favourable sex ratio figures reach back into the marital arrangements of Kerala in the past.³⁴ It is also argued that the relatively favourable sex ratio in non-agricultural work is connected with an improvement in female status.

Bhat and Rajan (1990) while examining Demographic Transition in Kerala come to the following conclusions. They opined that fertility decline has occurred from the changes in perception about children's cost and benefits and in this female education has made a significant contribution.³⁵

Other conclusions they arrive at are: (1) increase in female age at marriage was not an important factor in the decline of fertility in Kerala. It accounts for only 15 per cent of the decline between 1961 and 1981. (2) Fertility declined as knowledge of contraception became widespread.

(3) Decline of fertility was extremely rapid.

In their study female literacy emerges as the single most important factor in explaining the transition in Kerala. They do not consider other determinants on demographic decline and focuses on female literacy alone.

Harilal (1991) in response to the above article has mentioned that they rejected 'trivial' and incidental factors that includes many unique features of Kerala economy and society. He suggests that the special features attributed to Kerala should be seen only as products of history. He also adds that the picture of Kerala's demographic transition could be complete only if state specific factors including structural changes in the economy are retrieved.³⁶

Kannan et al (1991) had done a major study in understanding health and development in rural Kerala. It is stated that there are many socio-economic conditions unique to Kerala which have made 'health transition' possible. They are (1) high female literacy (2) traditional family set up in which females have high degree of decision making power and (3) the traditional healing systems, mainly the role of ayurveda.

Their study shows that 47 per cent of the poor people utilize private sector facilities. But it is not explained whether poor people can afford the private facilities and

how much is the role of private sector in improving the health status.

The fall in death rates among the higher socio-economic group of the population is attributed to increased medical intervention.³⁷ They have not looked into other related factors which might have contributed to the fall in death rates.

Eapen (1992) examines fertility and female labour force participation in Kerala. According to him the decline in fertility appears to have strengthened the commitment to labour force activity, however, it has not improved their employment situation. Another point he makes is that high rates of female unemployment have affected fertility behaviour through an upward pressure on age at marriage, higher proportions remaining never married in the younger age groups and completion of family size within a shorter span of time. These aspects are examined in detail in the next chapter.

Krishnan (1992) while examining population, poverty and employment in India mentions that social and psychological attitudes towards health care and population planning are essentially shaped by education. He gives the example of Goa and Kerala to demonstrate the effect of female education on these changes. Female literacy rates are highest in these two states and have been so for decades.³⁸ Fertility

has been found to be negatively correlated with the level of female education. The status of women is closely related to the level of education which in turn initiates concomitant changes in the age at marriage, employment status, income levels utilization of health care and in the attitude towards practise of family planning.

All the recent studies attempt to focus on female literacy and the high status of women in general in explaining the declining demographic trends. Therefore an enquiry into the role of status of women from a historical point of view along with the changing trends in the socio-economic and political context which moulded changes in the demographic trends has to be done. An attempt is made in the next chapter to understand the role of women's status in demographic transition in the light of above mentioned aspects.

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CHAPTER IV

THE ROLE OF THE STATUS OF WOMEN IN THE CHANGING KERALA'S
DEMOGRAPHIC SCENARIO

The "status of Women" in Kerala has been consistently emphasized throughout the last decade, in the context of demographic transition in particular and also in the context of social development in general. It has often been stated that the fertility performance of a woman is greatly determined by the social status that she enjoys in the society by virtue of her education, economic position, freedom in the selection of marriage partners and decision making etc. It is further maintained that negative association exists between the fertility of woman and her social status and the higher the social status, the lower the fertility and vice versa.¹

Those who theorize a direct linkage between variables related to women's status and fertility behaviour often do not take into account the critical element in fertility decisions and behaviour which is usually, though by no means always, structured in the husband-wife relationship.² This relationship does not exist in a vacuum, but is influenced by a couple's socio-economic status and their place in the kinship system as well as by the personal characteristics and values each spouse brings to the union.³

There is some evidence to suggest that employment outside the home is associated with considerably greater female autonomy and influence in family decision making than is work within the home.⁴ The issue that needs to be

examined in the context of the Kerala situation is how far women with greater economic independence are better able to control their fertility because of greater autonomy and what is the extent of their influence in family decision making, particularly in decisions related to fertility.

The present analysis is based on the studies done in the area of demographic changes and status of women in Kerala. The status related factors which have been known to have implications for fertility behaviour of women in Kerala will be examined in detail, in order to understand how important is the role of status of women for Kerala's demographic transition. Further this has to be placed in a time perspective by highlighting the significant changes taken place in the demographic trends with changing status.

The status of women and its possible connections with fertility and mortality can most likely be understood only in particular socio-historical contexts. This is because indicators of female status tend to be heavily "context dependent" (i.e., what indicates high status in one setting may indicate low status in another) and also because particular aspects of female status may have contradictory effects on fertility or mortality in different socio-cultural settings.⁵ The Kerala situation also gives evidence that determinants of fertility often are sensitive to socio-cultural context. Therefore, an attempt is also

made to understand the status of women in Kerala in the political, economic and socio-cultural context.

Overview of Studies Focussing Women's Status in Kerala

It is seen that the status of women has come to occupy a central theme in the literature explaining demographic transition only in the recent years. This is not to say that all earlier studies ignored the topic of women's status. On the contrary, beginning in the mid 1970s studies have acknowledged the role of the status of women having important demographic implication, along with other factors. But only in the recent years, however, has this topic become the central focus in Kerala's demographic transition.

A quick overview starting from the earlier studies to the recent ones, particularly mentioning status of women and demographic changes would clarify this.

Krishnan (1976) mentions that the decline in Kerala's fertility is due to a change in nuptial rates and the consequent rise in the age of effective marriage brought about by continuous and sharply increasing rates of female literacy. Gulati (1976) also pointed out the rise in the age of marriage of women in Kerala as the major factor in bringing down the birth rate. She mentions spread of female education along with other contributing factors which influenced the number of children a woman wanted to have.

Again Ratcliffe (1978) associates female education and labour force participation with fertility reduction in Kerala. Panikar (1979) points out the high level of literacy as one factor which has contributed most to the improvement of health status of women and children.

Coming to the studies in 1980s, Nag (1983) observes higher proportion of literates particularly among woman as one of the reasons for the high utilization of health facilities.

Nayar (1986) attempts to relate education of women, high age at marriage and fertility decline. Kurup (1986) also points out women's role as an important factor in reducing birth rate along with various other factors. Kumar (1989) also asserts that Kerala women enjoy greater autonomy. Coming to the studies in 1990s Bhat and Rajan (1990) focus their attention on female literacy, which they consider as the single most important factor in explaining demographic the transition. Kannan (1991) also refers to traditional family set up in which females have a high degree of decision making power. Zachariah (1992) observes that the IMR decreased with the mothers educational attainment.

Most of the studies, use indicators like women's educational level, employment, labour force participation, age at marriage, number of children ever born to a women

etc. for measuring or assessing women's status. Some of the studies have no data base but still makes a generalized statement that the status of women is high in Kerala. It has to be noted that the implications of particular social practices for women's status vary from context to context. It is indeed a difficult task to assess empirically the impact of women's status on fertility and mortality declines.

Most of the statistical analyses of female education or employment and fertility have focussed on global measures of fertility such as the number of children ever born to an individual woman or the total fertility rate. While this approach can reveal whether women's schooling or economic role has a net effect on their fertility behaviour, it fails to make a case as to why any such effects exist (or do not exist). To understand that, studies must focus on the intermediate determinants of fertility.⁶ The intermediate variables may also vary in different societies, for example, female education, its effect on high age at marriage, employment and economic situation of women, decision making in the family, and so on. All these are interlinked factors but may have its net effect on low fertility.

Another important aspect which needs to be enquired into whether women and men consistently differ in their view on fertility decisions and fertility desires. As women

educated their husbands will also be equally or more educated and in such a situation the decision making regarding children can be made by men or both the partners together. Therefore one cannot establish that only because women's education is high there is desire for fewer children. Considering the situation of India as a whole and in Kerala, the literacy rate for males was always high in Kerala than the national average. At present literacy rate is 90.59 per cent in Kerala and 52.11 per cent in India (1991 census).

Mortality and fertility tend to be lower in states where education is more wide spread, economic development more advanced, or its benefits more evenly distributed. Cassen (1976) says that this has only partly to do with the relations between mortality and fertility themselves, and rather more with the fact that both respond to the same sort of influences.⁷

It is to be noted that Kerala and Maharashtra, the states with the highest proportion of couples using contraception - over 30 per cent of couples with wives in the age range 15-44⁸ - are by no means well off by international standards, and are considerably poorer in income terms than those developing countries with birth rates in the region of 30/1000. That family planning programmes play a significant part, and can reach even poor

and illiterate people, is shown by the fact that in the states when over all contraceptive use is relatively high, use on the part of illiterates is higher than the average for Indian couples as a whole, and in fact higher than use among the educated in some of "poor-performances" states.⁹ Therefore it can be assumed that education, especially female literacy is not the sole reason behind the improved use of contraceptive practise.

Since status of women has become the central theme in most of the recent studies regarding Kerala's demographic transition, it is essential that the demographic profile and status of women be examined in terms of historical, socio-cultural, economical, political aspects and levels of health status.

Demographic Profile

According to 1991 Census, there are 14,793,070 females to 14,218,167 males in Kerala. The sex ratio in the state has increased from 1032 in 1981 to 1040 in 1991. Even by the turn of the century (1004/1000 in 1901) Kerala had a favourable sex ratio and since then it registered an almost steady improvement, whereas for the country as a whole the ratio almost steadily declined from 972 in 1901 to 929 in 1991.

Females in Kerala have a higher expectation of life at

birth. Life expectancy at present is 67 and 70 for males and females respectively. This is about 12 years higher than that of all India average.¹⁰ Right from birth, females here seem to have a greater survival strength. Mortality among female infants in the state is lower than among male infants, as of 1977, mortality rate among female infants came to 44 in rural areas and 34 in urban areas, compared to 54 and 41 respectively for male infants.¹¹

Another important aspect regarding women in Kerala is the higher average age at marriage. By the turn of the century it was 17.¹² and in 1971 it was 21 years as against the national average of 17 years.¹³ Comparison of nuptial rates of females in the age groups 15-19 years and 20-24 years in 1961 and 1974 shows that there has been a decline in nuptiality especially in the former age group.¹⁴

The foregoing section shows a favourable picture regarding demographic indicators of women in Kerala. It is, however, necessary to find out whether these indicators actually reflect a high status of women or not and what actually is the position of women and its role in the better

Historical and Social Aspects of Women's Status in Kerala

The status of women in any community is governed by socio-economic conditions as reflected in the level of

education, various institution, customs, and traditions prevailing from time to time. It also it depends to a large extent upon her economic status as governed by ownership and control of property and other assets, employment, occupation and income.

Due to historical developments like the social reform movement and institutional factors like the matrilineal system of inheritance, sex based inequalities have been comparatively less virulent in Kerala than in other states in India.¹⁵ It is often mentioned that Kerala society has largely been matrilineal where women are the decision-makers and the status of women is high. Also there is no son preference syndrome unlike in the northern states where it is deeply rooted.¹⁶ Whether women enjoyed a high status while matrilineal system was prevailing, how it affected fertility and mortality levels and whether it had any influence on gender preference of children etc. has to be delineated.

The joint family system, based on *Marumakkathayam* (matriliny) the law of inheritance through the female line used to be the pattern among several sections of the population. This might have contributed to the high status of Nayar women who followed this system. It was not only confined to Nayars alone but also almost all castes in North Kerala.¹⁷ Some of the Muslims of Malabar, and many backward

communities such as Ezhavas, artisans, and tribals like Kurichiyars (Mahadevan 1979) also followed this system. The rules of divorce for women and remarriage in the event of widowhood were liberal. These factors, namely the system of female inheritance, the right of female residence and the right to divorce and remarriage of widows, gave women a unique status unknown in the rest of India.¹⁸

Regarding 'son preference' it is obvious that, although it does exist in Kerala, it is much less prevalent when compared to the rest of India. The findings of Zacharia (1992) shows that gender preference as commonly understood, namely preference for the boy, exists minimally in Kerala. It is neither wide spread nor strong enough to make an adverse impact on the health of a girl child. If there was any neglect of the girl child as a result of preference for boys, there would not be a consistent trend of long-term favourable mortality for females. The sex differentials in infant mortality rate are consistent with the absence of sex preference in Kerala.

The age at marriage has been comparatively higher in Kerala without any legislation specially designed for that purpose. Not only was the female age at marriage among those practising *Marumakkathayam* higher, but the proportion of women remaining unmarried was also high, a situation virtually unknown in the rest of India.¹⁹ Even with

literate comprising only 4 per cent of the female population in the area, the mean age of marriage for women was seventeen years in 1901. Hence it cannot be maintained that only spread of female education is responsible for higher age of marriage. It is also mentioned that high age at marriage in Kerala is not only due to female education but the high unemployment rate, because of which girls either marry late or prefer to remain single.²⁰

This, however, cannot explain the higher age at marriage even early in this century. This is not underestimate the importance of age at marriage. The lengthening of the educational period have a tendency towards postponement of marriage²¹. It has to be noted that there are so many other factors (for example, employment, practise of dowry etc.) which influences the age at marriage.

The World Bank Fertility Survey of 1980 (WBFS) indicated that the desired age at marriage for females in Kerala was lower than the actual age at marriage. That is, given the opportunity, girls in Kerala would have been married earlier than the age at which they actually married. Parents also preferred younger age at marriage for girls than prevailing ones. The reason for the prevailing high age at marriage could be explained in terms of increasing education of the boys and girls and the prevalence of high rate of educated unemployed. As the age at marriage of boys

became higher, simultaneously age at marriage of girls also became high.²² This aspect whether the desired age at marriage differ from the age of actual marriage, the reasons for this divergence that and also whether this difference existed in the earlier years also should be further explored. A significant finding in this context is that men's education also influences women's age at marriage.

Education is mentioned as the key variable raising women's age at marriage. However, of late it has been found that schooling below 10 years does not make much difference. Once a girl is educated over 10 years, her age at marriage rises very considerably. The 1980s saw a reduction in the relative contributions of marriage to fertility reduction.²³ If education affects age at marriage which in turn affects fertility levels, then it has to be found out what level of education and what percentage of women should be educated to bring down fertility levels. As IMR also affects fertility rate, the influence of women's education on IMR also has to be quantified. Zachariah (1992) points out in his study that the lowest infant mortality rate was observed among the females who had completed 10 years of schooling and above and the highest IMR was among illiterate mothers. Another observations he makes is that the IMR values for illiterate mothers and mothers who had less than five years of schooling were closer during 1980-89. This finding

indirectly suggests that mothers' education is an important determinant for infant mortality only when she completes five years of schooling. It is also observed that fathers' education is more important than the mothers' education in determining the level of infant mortality.²⁴

This aspect of a father's education or the education of males on IMR levels has to be further explored in order to probe whether women's education alone plays a significant role in bringing down the IMR. It is to be noted that IMR is also affected by improved health facilities, economic condition of the family... etc. So the influence of women's education on different variables that affect fertility levels is a very complex indeed and that needs further exploration. One should therefore be cautious in attributing the reductions in fertility and mortality levels to women's education. There are other factors which might influence them in the same manner, and have therefore to be studied simultaneously. For example, accessibility to various resources and economic condition can affect female education and IMR. In addition all these are inter related factors so that a one to one relationship cannot be hazarded.

Tracing the history of female education in Kerala, it is noted that *Palli* was the educational institution, where education was offered in Sanskrit and the vernacular for

both boys and girls up to 10 years of age. Direct activity of the state in the field of education began only in 1917, when Rani Gouri Parvati Bai, the then ruler of Travancore, with the assistance of Devan Munro, introduced free and compulsory education in Travancore for all children. In the 19th century it was largely the work of missionaries who opened schools for girls in different parts of Kerala, popularizing women's education.²⁵ Thus the long tradition of female education due to the benevolent approach adopted by Maharajas of Travancore and Cochin and the spread of education by the missionaries are favourable factors which do not exist in other states of India.²⁶

By 1955 middle school education was made free to all in Travancore. Compared to other states then emphasis in Kerala was on middle school and secondary education as against higher secondary and college education. In addition the dropout rate among girls is the lowest in Kerala as compared to the other Indian states.²⁷

There is no large rural urban difference in female literacy rate. The enrolment rates of females at the primary level has reached 100 per cent of the respective age group. The enrolment rates at the secondary and higher levels are also fairly high. In 1981, of the total number of students who appeared for the SSLC examination, about 49 per cent were females. The proportion of females enrolled

in the Pre-degree, degree and post graduate classes during 1981-82 worked out to be 49.12, 0.16 and 48.36 per cent respectively of the total number of students at these three levels of higher education.²⁸

The female literacy rate in Kerala is 86.93 per cent. Further, the literacy rate among females in the state is not far behind the male literacy rate of 94.45 per cent (1991 Census). Demographers ascribe the favourable sex ratio in Kerala to the high levels of female literacy. It is also assumed, not without reason, that a better educated population tends to be less prejudiced towards female offspring. Another association pointed out is between literacy levels and the population growth, the more learned the population, the slower is its rate of growth.²⁹

Even though the literacy ratio among women is an indicator of her social position, it raises the question of the prevailing levels and quality of education. While the official concern for literacy is linked to the issue of promoting family planning - a notion for which there is little evidence of achievement, the majority of the women find little meaning in being "literate" (as defined by the census). It neither improves their work or home situation nor offers any new opportunities.³⁰

Again, considering female literacy or education and declining birth rate, it is seen that there was a marked

difference in literacy as well as birth rate during the period 1951-60 and 1961-70. Birth rate declined from 38.9 to 31.9 during that period, as female literacy increased from 38.4 to 53.9.³¹ But then it cannot be maintained that there is a one to one relationship between female literacy and birth rate. Because there are various other factors influencing declining birth rate like infant and child mortality, value of children (old age security value, labour value) etc.

Employment and Work Participation of Women in Kerala

Another important societal variable said to have significant relation to fertility performance of women is their work role, particularly, their employment outside the home. Demographers and sociologists agree that women's employment outside the home completely changes her status-role in the family and the larger society. In a review of studies relating to this relationship Freedman (1961-62) has observed: "There is systematic evidence that fertility declines as married women engage in non-familial activities, especially in work away from home".³² Associated with the role of women as worker are other factors like higher age at marriage, remaining unmarried and the changes in the economic independence of women and the economic position of the family as a whole. All these together tend set to

decline the fertility trend.³³

The extent to which fertility and the associated demand for child care time acts as a constraint on female labour force participation has also drawn considerable attention. In general fertility tended to be high for non-workers vis-a-vis workers as also those engaged in household industry.³⁴

The work participation ratio among females in Kerala does not seem to compare favourably with that of their counterparts in other states.³⁵ Labour participation of women in Kerala falls in line with the national trend. It has been declining practically all through the present century. In 1981, only a small proportion of women (17%) were found to be economically active in Kerala as compared with the whole of India (21 per cent).³⁶

The work participation rate has come down from 19.7 in 1961 to 16.9 in 1991. Also the workers sex ratio i.e., the number of female worker per 100 male workers has come down from 42.6 in 1961 to 36.8 in 1991.³⁷ However, the sex ratio here of persons at work in almost all modern occupations including architects, engineers, technologists, scientists, doctors nurses, teachers etc. is significantly higher than that in the other states.³⁸

Wages of female workers in Kerala have also been higher than the all India average of female earnings in both the agricultural and non-agricultural occupations. Males also

have higher wages. But the ratio of wages of female workers to that of males in this state is below the all India average in several instances. Except in traditional industries like coir and cashew, the male-female wage differential here is getting narrower.³⁹

The occupational distribution of working women in Kerala shows that one out of every twenty working women in the state is classified as a cultivator, while the all-India level is only one third of this. Moreover, in Kerala more than four out of every ten working women are engaged in non-agricultural activities and household industries, while in the country as a whole only one-sixth of the working women are so occupied. The employment of a large proportion of Kerala women in the non-agricultural sector can be attributed to two factors: (1) The rapid commercialization of agriculture in Kerala has led to a substantial fall in manual paddy cultivation over the years and has thus considerably reduced women's employment. (2) Due to social barriers, women belonging to high caste but poor peasant families do not generally seek employment in the agricultural sector, and an informal sector could easily use this cheap labour for productive employment.⁴⁰

The proportions of working women employed in the organized sector is almost twice as high as the national rate (11.38 per cent). This is mainly due to the high

proportions of women employed in plantations and service sectors. Though the proportion of working women in the unorganized sector including cultivators is lower in Kerala, this is not true of employment if cultivation is excluded. Thus it can be said that at 84.04 per cent the employment of women is more concentrated in the unorganized sector of the Kerala economy than it is nationally.⁴¹

Agriculture was the major sector in which Kerala women were engaged in the past. Gradually traditional industries like coir and cashew emerged in the 1860s and in the early years of the present century respectively. The fishing and beedi industries also opened up employment for women in the industrial sector. All these together account for approximately 71.16 per cent of the total employment in this sector. In coir and cashew about 95 per cent of the employment is accounted for by woman whereas in the case of beedi and fishing, they are 20 and 30 per cent respectively.⁴²

Within the above context of women's employment, labour force participation etc. we will look into the extent to which it has affected the status of women and which is considered to have influenced fertility behaviour. As regards the impact of women's employment on fertility in Kerala, very little attention has been given to study the phenomena.

The impact of structural change particularly in the employment structure, has not been given much emphasis in explaining the demographic changes in Kerala. The evolving structure seemed to be in favour of a fertility decline characterized as it was by (a) a relatively high proportion of non-agricultural employment even in rural areas, (b) higher proportions of workers including females depend on wage labour and a very low proportion self-employed. (c) a very high incidence of male migration and (d) a low incidence of child labour.⁴³

In Kerala more women are entering labour force as there is increase in female population and also there is decline in the number of births per woman since the seventies. However, female workforce participation ratio reveals a declining trend. This is primarily due to inadequate growth in employment opportunities, more pronounced in the case of educated women.⁴⁴

Two features of women's economic participation in Kerala are: (1) the much lower (than male) work participation rates which are even lower than all India rates and, (2) the decline in female participation rates between 1961 and 1981 (a trend which had in fact started even earlier).⁴⁵ Women constituted a larger proportion of the educated unemployed.⁴⁶

According to Eapen (1992) female education may lead to



a stronger motivation to work and hence postponement of marriage, raising the chances of pre-marriage work experience and reducing the negative effects of fertility on participation. Both education and the desire for work strengthen the upward pressure on age at marriage. He says that it is also possible that the system of dowry, the incidence of which is rising, has aggravated this pressure. Another important point is that given the long waiting periods and the fact that social pressures do not permit undue postponement of marriage of women, despite forces working in favour of encouraging married women to participate in economic activity, there would be a higher probability of their withdrawal from the work force. Even though fertility decline has taken place, the employment situation of married women has not improved. Although employment situation of females in Kerala shows a depressing picture we cannot conclude that women's status is low. Because, it is also due to increase in female population, educated women and the overall lack of employment generating opportunities.

The high rates of female unemployment have affected fertility behaviour through an upward pressure on age at marriage, higher proportions remaining never married in the younger age groups and completion of family size within a shorter span of time. The overall decline in family size

and mean fertility age seems to confirm this.⁴⁷

Political Dimensions of Women's Status in Kerala

Like education, employment etc. the political system and its climate in the state is another important social factor having implications for women's status and her fertility behaviour. Particularly for Kerala this has been a very crucial factor in influencing the demographic trends as pointed out by many demographers. (For example, Ratcliffe, 1978 and Nag 1989). But only very little attention has been given to the political dimensions of the status of women.

As mentioned earlier the emphasis on rural, primary and female education - indicators of equity in educational services - has always been greater in Kerala. Along with primary education, an important phenomenon that contributed to the easier accessibility to and better utilization of health facilities was a higher degree of political awareness in rural Kerala.⁴⁸ Improvement in health status is, in the final analysis, more related to increasing political consciousness and organization than to any specific health/medical technology.⁴⁹

All measures for improving the demographic indicators, as revealed by Kerala, requires strong political and social will. The role of political parties, the social

organizations and the religious leaders and their combined effort has to be examined afresh.⁵⁰

It has been pointed out by Saradamoni (1982) that women have benefited from legislation on wages etc. even though they have not brought about parity with men.⁵¹

As there is paucity of studies on political aspects and women's status, it is difficult to assess its influence on the demographic transition. Only the implications of land reforms for declining fertility have been examined.

Health Status of Women in Kerala

Health status of women also has to be understood as it reflects women's status to some extent. A higher sex ratio and life expectancy at birth for females does not necessarily imply a better health status of women. One has to look into the morbidity pattern and the nutritional status for this.

The data on morbidity as mentioned in the 28th round of the National Sample Survey (1973-74) show that the incidence and prevalence rates of temporary ailments as well as the proportion of the population suffering from chronic diseases are higher among females in Kerala than in the rest of the country. This is true of the male population also. The incidence rate of all temporary ailments among the females in the state comes to 35.49 per mille in the rural areas,

and 35.22 for millic in urban areas as against 11.55 and 13.14 for India as a whole. Similarly, the number of females suffering from chronic diseases in Kerala is estimated at 8498 and 8884 per 10,000 persons in rural and urban areas, as against the national average of 1929 and 1937 respectively.⁵² It is probable that because of higher level of education and health consciousness morbidity episodes are reported more than in the rest of the country. This is an aspect which need to be explored further.

Regarding nutrition, according to the results of the various rounds of the National Sample Survey (NSS) the average per capita intake of calories and proteins in this state is below the recommended allowances as well as the average intake in all other states. The surveys conducted by the National Nutrition Monitoring Bureau (NNMB) under the National Institute of Nutrition, Hyderabad, attempted more detailed age and sex-wise information on nutrition status. According to the NNMB data, the average daily calorie intake of females is lower than the recommended allowance, and women of all groups, including pregnant and lactating, in Kerala stand at the bottom among the 9 states covered by the NNMB. Thus the rates of intake of calories among adult females engaged in sedentary and moderate occupation come to 73.5 per cent and 51.8 per cent of recommended allowances, the ratio in the case of other more needy vulnerable groups

like pregnant and lactating women here are even worse. What is true of calorie intake is seen to be, by and large, true of protein and other nutrients.⁵³

The health status of women, which is a reflection of women's status in the family and community, is also influenced by the socio-economic and cultural factor. As the health status of women in Kerala shows an unfavourable picture, there can be two assumptions, (1) the morbidity rate itself is increasing due to low women's status (2) the socio-economic structure which is changing can bring about changes in health status. The first assumption does not hold good in the Kerala situation as many other indicators show a better status. The possibility that should be considered is whether the changing socio-economic structure i.e., the declining of matrilineal system and the economic situation in the family etc. - have affected the health of women.

Within the changing socio-economic milieu of the larger society and the shift from matrilineal structure of the family to a patrilineal one (Gulati 1976) women have less control over various resources. In addition breaking down of joint family system denied women the solidarity which she enjoyed earlier. In nuclear units she is under higher physical and mental burden.

The overall picture of status of women and demographic

transition shows that, the better women's status and positive demographic trends always co-exist. But then, the likely impact of status of women on demographic transition as such is not explained by demographers and social scientist. Having observed favourable demographic indicators demographers have speculated on higher status of women in Kerala an assumption which appears questionable.

The foregoing analysis implies that the actual impact of status of women on demographic transition is yet to be studied. Because certain areas where women status shows an unfavourable trend like high morbidity, less calorie intake, low wage earnings, high unemployment, low work participation etc. needs further probing. Also if high female education brings about such improved demographic trends, what is the extend and nature of education one requires to bring out such change. This aspect again has to be further examined. Because there can be other factors such as changing socio-economic structure of family or political dimensions which might affect both these variables.

It is to be noted that as so many factors have contributed to the demographic transition in Kerala, that the education of females or the high status of women are not in themselves a sufficient to bring about such a change.

Cassen is of the view that fertility decline depends on improvements in the status of women cannot precisely be

substantiated by evidence in India or else where. While quite a number of studies in other developing countries have shown that this may be the case, it is possible both for status to improve and fertility remain high or for fertility to decline without change in status. Nevertheless several commentators have opined that improvements in female status may be influential for the promotion of fertility decline,⁵⁴ and logic is on their side. He suggests that many of the features of social change which are associated with declining fertility are also strongly related to conceptions of women's role.⁵⁵

This explanation also endorses the view that even though the status of women has its influence on declining fertility, the interdependence of so many factors involved in the demographic transition of Kerala, makes it more complex than what is usually considered in the literature.

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CHAPTER VI
OVERVIEW AND CONCLUSION

It is now possible to provide an overview of the foregoing analysis and derive the conclusions regarding the demographic transition in Kerala and the role of the status of women in particular.

The importance of a small state like Kerala in the current demographic discourse lies in the fact that despite being defined as economically backward in terms of its per capita income, low calorie intake, high unemployment, it has been able to achieve the demographic transition from high birth and death rates to declining and low birth and death rates. The lowest growth rate in the present census has been registered in Kerala i.e., 13.98 per cent. It has a crude birth rate of 19.8 as against the national average of 29.9. The infant mortality rate is 21 per thousand population, while the national rate is 80. Death rate has come down to 6. Fertility has come down to 2.3 children per woman. The female literacy rate is 86.9 per cent which is especially high when compared to all the other states. The female age at marriage is also fairly high i.e. 21.8, while the national average is only 18.3. The sex ratio shows a marked difference i.e., 1040 females per 1000 males while it is 929 per thousand males for the country as a whole. The above mentioned indicators show a better position of women in Kerala.

Now let us look into the initial declines in fertility

and mortality rates in Kerala. Many demographers as well as social scientists have tried to understand Kerala's demographic transition and offered various explanations for it. Any such analysis can be done only in the back drop of changing trends in the concerned variables from the turn of the century to the recent years. It is shown that till 1971, Kerala had the highest growth rate in India and thereafter it showed a decline. After 1956, the interregional disparity in mortality has been considerably reduced. The decline, though initially slow, accelerated since the fifties. It is indicated that the infant and child mortality is extremely low in Kerala as compared to the rest of India. The largest gains of mortality decline was for the children. The IMR shows a sharp decline from early 1960s onwards.

Regarding fertility transition there was some fall starting from 1951-61, it has been showing a rapid fall indeed after 1961-71. But estimates do not give adequate information on the onset of the rapid fall in fertility.

Kerala has nearly achieved the demographic goal of replacement level (Net Reproduction rate of 1) in 1985 according to S.R.S. report. This is a goal which India is hoping to achieve by the year 2000 A.D.

Studies are chronologically reviewed in order to get a clearer picture of the changing trends in Kerala's

demographic transition. These studies have looked into the Kerala phenomenon from various angles. It is to be noted that the earlier studies tend to focus on the utilization of health services, land reforms, family planning programme and above all on education.

Over time there was a shift in the focus and the status of women has emerged as an important theme in the studies. Another aspect which our analysis brings out is that even though the earlier studies recognizes other factors, empirically and analytically they provide a unicausal understanding of the phenomena. They do not visualize the impact of various aspects in relation to each other and also in its differential impact on Kerala's demographic transition. It should be recognized that as Kerala situation stands out from the rest of India, there might be specificities which could have influenced such a transition. But this does not mean that one specific aspect is the only important factor in explaining transition.

The major observations that emerge from the analysis of studies are given below. Also it strikingly reveals the changes over the years regarding the determinants.

In the beginning i.e., early 1970s the prime concern of the studies was decline in mortality rates especially IMR which is shown as the major factor in bringing down the fertility levels. The focus of earlier studies was to

establish direct linkages between demographic indicators and spread and utilization of health facilities, the family planning programme etc. but they have also acknowledged the female indicators, associated with decline of fertility (U.N., 1975; Nair, 1974; Gulati, 1975).

Political factors came into focus in the later part of 1970s and early 1980s when some authors drew attention to the high political awareness of the people and the political action which, according to them, resulted in the successful implementation of all development strategies (Ratcliffe, 1978; Nag 1984). Along with this land reforms also was considered as a contributory factor (Zachariah 1983; Panikar 1984).

Women's status came to occupy prominent role in the analytical paradigm of recent studies. But even regarding this, the conceptualization of women's status was treated in diverse ways.

The review of studies points out that many of the factors which is said to have linear relationship with fertility and mortality levels have been questioned by later studies. A few such factors are the spread and quality of health services, female education in bringing down IMR rates, importance of land reforms in explaining the demographic behaviour of weaker sections, high age at marriage and its influence in reducing IMR etc. Perhaps the

most disturbing short coming in attempts to explain the dramatic changes in Kerala's demographic profile is the inconsistency of the authors regarding determinants of transition. The analysis reveals a mixed picture of ambiguity in explaining the phenomena.

The serious drawback of explaining the Kerala phenomena is the lack of any serious attempt to place the demographic change against the socio, economic, political and cultural context of Kerala.

Similarly, no adequate attempt has been made to understand the inter-regional differences, except for a few studies focusing on rural urban difference. Our analysis indicate that inter-regional variation do exist as pointed out by some studies (Zachariah, 1980) which indeed needs further exploration. Even though inter-regional disparities exist from the beginning, authors have not looked into the reasons for which Malabar districts is lagging behind in many of the demographic indicators.

However, our review also tried to examine the actual educational, political, historical aspects as well as health situation of Kerala which tend to have association with the demographic changes. Our analysis indeed brings out a favourable position, but the question is whether these favourable aspects are only specific to Kerala. Further there is no consistency with regard to the socio-economic

effects on demographic trends. An unambiguous picture regarding demographic transition do not emerge from such studies.

As our study does not attempt an in-depth analysis of the socio-economic situation in Kerala with a historical perspective, the relative importance of each factor in relation to the changes in demography is not brought out. Also it is beyond the scope of this study to find out the proximate determinants of Kerala's transition.

As pointed out in the analysis, paucity of reliable data is a major limitation in any further study. The S.R.S. data was introduced only the mid-sixties and for periods before that one has to rely on census data which is highly unreliable.

In studies pointing out historical reasons as specific to Kerala, no adequate evidence showing the association is given. It has become a tendency to attribute all the unexplained factors in Kerala's demographic situation to historical reasons, without looking into the historical factors in detail.

The latter part of our analysis reveals a better position of women considering the demographic indicators, no adequate explanation is however given for the high status of women. As studies in western countries shows a positive correlation between women's status and declining fertility

rate, it is not necessary that Kerala's improved demographic trends are also correlated with high women's status. Also Kerala's pattern of demographic transition does not keep in line with experiences of other western countries.

Most of the studies on fertility behaviour and women's status focus on different indicators of women's status. However, as only a few of them point out, the relationship between each of these variables and fertility is neither direct nor simple. Each variable is interlinked and in addition there may be other factors that influence fertility and the status of women equally.

The question, that need to be addressed are: what are the factors affecting the women's status which in turn influence fertility behaviour and how do they act upon in bringing down fertility? For example socio-economic changes within the family set up can influence both fertility as well as the status of women. Again it has to be understood as to how important is women's status in bringing down fertility measures in relation to various other factors.

The status of women is considered in an abstract manner unrooted culturally in the traditional society of Kerala. Studies, however associate the high status of women with the Marumakkathayam system. It is not shown how it influenced fertility decline. Moreover it is not associated with the period of decline. The period when the system actually

evolved and declined, and its association with women's status and demographic trends need to be understood. More closely, the aspects of that system which influenced age at marriage, women's education, low fertility, low mortality etc. should be further explored in order to get insight into the demographic change. Even after the decline of this system, there is sharp decline in demographic indicators, which means certain other factors have emerged which are now influencing change.

If the role of political factors have its impact on improved demographic trends, after the formation of state, changes which occurred prior to that period might be due to other factors. This itself calls for the necessity to look into the changing trends of the determinants over the years. Because changing socio-economic milieu of the family and social change at large might influence the proximate determinants of fertility. The studies to date, fails to understand the changing role of women in the context of socio-economic changes and demographic transition. Also the studies analysed do not show a clear and consistent relationship between status of women and the transition. While the present studies, especially on status of women are largely impressionistic, a holistic scientific understanding of 'Kerala phenomena' remains ever elusive.

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