CHAPTER I

GENERAL INTRODUCTION

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CHAPTER I

GENERAL INTRODUCTION

1.1 Introduction

Religious affiliation is an important characteristic feature of the people in many countries that has immense significance in their socio-economic and political life\(^1\). It is also a determinant of fertility behaviour of the people at the forefront of demographic research at any time. Religion is frequently cited as a significant factor that influences the fertility decision of the people. So, demographic researchers have always been interested in finding out the correlation of religious affiliation and fertility. Fertility differentials based on religious affiliation of the people have been observed in developed as well as developing countries. In the demographic literature several reasons have been put forward to explain the differentials in fertility by religion.

Substantial religious differentials in fertility were established in a large number of countries like Lebanon, Egypt, Israel, Jordan, Africa, Malaysia, Albania, Yugoslavia and India. In all these countries the Muslim fertility is higher than that of the non-Muslims (Freedman and Whelpton, 1961; Westoff et al., 1963; Jones and Nortman, 1968; Ryder, Westoff, 1971, and Chamie1977). Significant difference in fertility was found between Catholics and Non-Catholics, Christians and Jews and Christian and Muslims in North America and Europe. Various studies found that, Catholics had higher fertility as compared to Protestants and the Muslims as compared to Christians. In the Catholic Protestant Jews group Catholics

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\(^1\) For example, in Lebanon religious differentials is the single most characteristic defining group status. The offices of the President, Prime Minister and Speaker of the Chamber of Deputies, the composition of the Chamber and the distribution of the government posts are based on religious status, (Chamie, 1977).
had higher fertility than Protestants and the Jews had the lowest fertility (Ryder and Westoff 1971).

In India, fertility estimates from various sources have found that, among the major religious groups Muslims had the highest fertility and the Sikhs had the lowest. In between these two extremes were the Hindus and the Christians. For the country as a whole, the Muslim fertility had always been higher than Hindu fertility and Christian fertility lower than the Hindu fertility, (Visaria 1974; Bal Subramaniam, 1984). However, because of the cultural, economic and geographical diversity, the magnitude of regional variations in fertility was large in India. Populations of various religions were not evenly distributed across States and the religious differentials observed at the national level might be due to regional or spatial variations rather than religion factor (Jeffrey and Jeffrey, 2000). Thus, in this context it would be interesting and rewarding to assess religious fertility differentials in the context of the spatial variations of the population.

1.2 Need for the Study

Most of the studies on religious fertility differentials in India were centered on the fertility difference between Hindu and Muslims. Among all the States in India, Kerala achieved a tremendous demographic transition well recognized all over the world. Even then there exist fertility differentials among the three major religious groups Hindu, Muslim and Christian. This is different from what was experienced by the advanced

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2 The present study has selected only the three major religious groups in India – Hinduism, Christianity and Islam.

3 The National Family Health Survey-1 of India conducted during 1992-93 estimated the total fertility rate (TFR) at 4.41 for Muslims, 3.30 for Hindus, 2.87 for Christians and 2.43 for Sikhs. Data from the second National Family Health Survey conducted during 1998-99 also show the same fertility pattern: total fertility rate of 3.59 for Muslims, 2.87 for Hindus and 2.26 for Sikhs, (International Institute for Population Sciences and ORC Macro, 1995 and 2000).
countries like North America during their demographic transition. Fertility was much higher among the Muslims as compared to the Hindus and Christians. Even though the State achieved replacement level fertility (1.7), large differences were seen among the religious groups. According to 2001 census, 56.1 percent of the total population of Kerala (31.8 million) was Hindus, 24.6 percent Muslims and 19.0 percent Christians. NFHS-I data show that the total fertility rate (TFR) in Kerala was 2.00 during 1992-1993. Fertility was low for Hindus (1.66) and Christians (1.78) but for Muslims the TFR was relatively high (2.97). NFHS-II data also show the same pattern of fertility differentials among the three groups, total fertility rate of 1.64 for Hindus, 1.88 for Christians and 2.46 for Muslims. This calls for an examination of the reasons for religious fertility differentials in Kerala. Moreover, among all the Indian States, Kerala is the only State in which the proportion of the three religious groups is sufficiently high enough to make such an investigation.

1.3 Objectives of the Study

The principal objective of the study is to understand the determinants of fertility differentials among the religious groups in Kerala. Other intermediate objectives are the means used to achieve the principal objective. They are:

1. to find out the levels, trends and differentials of fertility among the religious groups in Kerala,

2. to understand the socio-economic, and demographic factors responsible for the fertility differentials among the religious groups in Kerala, and

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It is known that, during the process of fertility transition in North America, the Catholic Protestant Fertility gap narrowed down during the post-baby boom period.
3. to understand the effect of spatial settings on fertility among the religions in Kerala.

1.4 Hypotheses

Social scientists and demographers have formulated four hypotheses regarding fertility differentials by religion, (Goldscheider 1971: Chammie 1981). They are: characteristics hypothesis, particularized theology hypothesis, minority group status hypothesis, and interaction hypothesis. According to characteristics hypothesis, some key socio economic variables could vary by religion causing fertility differentials. Particularised theology states that, religious differentials in fertility are due to differences in religious doctrine. Minority group hypothesis states that, the political and social insecurity of the minority religious groups increases their fertility compared to the majority group. Interaction hypothesis maintains that, fertility differentials depend on the interaction between socio-economic levels of religious groups and the local orientations of these groups toward procreation and fertility control (for detailed explanation see chapter II, 2.3).

The Demographic experiences of many nations have proved that the socio-economic factors play a significant role in determining fertility behaviour. This means that, differences in the socio-economic factors of the religions can have an impact on fertility behaviour of their members. Therefore it is essential to examine whether fertility differentials are caused by socio-economic factors or are they the effects of other factors. If differentials are observed even after controlling for the effects of socio-economic factors, the other hypotheses like particularized theology, minority status and interaction effects will have to be analysed.

It is difficult to examine the minority group status hypothesis from an analysis of a single State like Kerala, because among the three major
religious groups, Christians and Muslims are minorities and Hindus the majority group. Also the minority status effects get confused with the particularized theology effect. So the present study concentrates on examining the characteristic and interaction hypotheses in the context of Kerala.

In Kerala, the socio-economic characteristics of the major religious groups are not identical. At the same time there are spatial variations in these factors within the State. On the other hand, there are regional differentials in the concentration of the religious groups in Kerala. Since, the socio-economic factors affect fertility via some proximate determinants, the religious fertility differentials in Kerala may be either because of the differentials in the socio-economic characteristics of the religious groups or due to the concentration of one or more religious groups in some parts of the State.

In the present study it is hypothesised that religious fertility differentials in Kerala is the result of the spatial effect on fertility. In other words, no matter to what socio-economic characteristics the couples belong to, living in a certain geographical area under particular spatial settings determined the number of children, large/small, to be born to them. Using the data from the National Family Health Survey-II (1998-99), the present study tries to examine this hypothesis in the context of Kerala.

1.5 Conceptual Framework

Research on variables that can explain the factors responsible for fertility differentials among the religious groups has gained attention among the social scientists. The analytical framework presented by Davis and Blake (1956) listed nearly eleven such variables. Bongaarts (1982) presented seven proximate determinants (biological or behavioural factors) of fertility through which all the socio-cultural and economic processes had
to interact with fertility. However, with the available evidences Bongaarts demonstrated that 96 percent of the variation in fertility was explained by four proximate determinants, namely, proportion of female married, use of contraceptive, the incidence of induced abortion and the fertility inhibition effect of breastfeeding. According to Bongaarts, total fertility rate (TFR)\(^5\) was expressed as the product of four indices measuring their fertility inhibiting effect and their total fecundity rate (FR)\(^6\).

Religious norms can influence the value of children, sex preference and age of marriage and thereby can influence also the fertility regulation by means of contraception or abortion. On the other hand, specific injunctions prescribed by religions may influence contraception and abortion directly. The influence of socio-economic, demographic and cultural factors on fertility decision and the proximate determinants are well known. This means that fertility itself is likely to be influenced by a number of factors like age at first marriage, education, economic status, household occupation, ethnicity, place of residence and contraceptive prevalence. According to Bongaarts and Potter (1983), socio-economic factors were the principal causes of fertility trends and differentials; also these factors differed according to religion. Therefore, differences in the socio-economic factors are to be taken into account in order to examine the influence of religion on fertility.

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5  The average number of children that would be born alive to woman (or group of women) during her life time if she were to pass through her child bearing years conforming to the age–specific fertility rate of a given year.

6  The total fecundity rate is the average number of live births expected among women who during their entire reproductive period remain married, do not use any contraception, do not have any induced abortion and do not breast feed their children. In such a hypothetical situation the value of TF is found to vary between 13 and 17, but Bongaart has suggested the mean value of 15.3 births while testing the model.
It would be interesting to examine whether the differentials in fertility among the religious groups are caused by variations in socio-economic conditions (characteristic hypothesis) or whether religion per se is responsible for the fertility differentials (particularized theology). The conceptual framework, therefore, calls for an analysis of the trends and differentials of the socio economic factors among the religious groups and the effect of these factors on religious fertility differentials.

1.6 Profile of Kerala

Kerala state, which is located in the extreme south-west part of Indian Union, was established on November 1, 1956 as per the State Re-Organization Act of 1956 by merging the three Malayalam-speaking regions of the princely States of Travancore and Cochin, and the Malabar district of the Madras Presidency. The State is situated between 8º 17’ and 12º 47’ North latitude and 74º 51’ and 77º 24’ East longitude. Kerala covers an area of 38,864 sq km (15,005 sq mi) stretching north south 580 km in length and 30-130 km east west in breadth. It borders on Karnataka State in the north, Tamil Nadu state on the east and south-east, Arabian Sea on the west and Indian Ocean on the south-west. The topography of the State is highly undulating, starting from the mountain ranges with thick forests of the Western Ghats on the east along with Nilgiri hills, from where it gradually slopes to the valley, the small hillocks to the plains and back waters before finally ending on the sandy beaches of the Arabian Sea in the west. Geographically, Kerala can be divided into three natural regions: high land, midland and low land. These divisions form parallel belts running across the length of the State.
1.6.1 Demographic Characteristics

The State is divided into 14 administrate districts. Its achievements in terms of some of the basic indicators of human development are well known and have been well commented upon. In terms of area, Kerala forms only 1.3 per cent of India, but its population of 31.8 million accounts for 3.01 per cent of India’s population (Census 2001). Population density in Kerala is 819 persons per sq. km, one of the highest in the country. Kerala’s sex ratio, at 1.058, is identical with that of advanced countries. The State has achieved all Millennium Development Goals (MDG) at least a decade earlier. The life expectancy at birth (of over 73 years) is well beyond what has been attained by the rest of India. Birth rates and death rates of Kerala are the lowest in India, (17 and 6 respectively). Among the major Indian States, Kerala’s infant mortality rate is the lowest as per the latest estimates given by Sample Registration System (SRS), 2006. In Kerala, out of every 1,000 children born, 12 die before attaining their first birthday, whereas in India as a whole the number of death before the first birthday is 58.

1.6.2 Education

Kerala is much ahead of the other Indian States in achieving the goal of universalising elementary education. Literacy rate of Kerala has been much higher for Kerala than the national average. The literacy in the 2001 census was 91.05 percent, which stood much higher than that of all the other Indian States and also much above the all India level of 65.2 percent. The male literacy rate was 94.20 per cent in 2001 in contrast to 93.62 per cent in 1991, and the female literacy rate was 87.86 per cent as

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During 1961-1971, Malappuram district was carved out of Kozhikode and Palakkad districts, and included some part of Trissur district. During 1971-1981 Kozhikode was divided into Kozhikode and Wayanad; and Idukki was carved out of Kottayam and Ernakulam districts. During 1981-1991, Kannur was divided into Kannur and Kasargod; and Pathanamthitta was carved out of Alappuzha and Kollam districts. The state had 9 districts in 1961, 10 districts in 1971, 12 in 1981 and 14 in 1991.

1.6.3 Per capita income

The per capita income in Kerala, which was lower than the all India average in 1970s, increased significantly over the last one decade or more. The per capita income was estimated as Rs.10754 for 2001-2002 (at 1993-94 prices, around US $ 240). The net State domestic product at constant prices (1993-94) was estimated at Rest 360790 million in 2001-02 as against Rs 344500 million in 2000-01. At current prices, the State income was estimated at Rs 696020 million during 2001-02 as against Rs 630940 million during 2000-01, registering a growth rate of 10.3 percent. The calculation of State income did not include remittances arising out of migration. If remittances had to be included in the State income, it would have been 20% percent more than the present State Domestic Product (State Planning Board, 2003).

1.6.4 Work participation

In spite of the high educational attainment, Kerala has lower work participation of women and discrimination at work. This is an unpleasant reality about the State. Male work participation rate in Kerala is 50.2 percent against 15.4 percent work participation rate for women. Kerala has been facing also an industrial backwardness. The development of industries has been far behind that of the other States like Maharashtra, Gujarat and Tamil Nadu. One of the most significant events that took place in Kerala has been the land reform movement of 1957 that made the tenants of the land its owners. The main aim of this movement was the redistribution of wealth and income from the hands of the upper class people of the society
to the lower class. The Kerala Land Reforms Act succeeded in transferring land resources as a means of living to a large majority of middle class and lower class people. The 12th Finance Commission ranked Kerala among the ‘high middle’ on the Infrastructure Index together with Gujarat, Haryana and Tamil Nadu while Goa, Maharashtra and Punjab were classified as States with a ‘High’ Index (Ministry of Finance, 2004).

1.6.5 Climate

The climatic condition in Kerala is suitable for the cultivation of both cash crops and food crops. Agriculture forms the raw material base for a number of agro-processing industries, such as coir, cashew, wood and edible oil. These industries continue to occupy an important place, especially in terms of employment. Rice and Tapioca are important cereal crops grown in Kerala. Predominantly a cash crop economy, Kerala grows a large variety of high value cash crops like coconut, pepper, rubber, tea, arecanut, cardamom, ginger, and cocoa.

1.6.6 Religion

Hinduism, Islam and Christianity are the three predominant religions in Kerala. The State has a fairly balanced religious composition. As a result no one caste group can profit at the expense of another (Zachariah, 1984). Christians⁸ and Muslims⁹ account for a greater share in the society in Kerala than in the other Indian States. According to 2001

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⁸ Historically it is believed that St. Thomas was the forerunner of Christianity in Kerala. The settled Christian traders in India tried to expand Christianity by preaching, marrying the natives and baptizing the slaves. Syrian traders came first and the Bishops were from Persia and East Syria. With the influence of Portuguese, the Roman Catholic Church was formed and with the influence of British, Protestants became prominent. Hence in Kerala Christians represent an amalgam of various subgroups of Christians (Miller, 1992).

⁹ As in the case of Christian traders some of the Muslim traders settled in the major ports and married the natives and facilitated the introduction of Islam. Islam is believed entered into India through Kerala. There are historical records of commercial trading between Kerala and Middle East during 7th Century AD. The Jews and Arabs of the Pre-Islamic period were among the pioneers of spice trade with Kerala. The religion of Islam was also by these traders from Middle East, who later settled in Coastal belt of Kerala. To this day Muslims are very proficient in trade and commerce. In spite of the socio-cultural and religious diversity, Malayalam is the binding language of Kerala.
Census, they accounted for 19 per cent and 24.7 per cent of the population, respectively, while 56.3 percent were the Hindus.

1.7 Religion, Marriage and Birth Control

According to characteristics hypothesis, the higher fertility of certain religious groups could be accounted for by the socio-economic characteristics of the group. But the question arises when the association between religious affiliation and fertility persists even after taking into account the differing socio-economic characteristics of the group. Similarly it is not clear how the particularised theology hypothesis affects religious fertility differentials. In this context it is important to examine the various ways in which religious precepts influence demographic transition. A discussion of the marriage practices and the attitude towards birth control among the three concerned major religious groups is supposed to shed light on these issues.

1.7.1 Hinduism and Birth control

Hinduism is a difficult religion to analyse because of its diversity of cults, sects philosophies and traditions. Unlike Christianity and Islam, there is no one religious book, which contains all the teachings of Hinduism. However, there is large number of writings and scriptures, which teach the Hindu beliefs. These include the Vedas, the Upanishads, the Bhagavad-Gita, the Ramayana and the Mahabharata.

Similar to Islamic position on marriage, Hinduism are encourages man and woman to enter married life. Moreover, marriage is important in Hinduism as indicated by the fact that the Hindu Gods are always depicted as married, unlike the God of Christianity and Islam. No God in a Hindu pantheon is ever depicted in a temple or other place of worship without at least one consort, which in itself may provide evidence for the sanction of polygamy. However, the perfect marriage in the Hindu scriptures is the
monogamous one. Polygamy was tolerated in Hindu scriptures, but only in the absence of male offspring. But it became illegal for Hindus in India in 1955 with the Hindu Marriage Act Legislation. Moreover, in scriptural Hinduism marriage is indissoluble but, in certain circumstances divorce is permitted.

Hinduism says little about limiting births explicitly. Abortion and the decision to use contraception are regarded as women’s personal matters, which are not within the purview of religious injunction. One explanation for this may be that the matters pertaining to the reproductive function of women, such as menstruation and child birth, are viewed as making women temporarily impure. However, it should be noted that the reproductive function of women are important in the context of the norms given to multiple partners of marriage by Vyasa. Vyasa argues in the Mahabharata that, women and rivers are alike. They do not become impure by contact with man. Rivers are purified by flow and women are purified by menstruation (Dehpande, 1978).

In spiritual Hinduism the only reference to the control of birth is indirect, in the context of norms about abstinence. For example, Vyasa argues that, ‘He (the household) should avoid intercourse with his wife when she is old or barren or ill behaved, when her children die or when she has not yet achieved maturity, when she gives birth to daughters only or has many sons (Radhakrishnan, 1947). Thus, the specific norms for abstinence to keep purity may be a reason why abortion and birth control issues are not specifically addressed to in the Hindu scriptures.

1.7.2 Muslim, Marriage and Birth control

Many theoretical as well as empirical conclusions have been derived from the studies made on the fertility behaviour of Muslims. Sociologists and Philosophers have argued that, the institutional requirements of Islam
are specified in the Sharia, the Islamic religious law, which is derived from two main sources: first, the written document, the Koran and second, the Prophet Mohammad’s interpretations of the word of God, and their application to various situations, (Ragab, 1980: 513-521).

In the Koran all Muslim males are encouraged to marry, and the universal remarriage of widowed and divorced women is highly encouraged in most Muslim countries, (Youssef, 1978: 88). The minimum female age at marriage is 18 years, but marriages, which are contracted between parties below the minimum age, are still considered valid, (Coulson and Hinchcliffe, 1978: 37-38).

Use of birth control in Islam is part of the wide complex of its ideas and social institutions. Islam has traditionally been portrayed as not permitting birth control or abortion in any situation. This may be because of the streak of fatalism, “a strong belief in the active providence of God” (Youssef, 1978: 87), and the belief that ‘Allah creates sexuality and determines procreation and barrenness’, (Youssef, 1978: 87). However, scholars like Obermeyer argued that the position of Islam on birth control and abortion depends very much on the interpretation of different schools of Islamic jurisprudence, (Obermeyer, 1992:33-60). The Islamic attitude towards family planning consists only of the opinion of jurists since the Koran says nothing about contraception. According to this view, Islam does permit family planning, an inference drawn from the absence of any reference to prohibition of birth control in the Koran.

Theologians present two contradictory views. The first one is the conservative group, which is led by Ibn Hazm and Maulana Maudodi, and the second is the liberal view, which has the support of a large number of scholars and is led by Imam Ghazali. The former group quotes the Koranic verse: "Kill not your children, on a plea of want. We provide sustenance
for you and for them." The other group also quotes the Koran: "And one (God's) sign is, that he has created for you your mates from yourself, that you may dwell in tranquillity with them, and has ordained between your love and mercy."

In view of absence of a religious text, Ghazali discussed contraception from premises rooted more in profane biology and economics than in strictly religious sources. Ghazali argued that while abortion and infanticide were crimes against an existing being, contraception was different. While Ghazali accepted some of the motives for birth control, he rejected others as objectionable. Use of contraception for fear of having daughters was not allowed in Islam. Similarly, its use by women for personal reasons - such as that they dislike pregnancy or because they had a fetish for absolute cleanliness, or simply because they did not bother about childbirth, was not permitted either. It must, however, be noted that it was the intent that was objectionable, not the concept of family planning per se.

Obermeyer argues that Sunni\(^\text{10}\) and Shia\(^\text{11}\) positions on birth control are in fact derived from the writings of Ghazali, who outlined many situations where birth control within Islam is permissible. Ghazali supported the use of contraceptives with one's wife to protect her from dangers of childbirth, or simply to preserve her beauty. He also supported the economic reasons for family planning such as a desire to limit the family to a manageable size. Another valid reason for practising contraception in Islam was the well being of children. The presence of a nursing infant was a major reason for birth control. Even the Koran impliedly supports age difference between children: "And mothers shall

\(^{10}\) The largest branch of Islam which believes in the traditions of the Sunna and accepts the first four caliphs as rightful successors to Muhammad.

\(^{11}\) The branch of Islam that considers Ali, the cousin of Muhammad and his descendants as Muhammad’s true successors.
suckle their children two full years to complete breast feeding." Obermeyer observed that some schools of Islamic jurisprudence did permit abortion. While the Malikis school prohibited abortion outright, most other schools permitted abortion up to the time when the foetus was regarded as being ‘ensouled’, a definition which varied to include the 40 to 80 or 120 days of pregnancy, depending on the school, after which abortion was prohibited.

1.7.3 Catholic Church and Birth Control

Catholic Church has always been against artificial birth control measures. In the past many Catholics tended to follow, almost blindly, the biblical command to “increase and multiply”. But in the light of new knowledge and because of changing social and economic conditions, the accent today has been rightly shifted to “responsible parenthood”, which says no more children than what the self-evident moral principle dictates in this regard. According to this principle, human reproduction is a responsible act and, an eminently moral act.

Contrary to the widespread belief the Catholic Church does not forbid birth regulation. For any serious cause a married person is exempted from the normal obligation of parenthood for a long time and even for the whole duration of the married life. The method sanctioned by the Church is “Rhythm Method”.¹² The Church considers the primary goal of the natural institution of the matrimony to be ‘responsible parenthood’.

To help the parents to realise their responsibility, Don Stevens points out that they must take in to account the present and foreseeable future of the society. This is needed for the sake of the children themselves as well as for the common good, which the parents are strictly bound to promote as a matter of general justice as Saint Thomas puts it.

¹² Rhythm method means the use of the infertile or safe period.
In a scholarly work, “Love and Control”, Lean Joseph, Cardinal Suenens, points out that conjugal love should be guided by reason and a clear consciousness of the duties of parenthood. Procreation should not be a matter of blind instinct. He says, “One of the first and essential things to consider, when they (married couples) evaluate their circumstances in life, is the education and training to give their children”. He commends family planning and points out that it can help a mother get used to the duties of motherhood in a more balanced way and aid her in taking responsibilities with a great reserve, generosity and at the same time with more physical strength.

The Church teaches that parents bear the responsibility before God of deciding the number of children they are able to bear and educate. But the Church does not believe married couples have the right, before God, to choose any existing birth control measures. It maintains that any agent of chemical or mechanical nature that destroys or obstructs life-giving sperm or aborts life-giving ovum is against the natural law and, therefore, the use of such an agent is immoral.

In 1930, in his encyclical ‘Casti Connubii’ (on Christian Marriage), Pope Pius XI authorized Catholics to use rhythm method. According to it, the aim of sexual intercourse in marriage is the procreation of children. There was great pressure from inside and out to change the Catholic teaching on contraception. It became, especially, intense in the 1960’s. But Paul VI affirmed in very clear language that contraception is seriously wrong\(^\text{13}\). Nevertheless he did not deny the importance of family planning and responsible parenthood.

\(^\text{13}\) Fully aware of the doubts about the Church’s teaching of birth control and, in fact, to remove them, in his encyclical “Humane Vitae” Pope Paul VI strongly reaffirmed the constant teaching of the Church that, contraception is intrinsically a serious disorder.
The opposition of Church to any form of unnatural birth control in the modern world raises serious issues for the Catholic community in the Indian context of poverty, ignorance and economic development. Pope John Paul II opposed the Third International Conference of Population and Development, which took place on 5th to 13th September 1994 in Cairo. At that time Pope assembled 114 Cardinals from around the world to endorse his unbinding position against artificial birth control and abortion. The position of Pope Benedict XVI is also against abortion and artificial birth control. All these show the opposition of the Church to artificial birth control measures.

In the history of the Catholic Church even the Reformation did not have any effect on the Catholic doctrine on marriage, although the Protestants, who stood for the reforms, rejected many of the conservative teachings of the Catholics including that of marriage. This resulted in large fertility difference between Catholics and Non- Catholics. The Catholic Protestant fertility differential is attributed to the strong disapproval of birth control measures by the Catholic Church, (Blake, 1984).

1.8 Empirical evidence of the Effect of Religion on Fertility

There are only a limited number of empirical studies regarding the impact of religion on fertility. The Mysore Population Study concluded that the Hindu religious traditions in Indian society favoured the position of parents having many children. This study also showed that, after child birth, Hindu women spent an average of 53 weeks interval away from their husbands in their parents’ home and that this was connected with Hindu religious belief about women’s ‘purity and pollution’ after child birth. On the other hand Muslim women stayed away from their husbands from an average of only 28 weeks. The study concluded that this might explain the higher fertility among Muslims (U.N, 1961)
Most of the empirical studies, which dealt with Islam and fertility, were focused on the Arab countries. Between 1950-56 and 1985-90 these nations collectively showed a total fertility rate of 6.9 children per woman. Many scholars related this to religious factors and to the low status of women in these countries (World Bank 1991; Farid 1987; Omran 1980; Caldwell 1986). Operations Research Group conducted a survey about variations in acceptance of family planning in India. It was found that as against 45.5 per cent Hindus, only 33.8 per cent Muslims practised family planning. However, it has to be noted that, as against this national average, 64.4 per cent Muslims in Kerala practised family planning as compared to 17.3 per cent in Rajasthan, 18.1 per cent in Uttar Pradesh, and a mere 14.6 per cent in Bihar. Thus, the size of family had nothing to do with one's religion, but some other factors were involved in it.

It is observed that, even though Catholic Church is against artificial birth control measures, there has been a decline in their birth rate. Roman Catholics made a switch from having large number of ill-fed and unattended children to a fewer number of well-fed and well cared for children. This is part of Church’s idea of “responsible parenthood”. The Church teaches that indiscriminate procreation is not the moral ideal but it is mere irresponsibility, for the family must take prudent provision for the future welfare of the children both spiritually and physically. However, it is evident that Catholic women are going ahead in their own lives, limiting the number of their children to three or less (Cyriac, 2005).

1.9 Data and Methodology

Religious differentials in fertility have been observed in a large number of countries. Demographic estimates carried out by various agencies in India also come across the same observation. Among all the States in India, Kerala has undergone rapid fertility transition during the
last few decades. But this transition has not been uniform across region and among the three concerned religious groups. In the present study an investigation has been carried out to understand the socio-economic, religious and geographic factors that determine fertility differentials among the religious groups in Kerala. This part of the chapter describes the sources from which the data were collected, quality of these data and the method of analysis used for the study of the religious differentials.

1.9.1 Sources of Data

The principal data for the study are from the National Family Health Survey –II (1998-99), a large survey that covered various aspects of fertility and family planning in all the States of India. The NFHS-II national sample covered more than 99 percent of India’s population living in the 26 States that existed at the time of the survey. It did not cover the union territories. NFHS-II was a household sample survey with an overall sample size of 90,303 ever-married women in the age group 15-49 living in 92,486 households. However, in order to examine the levels, trends and differentials of fertility by religion, data from recent censuses, Sample Registration System\(^{14}\) and other surveys were used\(^{15}\).

\(^{14}\) In the absence of complete and reliable civil registration system the Office of the Registrar General, India established SRS in 1964-65 on a pilot basis. This was expanded in to a full-scale system in 1969-70. Since the early 1970s the SRS has been the authoritative source of fertility estimates for the country. The SRS furnishes data on vital statistics only since the year 1971. Although the SRS has been widely used to study fertility since 1970, it provides estimates of fertility for major states only. In recent years SRS has published estimates for smaller states and union territories but does not provide information of fertility at the district level. Kerala Fertility Survey focuses on fertility and its determinants at the state level. Thus, SRS is a demographic sample survey based on a duel record system designed to provide national and state level estimates of fertility and mortality on an annual basis.

\(^{15}\) The available secondary source of data will be utilised for understanding fertility change at the state as well as at the district level. The data are also drawn from the National Family Health Survey -1, National Family Health Survey-2 and the two field surveys. The first was done in 1980 in Alappuzha, Ernakulam and Palakkad districts with financial support from the World Bank (World Bank Fertility Survey, WBFS) The second was done in Ernakulam, Palakkad and Malappuram districts in 1991 with financial support from the Gujarat Institute of Development Research (GIDR) and the Centre for Development Studies (CDS), Thiuvananthapuram, known as the Dynamics of Fertility and Family Planning in Kerala, (DOFFIK).
The Ministry of Health and Family Welfare (MOHFW) subsequently designated the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency to initiate NFHS-II, which was conducted in 1998-99. An important objective of NFHS-II was to provide State-level and National-level information on fertility, family planning, infant and child mortality, reproductive health care, child health care, nutrition of women and children, and the quality of health and family welfare services. Another objective was to examine this information in the context of related socio-economic and cultural factors.

The survey for Kerala was carried out during March to July 1999. It covered a sample of 2834 households and 2884 married women of age 15-49 from these households were interviewed. The sample covered a fairly large number of ever-married women belonging to each of the three major religions; 1501 Hindu (52%), 916 Muslim (31.8%), 465 Christian (16.1%), (0.1 percent women belonging to other religions (Sikh and Jain) were not included in the analysis). However information regarding various denominations or sects within a religion was not obtained in the survey. Hence, it is not possible to find out Nair-Ezawa, Shia-Sunni, and Roman Catholic-Latin Catholic differentials from the survey.

NFHS-II used three types of questionnaires: the Household Questionnaire, the Woman’s Questionnaire, and the Village Questionnaire. The Household Questionnaire listed all the usual residents in each sample household plus the visitors who stayed in the household the night before the interview. It collected basic information on age, sex, marital status, relationship to the head of the household, education, and occupation. This was used to identify the eligible respondents for the Woman’s Questionnaire. Household Questionnaire also collected
information on the prevalence of asthma, tuberculosis, malaria, and jaundice, and three life-styles related risk behaviours, chewing paan masala or tobacco, drinking alcohol, and smoking. Information was also collected on the usual place where household members went for medical treatment when they got sick, the main source of drinking water, type of toilet facility, source of lighting, type of cooking fuel, religion of the household head, caste/tribe of the household head, ownership of a house, ownership of agricultural land, ownership of livestock, and ownership of other selected items. In addition, a test was conducted to assess whether the household used cooking salt that has been fortified with iodine. Finally, the Household Questionnaire included information related to births and deaths in the household.

The Woman’s Questionnaire collected information from ever-married women age 15-49 who were usual residents of the sample household or visitors who stayed in the sample household the night before the interview. The questionnaire covered mainly ten different areas: (i) Background characteristics: Questions on age, marital status, education, employment status, and place of residence provide information on characteristics likely to influence demographic and health behaviour. Respondents were also asked about the characteristics of their husband; (ii) Reproductive behaviour and intentions: This covered dates and survival status of all births and current pregnancy status and future childbearing intentions of each woman; (iii) Quality of care: Questions assessed the quality of family planning and health services; (iv) Knowledge and use of contraception: Here information was gathered on the knowledge and use of specific family planning methods. For women not using a contraceptive method, questions included the reasons for not using contraception and intentions concerning future use; (v) Sources of family planning: Questions determined where a user obtained her
contraceptive method; (vi) Antenatal, delivery, and postpartum care: The questionnaire collected information on whether women received antenatal and postpartum care, who attended the delivery, and the nature of complications during pregnancy for the last two births after January 1996; (vii) Breastfeeding and health: Questions covered feeding practices, the length of breastfeeding, immunization coverage, and recent occurrences of diarrhoea, fever, and cough for young children; (viii) Reproductive health: Questions assessed various aspects of women’s reproductive health and the type of care sought for health problems; (ix) Status of women: The questionnaire asked about gender roles, women’s autonomy, and violence against women; (x) Knowledge of AIDS: Questions assessed women’s knowledge of AIDS and the sources of their knowledge, as well as their knowledge about ways to avoid getting AIDS. Information was also collected on the height and weight of each woman and each of her children born after January 1996 and haemoglobin levels and rates of anemia among women and children.

The Village Questionnaire collected information on the availability of various facilities in the village, especially health, education facilities, electricity and telephone connections. Respondents to the Village Questionnaire were also asked about the development and welfare programmes operating in the village.

During the time of this work the third National Family Health Survey (NFHS- III, 2005-2006) was carried out in Kerala. However, the principal report from this survey has not been released and the individual data are not made available until all the data for this work were sorted out. Hence, the findings of that survey could not be made use for this work.
1.9.2 Quality of the Data

Since the analysis in this study is based on the secondary data from the NFHS-2, it is necessary to look into the quality of data before carrying out the analysis. NFHS-2 was a large survey based on the model of the Demographic and Health Survey (DHS). The mechanism used was well developed. The process was carried out by number of professional agencies and was co-coordinated by the International Institute for Population Studies. NFHS-2 was conducted with financial support from the United States Agency for International Development (USAID), with additional funding from UNICEF. Technical assistance was provided by ORG Macro, Calverton, Maryland, USA, and the East-West Center, Honolulu, Hawaii, USA. Thirteen field organizations were selected to collect the data. Eight of the field organizations were private sector organizations and five were Population Research Centres (PRCs) established by the Government of India in various States. Each field organization had the responsibility for collecting the data in one or more States. ORG Centre for Social Research (ORG-CSR), New Delhi, was selected as the field organization for NFHS-2 in Kerala. Therefore, the overall quality of the data is expected to be good.

1.9.3 Universe of the Study

India is a country of striking demographic diversity, with enormous variations in the conditions and mechanisms of fertility transition. There are large spatial variations in the socio-economic cultural and religious compositions within the country. Regional variations in fertility could be attributable to spatial variation in these factors. Therefore, fertility differentials by religion could be the result of spatial variations in the religious compositions. Among the three major religious groups in India, Hindus are the majority group with 80.5 percent. Muslims are the largest
minority group accounting for 13.4 percent of the total population while the Christians are only 2.3 percent of the population. Majority of Christian population lives in the southern States of India, which are characterized by low fertility. As in the demographic picture of India, in Kerala also Hindus are the prominent religious group accounting for 57.35 percent of the total population. Muslims are the second largest religious community with 23.33 percent and Christians the third with 19.32 percent (Census 2001). The proportion of population in each of the religious groups is sufficient for making a comparison of the fertility differentials among these groups. Kerala is the only State in India where the proportion of population among the three religious groups is sufficiently large for making such a comparative study. Each of three religious groups in Kerala has more than five million populations. Also the National Family Health Survey-II took sufficient number of women belonging to each of the three religious groups as the sample for its survey.

1.9.4 Tool of Analysis

The main statistical technique used in the study is regression analysis. Regression analysis is one of the very scientific techniques for examining the effects of various independent variables on a dependent variable, or to assess the relationship between one dependent variable (DV) and one or several independent variables (IVs). On the basis of the number of variables regression can be classified into simple and multiple. Since many independent variables are employed in the present study, the multiple regression analysis is used in the study for the purpose of data analysis. Simple regression is mathematically explained as, $Y' = a + bx$, where, $Y'$ denotes the estimated value of $Y$ for a given value of $X$. This is known as regression equation of $Y$ on $X$, which means that each unit change in $X$ produces a corresponding change of $b$ in $Y$, which is positive for direct and
negative for inverse relationship. Multiple regression assumes the form,

\[ Y' = a + b_1 x_1 + b_2 x_2 \]

where, \( x_1 \) and \( x_2 \) are the two independent variables.

If there is high degree of correlation between independent variables, then there arises the problem of what is commonly described as the ‘problem of multicollinearity’. In the present study variables are selected in such a way that the problem of multicollinearity is reduced to the minimum.

R represents the correlation between the observed values and the predicted values of the dependent variable. \( R^2 \) is the square of R and gives the proportion of variance in the dependent variable accounted for by the set of independent variables chosen for the model. R square is used to find out how well the independent variables are able to predict the dependent variables. However, the \( R^2 \) value tends to be a bit inflated when the number of independent variables is more or when the number of cases is large. The adjusted \( R^2 \) takes into account these things and gives more accurate information about the fitness of the model. While in natural science research it is not uncommon to get \( R^2 \) values as high as 0.99, a much lower value (0.10 – 0.20) of \( R^2 \) is acceptable in social science research. In the present analysis the value of adjusted \( R^2 \) is examined to get the model summary.

1.9.5 Data Analysis

Levels, trends and differentials of fertility among the religious groups in India and in the State of Kerala are examined using the data from various sources, (see sources of data, 1.9.1). Data related to the background characteristics of the three religious groups such as education, age at marriage, standard of living, ethnicity, women work participation and contraception are extracted from various sources in order to understand the socio-economic demographic and religious factors
influencing fertility in Kerala. The spatial variations in religious population have also been collected and the geographical differential in fertility has been examined using multivariate analysis. This geographical differential in fertility has been examined using multivariate analysis. This helps to understand whether the differentials are caused by socio-economic characteristics or because of religion per se or because of a combination of both. Multivariate regression analysis has been carried out for the purpose of examining the religion effect after controlling for other socio-economic and demographic factors such as age of the respondents, age at first marriage, place of residence, ethnicity, education, standard of living, women work participation, contraceptive prevalence and geographic variations. This helps to make an assessment of the relative strength and significance of the socio-economic factors on religious fertility differentials.

The religion effect on fertility is not always constant at different socio-economic settings. It may differ according to the different levels of education, standard of living and/or at different regions. This means that there could be interaction between religion and one or more of the aforesaid socio-economic variables. In order to examine and assess the nature and characteristics of the interaction effects, additional variables such as Religion X Education, Religion X Standard of Living, Religion X Region etc. are created, (details are given in chapter VI)

1.10 Plan of the Thesis

The thesis consists of seven chapters. First Chapter describes the background for the selection of the topic and the relevance for the study, the objectives, data, methodology and the research plan. Review of related literature is the content of Chapter Two. The levels, trends, and differentials of fertility by religion in Kerala and in India are discussed in
Chapter Three. Fourth Chapter deals with the socio-economic and demographic factors that determine fertility differentials in Kerala. An analysis of district level fertility differentials in Kerala is carried out in Chapter Five. Regression analysis explaining the socio-economic factors that determine fertility differentials by religion and their interaction effects are discussed in Chapter Six. Chapter Seven gives a brief summary and conclusion of the research study.
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