Introduction
This is a study of differentials in human fertility behaviour due to different socio-economic determinants of the phenomenon, based on a comprehensive field survey, conducted by the candidate, herself, in the very politico-economically vibrant Aligarh district of western Uttar Pradesh (India). The survey, which will henceforth be called, Aligarh District Fertility Survey (ADFS), was conducted during about two years period (Jan. 2000-March 2002).

Keeping in view the ever increasing population growth in India, which is rightly termed as population explosion. The Government of India, through Ministry of Health and Family Welfare (MOHFW), launched an ambitious project in 1991, what is known as National Family Health Survey (NFHS). The first NFHS was conducted during April 1992 to September 1993. It’s report for Uttar Pradesh was published jointly by International Institute For Population Sciences, Bombay in collaboration with Population Research Centre, Lucknow University in October 1994.
The survey covered 24 States and the National Capital Delhi which comprises 99% of the total population of India. In all about ninety thousand (89,777) ever married women age 13-49 were interviewed during one-and-a-half years survey period. The state level reports contain valuable information on fertility as well as family planning practices, the status of health and welfare of Indian mothers and then children.

After successful completion and presentation of NFHS-1 in creating demographic and health database, the exercise was repeated in 1998-99, designed to strengthen the database further. The objective of the survey was to provide state and national estimates of human fertility, the practice of family planning, infant and child mortality etc. An added feature of NFHS-2 was the measurement of the nutritional status of women. The survey was funded by United States Agency for International Development (USAID) and UNICEF. Many organisations jointly organised and supervised the survey such as, International Institute for Population Sciences, Ministry of Health and Family Welfare. Thirteen reputed field organisations including five population research centres, collaborated in the survey project.
NFHS-2 covered a representative sample of about 90,000 eligible women (15-49 age group) from 26 states comprising of 99% of India's population. The data collection was carried out during November 1998 to March 1999. A comprehensive report of the survey was published by the Government of India in April 2001.

Both the reports (NFHS-1 & NFHS-2) for Uttar Pradesh are of great interest to us, as our area of study Aligarh district falls in Uttar Pradesh. During the last two decades a lot of work has been done human fertility problems on global, continental and national scale by geographers. However, micro level regional studies are relatively few and it is now being realised that small scale comprehensive studies are the need of the hour. Infact for better understanding of the nature and magnitude of human fertility problems facing the world, micro-regional studies are immensely important. In view of the above facts Aligarh district was chosen as the study area for the doctoral research work. The district falls in a politically and economically important areas of North India. It is nearer to Delhi (126 kms.) than the state capital Lucknow (381 kms.). The human dwelling in the area has been traced to pre-vedic
period. During it's long history it has been post-vedic, Islamic, Christian and now post-modern era.

For the purpose of survey, stratified random sampling technique was employed. Two sampling frames the rural and urban were designed to get a truly representative. The data were further categorised by the well-known determinants of fertility differentials, namely, education, religion, income and residence. Hindus and Muslims are the only two dominating religions of the district, so the fertility differential according to religious beliefs was also tested on the basis of average number of children per Hindu and Muslim families. The Standard Normal Probability distribution was used to conduct Z-test for testing the significance of difference in means of the two populations. Similarly the Rural-Urban differential in fertility was tested using the standard normal test for testing the hypothesis that the difference in average number of children per rural and urban family is not significant one. Average number of children per family according to literacy status were also calculated. Three categories of literacy level were designed of the illiterate, literate (below middle) and highly literate (more than middle). All these averages were compared with the help of bar diagrams with the corresponding averages for the
Uttar Pradesh State as a whole as provided by NFHS-1 and NFHS-2. An inverse relation between education and fertility was observed.

Similarly the respondents were divided into four stratum according to income characteristic. Four categories of income level were designed, category (A) with less than Rs. 1000, category (B) between 1000-2000, category (C) between 2000-5000 and category (D) more than Rs. 5000 per month. An inverse relationship between income and fertility was observed.

The first sampling frame constituted the urban sample frame. In this design the urban areas of the district were divided into three stratum. The first stratum consisted of the Aligarh city, the district headquarter, second stratum consisted of north-eastern urban areas consisting of seven blocks. The third stratum consisted of south-western urban areas consisting five blocks. Random sampling units from among the ever married women were selected using random number tables from stratum 1, 2 and 3 respectively.

In another technique of stratification rural sampling frame was designed. Three distinct stratum were designed on the basis of population size of villages. The list of all villages with population
size was made available from the district information office. Three distinct strata consisting population more than 750 between 300 and 750, and less than 300 households were formed. Then in second stage of sampling simple random samples using random number tables from among the ever married women only were drawn. The selected women were asked to fill a questionnaires having two parts. In the Part I questions regarding education, religion, income, number of children, age and sex of children, number of children died before age 5 were asked in presence of some male member of the family. The Part II of the questionnaire consisted questions of about their opinions on family planning programme. In this way a comprehensive data were collected from the doorsteps of respondents.

Subsequently a comprehensive statistical analysis of the data was carried out and the results were compared with the results of other state level surveys conducted by Government of India such as NFHS-1, NFHS-2 and National Sample Survey. The doctoral thesis is being presented under six chapters.

Chapter first consists of a brief introduction of important measurers of fertility and explanation of it's various socio-economic determinants.
In the **second chapter**, some important theories on human fertility are given along with a brief literature survey on the subject of few important researches in the related field is also attempted.

In **chapter third**, an attempt has been made to introduce the area of study. Physical, demographic, economic and literacy profiles of Aligarh district have been presented for understanding various parameters and characteristics of the concerned population.

In **fourth chapter**, the result of Aligarh survey have been presented and compared with the corresponding results of state level surveys, such as NFHS-1, NFHS-2 and SRS. Fertility measures due to characteristics, residence, religion, education and income as obtained in the survey have been rigorously analyzed and statistically tested for their significance.

In **Chapter five**, the age specific fertility rates, total fertility rates, total age specific fertility rates and their differentials on the basis of religion, residence and education have been calculated and compared with the corresponding NFHS-1 and NFHS-2 results.

The last **chapter six**, consists of the results of our survey regarding status of family planning in the district. A total of 16
questions (9 positive and 7 negative) were asked about opinion of married women regarding the family planning and its effect on the society. They were asked to categorise their responses to every question into five options ranging from strongly agree to strongly disagree. In between were the options, agree, undecided and disagree. The Likert method of opinion testing was used to test the hypothesis that the spread of literacy has had a positive effect on the opinions of married women regarding usefulness of family planning programmes and methods. A 3x3 contingency table for the observed and expected frequencies was formed and $\chi^2$-test was employed for testing the hypothesis. The test has established that education have had a positive effect on the public opinion regarding family planning.