DEMOGRAPHIC, SOCIO-ECONOMIC AND CULTURAL FACTORS WHICH INFLUENCE IMPLEMENTATION OF FAMILY PLANNING PROGRAMME IN KENYA: A STUDY OF THE CITY OF NAIROBI AND KERICHO DISTRICT

M.A THESIS

BY

GITHINJI SOPHIA WANJIKU

A thesis submitted in partial fulfillment for the degree of Master of Arts (M.A in Population Geography) Kenyatta University.

2002

DECLARATION

This thesis is my original work and it has not been presented for a degree in any other University.

GITHINJI SOPHIA WANJIKU

This thesis has been submitted with our approval as the supervisors.

DR. LEONARD M. KISOVI
SENIOR LECTURER
DEPARTMENT OF GEOGRAPHY
KENYATTA UNIVERSITY

MR FRANCIS O. ONSONGO
LECTURER
DEPARTMENT OF GEOGRAPHY
KENYATTA UNIVERSITY

DEDICATION

I would like to dedicate this work to my mother, Lucy Wamaitha, to my father, George Githinji and to my brothers and sisters: Njoroge, Maina, Mwendia, Wanjiru and Wambui. Your support, encouragement, understanding and patience have helped be lot in this long journey.

TABLE OF CONTENTS

LIST OF TABLES

LIST FIGURES

LIST OF APPENDICES

ABSTRACT

Kenya has since 1967, been having one of the most well funded Family Planning Programmes in sub-Saharan Africa. Ninety seven percent (97%) of married women know of family planning methods but only 39% of them are using a method (Kenya Demographic and Health Survey, 1998). The large existing gap between knowledge and use is a clear indication that there are, some unknown forces that influence decisions on fertility and use of family planning services in Kenya.

The major research hypothesis of this study is that the socio-economic and cultural factors that influence fertility are little known and therefore ignored in the design and implementation of the family planning programmes. This study examines the socio-economic and cultural factors that influence fertility and family planning in five ethnic groups in the city of Nairobi and Kericho District of Kenya. These groups are the Luo, Luhya, Kisii, Kalenjin and Kikuyu. These groups were selected to capture people from different cultural backgrounds. The city of Nairobi was chosen to represent the urban areas and Kericho District to represent the rural areas. The study also evaluates the Family Planning Programme of Kenya with a view to determining the extent to which it takes into consideration the socio-economic and cultural factors.

Primary data were collected through the administration of a questionnaire designed to investigate the socio-economic and cultural factors that have a bearing on fertility. The questionnaire was administered to some two hundred women of childbearing age selected from the five ethnic groups in Nairobi and Kericho. Secondary data from demographic and health surveys, census reports and population research journals were reviewed and used to evaluate the Family Planning Programme of Kenya.

Principal Component Analysis (PCA) and stepwise regression analysis were applied to determine the factors, which had a greater explanatory power on fertility. The analysis showed that the influence of socio-economic and cultural factors on fertility was greater in Nairobi than in Kericho District. Age at first marriage, age at first birth and level of education were found to be considerably higher in Nairobi and consequently, their influence on fertility

was stronger in the region. Forty six percent of women interviewed in Kericho District got married in the 15 to 19 year age group, compared to only 15 % in Nairobi.

Fifty two percent of women interviewed in Nairobi had completed secondary education compared to 24 % in Kericho District. Forty five percent of women in Kericho District relied on their children to do house work. In Nairobi, forty one percent of the women had their children study after school. These women valued the quality of education for their children and had smaller families in order to provide them with the desired education. Women in Kericho District, on the other hand, valued the work done by children and so they had larger families.

Duration of breast-feeding, preference of male children and attitude towards methods of family planning were some of the cultural factors found to influence fertility in both Nairobi and Kericho District. Fifty two percent of women in Kericho breast-fed their children for more than eighteen months. Only thirty nine percent of women in Nairobi breast-fed for more than twelve months. Employment is a factor contributing to the short breast-feeding duration among the urban women. In all the five ethnic groups investigated, women who did not have male children were looked down upon.

In Nairobi, fifty six percent of the women interviewed reported having experienced side effects as a result of using the modern methods of family planning. In Kericho, the proportion was seventy percent. Forty four percent of urban and thirty nine percent of rural women considered traditional methods still effective. The Family Planning Programme of Kenya was found to be supply oriented rather than demand driven. Contraceptives are provided for free in the public sector and at subsidized rates in the private sector. The programme has not taken into consideration the socio-economic and cultural factors that connect the well being of people to fertility limitation. The study recommends the review of the Family Planning Programme to accommodate these issues and help people to achieve their childbearing expectations.

ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to my parents, Mr and Mrs Githinji, for their efforts in financing my education to this level and for their encouragement, patience and understanding through out my studies. Secondly, my gratitude goes to Kenyatta University for awarding me a scholarship to pursue postgraduate studies. I thank, most specially, my supervisors Dr. Leonard Kisovi and Mr Francis Onsongo for their guidance, patience and for dedicating their time to read and supervise my work.

I would like to thank heartily, all the people who assisted me in the process of collecting data. A special vote of thanks goes to Lillian Chepkemoi for her assistance in collecting data in Kericho district. I extend my gratitude also to her family for hosting me during the exercise. Their hospitality made the tedious exercise of data collection a lot easier and interesting. I also thank mama Alice from Korogocho for helping me collect data in the rather unsafe surroundings of the slums. My sincere gratitude also goes to Yvette Odero and Nancy Likalamu for their assistance in conducting the exercise in Loresho, Lavington and Komarock.

Another very special vote of thanks goes to my friend Sarah Ndegwa for the many sleepless nights she spent helping me to type and make corrections on this work and for her assistance in collecting data in South B and South C. I would also like to thank Maureen Mweru for her assistance and encouragement during the last stages of this work. I cannot forget to thank all my sisters of Roshani house for the support they gave me through their prayers and encouragement. I would like to thank specially Miss Rufina King'ori for her assistance in putting the work together.

I would also like to extend my gratitude to the IMCS Pan-African Co-ordination office and Fanusi study centre for allowing me to use their computers in the initial stages of this work. Lastly, I thank most sincerely, Miss Margaret Roche for her understanding and all the support she gave me in writing this thesis.

DEFINITION OF TERMS

Infant Mortality Rate (IMR) - This refers to the annual number of deaths of infants below one year per 1000 live births.

Total Fertility Rate (TFR) - This is the sum of the age specific birth rates of women over their reproductive span (usually 15 – 49 years) as observed in a given year. Age specific birth rate is the number of births to women of a given age group in a year per one thousand in that age group.

Post partum amenorrhoea - It is the length of time after birth when a woman cannot conceive. It is also known as post partum infecundity

Lactational Amenorrhoea - This refers to the inability to conceive due to the effect of breast-feeding until the normal pattern of ovulation and menstruation is restored. It is primarily determined by the intensity and duration of breast-feeding.

Family planning - It is a process by which couples or single women use artificial and other methods of contraception to regulate their fertility in such a way that they will have children only when they want to and the number they desire.

Family Planning Programme - This refers to a policy designed to promote Family Planning activities providing necessary information, education and services to interested people.

Parity - It is the number of children born alive per woman.

Fecundity - It refers to the biological capability to give birth.

Fertility - It is the tempo or intensity of births in a given population where the tempo refers to number of births and intensity is the closeness of those births.

Non-marital fertility –This is fertility outside marriage

Intermediate (proximate) determinants of fertility - These are the biological and behavioural factors that affect fertility directly. They include the proportion of married women, post partum abstinence, lactational amenorrhoea, contraception, induced abortion, natural and pathological sterility.

Cultural factors – These are the values, beliefs, norms and other characteristics that relate to morality and social order.

Socio-economic factors - These include the social, economic, psychological, health and environmental variables that affect fertility only indirectly by modifying the proximate determinants.

Ideal family size - In this study, this term is used to express the number of children considered ideal in a given area.

Desired family size - In this study, the term refers to the number of children a woman would want to have if she were to go back to the time before she started bearing children.

CHAPTER ONE

1.0 INTRODUCTION

This chapter gives a background to the research and statement of the problem. The objectives, hypotheses and research questions are stated. The scope and limitations of the study are outlined. The rationale of the study is explained and finally, a description of the study areas is given.

1.1 BACKGROUND TO THE PROBLEM

Kenya was the first sub-Saharan African country to initiate a national Family Planning Programme by using central government resources with aids from foreign organizations. The history of family planning in Kenya dates back to 1955 with the formation of two private associations in Nairobi and Mombasa. These two associations joined forces to form the Family Planning Association of Kenya (FPAK) in 1957. The FPAK became affiliated to and largely financed by the International Planned Parenthood Organization.

In 1965, a Population Council Advisory Mission was invited to study the population prospects and problems in Kenya. The Mission recommended the lowering of the Total Fertility Rate (TFR) to about half of the then 6.8 within 10 to 15 years. The 1998 Kenya Demographic and Health Survey (KDHS) recorded a TFR of 4.7 showing that the target was not achieved. The Mission also recommended that Kenya establish a national Family Planning Programme with the goal of making each pregnancy a voluntary choice. Following this recommendation, a national family planning council was set up in February 1967. Three months later, a decision to institute a national Family Planning Programme was reached. Kenya, therefore, became the first sub-Saharan African country to adopt an official population policy. The Family Planning Programme was integrated into maternal and child health division of the Ministry of Health (Kenya, 1989 a).

The Family Planning Programme of Kenya is well funded by the government and other organizations such as the World Bank, Federal Republic of Germany, DANIDA, SIDA, and Pathfinder. By 1980, over five million US dollars were being spent on Kenya's population programme including a grant of 832,000 US dollars to the Family Planning Association (World Bank, 1980). Kenya was no doubt, well placed to lower its population growth rate

but as it happened, population growth increased from 3.0% in 1962 to 3.3% in 1969 reaching 4.1% in 1979 (Kenya, 1996). The 4.1 % growth rate of 1979/80 was the highest ever recorded for a single country (Frank and Susan, 1980). At the same time, Kenya had the best-financed national Family Planning Programme in Sub-saharan Africa. Why then was the country's population growing at such a high rate?

In 1982, the National Council for Population and Development (NCPD) was established. Its mandate was to formulate population policies and strategies and to coordinate the activities of government ministries, NGO's and donors in population, health and Family Planning Programmes. In 1984, a set of population policy guidelines (Sessional Paper number four) was issued to guide population programme implementation. These guidelines accorded utmost importance to fertility reduction. (Kenya 1989a, Kenya 1996).

In 1994, the International Conference on Population and Development (ICPD) was held in Cairo. The conference agreed upon a programme of action on population and development, which changed the scope of population policy and programmes. It placed more emphasis on the welfare of an individual rather than on the achievement of demographic targets. As a result of that conference, the government updated the Sessional Paper number four of 1984 in order to have a population policy that was in line with the ICPD programme of action. In 1997, Sessional Paper number one on National Population Policy and Sustainable Development was issued with demographic, health and social service objectives.

Declines in fertility have been, recorded since the late 1980's. The population growth rate decreased from 3.6 % in 1989 to 2.0 % in 1998. These rates, however, are still high, compared to those of the countries of Southeast Asia, which started their population policies at around the same time as Kenya. Table 1.1 shows the annual increase and total fertility countries for some of those countries.

Table 1.0 Annual rate of population increase and total fertility rates for Kenya and some countries of South-east Asia

COUNTRY	ANNUAL INCREASE (1998)	TOTAL FERTILITY RATE (1998)
Kenya	2.0	4.5
Indonesia	1.5	2.7
Thailand	1.1	2.0
Malaysia	2.2	3.2

Source: Adapted from World Population Data Sheet 1998

There are many conflicts concerning the efficacy of methods of fertility control and their moral legitimacy. There is need to study the societies involved to find out the methods which are culturally and ethically acceptable. This study set out to examine the importance of the socio-economic approach to fertility reduction.

1.2 STATEMENT OF THE PROBLEM

For a long time, the focus of Family Planning in Kenya has been limited to mere supply of contraceptives at subsidized rates in the private sector, and free of charge in the public clinics and hospitals. The 1989 - 93 National Development Plan took note of this shortcoming and stressed the need to look at the impacts of socio-economic and cultural considerations that connect the well being of people and quality of life to population control proposals.

The International Conference on Population and Development (ICPD) of 1994 also noted the narrow focus of Family Planning Programmes in developing countries. The conference signaled the importance of a broader approach in dealing with population issues. It suggested that broader policies, including responsible economic development, education, empowerment of women and high quality health care be pursued (Ashford 1995, Sen. et. al. 1994).

McNicoll and Odile (1987) noted that in Kenya a lot of technical demographic studies had been done using the latest techniques of inference from incomplete data. Its population

researchers, however, have shown little interest in the institutional and cultural determinants of fertility. Lack of a thorough investigation of the social and economic basis of Kenya's high fertility is a serious omission. Frank and Susan (1980) noted that it would take major socio-economic and cultural changes lower Kenya's fertility.

Development process towards small family requires access to technically and culturally appropriate family planning technology. This study investigated some of these technologies in five ethnic groups in Kenya. These were the Kikuyu, Luo, Kalenjin, Kisii and Luhya. Gugulethu (1994) noted that knowledge of contraceptive methods is high in Kenya at 97% among married women. This knowledge, however, has not, been translated into use. Only 32.7% of married women were using contraceptives in 1993. According to the 1998 KDHS, only 39% of currently married women were using a contraceptive method. Of these, 31% were using modern methods. The large existing gap between knowledge and use of contraceptives is a clear indication that socio-cultural factors still have a major influence on fertility in sub-Saharan Africa. It is important that these factors are adequately and appropriately addressed when designing and improving Family Planning Programmes. Kenya, being one of the first countries to adopt an official population policy in Africa, ought to have achieved great success in family planning. This, however, has not been the case. What then is lacking in Kenya's population policy?

A few researchers have pointed to the socio-economic and cultural aspects such as education, status of women and income levels. Bauni (1990) points out that the culture and socio-economic background of Kenya's people in terms of population are little known and have neither been outwardly recognized, nor sufficiently addressed by experts in Kenyan demography. Other works include Arudo (1993) in Migori and Kamaara (1994) in Kenyan urban centers. More research is needed in order to elucidate the socio-economic and cultural factors affecting fertility in many more areas.

In view of this background, this study aimed at answering the following research questions:
What are the most important socio-economic and cultural factors affecting fertility?

1. How can the Family Planning Programme of Kenya address these factors, which are the key determinants of fertility?

How can the population programme accommodate the legitimate moral questions raised by the religious and other sectors concerning contraceptive use?

2. What alternatives exist to improve the efficiency and effectiveness of the current Family Planning Programmes?

This study set out to bridge the gap by examining critically the socio-economic and cultural forces influencing fertility in five ethnic groups in the country. The socio-economic aspects include education, economic status, use of different methods of family planning, costs and benefits of children among others. The cultural factors include the different attitudes towards children and methods of family planning. The study then places these factors in the context of the population programmes where they can be adequately addressed.

1.3 RESEARCH OBJECTIVES

The purpose of this research was to study the demographic, socio-economic and cultural factors that influence fertility in five different ethnic groups. It also aimed at finding out ways in which these factors can be incorporated into the country's Family Planning Programme. The specific objectives of the study were:

To investigate the demographic, socio-economic and cultural factors which influence fertility.

To determine the demographic, socio-economic and cultural factors that, have the greatest explanatory power on fertility in Kericho District and the City of Nairobi.

To compare the demographic, socio-economic and cultural factors that influence fertility in Kericho District and the City of Nairobi and within the different ethnic groups.

To evaluate the effectiveness of Family Planning Programme in Kenya and identify areas of possible improvement.

1.4 HYPOTHESES

H_{01} Demographic, socio-economic and cultural factors do not influence fertility.

H_{02} There is no difference between the demographic, socio-economic and cultural factors, which influence fertility in Kericho District and the City of Nairobi.

H_{03} There is no difference in the demographic, socio-economic and cultural factors that influence fertility within the different ethnic groups.

H_{04} The Family Planning Programme of Kenya has not met its targets and objectives.

1.5 JUSTIFICATION FOR THE STUDY

Bauni (1990) noted that although socio-economic and cultural factors do play an important part in initiating and sustaining the observed fertility behaviour, their relative importance have not so far been quantified. Sindiga (1988) noted that traditional social controls of fertility are responsible for general low fertility among some tribes.
However, it is not clear, how far these factors operate and which ones are more decisive in regulating fertility.

The Sessional Paper number four of 1984 noted that the narrow approach adopted in family planning, which emphasized quantity of contraceptive methods, was inadequate to achieve fertility change. The document stressed the need for a dedicated approach which addressed the issue of cultural, social and economic aspects vis-a-vis fertility. This study aimed at contributing towards the understanding of these aspects (Kenya 1984).

The focus of many Family Planning Programmes has been commodity oriented rather than people centered. The emphasis has been on supply of services to the people without considering their social welfare. It has not encouraged articulation of a population policy beyond responding to donor agency demands. An approach that will emphasize full mobilization of population and natural resources in the development process and attach importance to cultural authentication of the modes of societal modernization is required.

Renewed emphasis in fertility theory on cultural factors and cultural context of high fertility has not, as yet achieved great impact on fertility research. Data from the World Fertility Survey [WFS] and other surveys, for example, has failed to herald the triumph of the socio-economic perspective (Smith, 1989). Simmons and Simmons (1983) argued that social demographers had failed to analyse behaviour, norms and conditions that led to formulation of population policies and shape their implementation.

Population studies are largely concerned with individual and aggregate behaviour patterns, which are understandable only within a given social and cultural milieu. There is need to study

the social context in which a wide range of decisions concerning family formulation, reproductive behaviour, and child bearing, are made. Such issues cannot be successfully dealt with outside the context of broad social policies and institutions. The capacity to understand, interpret and influence these patterns will be greatly enhanced, when demographic research investigates and emphasizes the socio-cultural context in which the patterns are embedded rather than simply extrapolating from other cultures or historical experience. It is also important to note that Family Planning Programmes are an element within socio-economic structure and they have little impact beyond the socio-economic forces at work.

The investigation of the socio-economic and cultural basis of fertility, therefore, forms the rationale of this study.

1.6 SCOPE AND LIMITATIONS OF THE STUDY

This study limited itself to the demographic, socio-economic and cultural factors that influence fertility in five ethnic groups (Kikuyu, Luhya, Luo, Kalenjin and Kisii) in City of Nairobi and Kericho District. The study also reviewed the Family Planning Programme basing its focus on how the underlying, demographic, socio-economic and cultural factors have been incorporated.

1.7 THE STUDY AREAS

The study was conducted in the City of Nairobi and Kericho District of Kenya. Figure 1.1 shows the location of the two study areas in Kenya. The City of Nairobi lies in the fertile highlands of south central Kenya. It is located at latitude 1^0 17' south and longitude $39^0$40'East. It was chosen because it represents a good urban setup with socio-economic and cultural diversity. Westlands, Makadara and Kasarani divisions were, selected to represent the high, medium and low socio-economic status groups. Data were collected specifically in Dandora estate and Korogocho slums for the low income, South B, South C and Komarock estates for the middle income and Loresho and Lavington for the high income. Figure 1.2 shows the administrative divisions of the City and areas where data were collected.

Kericho is one of the districts in the Rift Valley Province. At the time of the study, it was found between longitude 35^0 02' and $35^0$40' east and between the equator and latitude $0^0$23'south. It occupied an area of 2515 square kilometers and comprised of eight divisions

namely: Londiani, Kipkelion, Chilchila, Rolet, Township, Belgut, Bureti, and Ainamoi. The population of the district was estimated at 645,000. Kipkelion had the lowest population while Bureti had the highest. Most of the people lived in small households. The district was chosen because it is a rural district, comprising of people from different ethnic groups. The Kalenjin comprised the largest portion of the population. Others included the Luo, Kikuyu, Kisii and Luhya. Employment in the tea industry was an important factor in attracting immigrants from other ethnic groups (Kenya, 1994). Cultural beliefs were still very strong in the area and use of modern contraceptives was low. Data were, collected specifically in the following areas: Roret, Litein, Sosiot, Londiani, Kericho municipality and two tea estates namely Jamji and Kaisugu. Selection was based on the settlement of different ethnic groups. Figure 1.3 shows the administrative divisions of Kericho District at the time of the study and areas where data were collected. Since the time of the study, new districts have been curved out Kericho and the neighbouring districts.

CONCLUSION

This introductory chapter has given a historical background of the population programmes in Kenya and highlighted the missing links. It has tried to bring into focus the problems, issues and negative consequences that arise from lack of proper knowledge and consideration of the socio-economic and cultural factors that influence fertility. It has also described and argued for the choice of the study areas. The following chapter gives an overview of the importance of the socio-economic and cultural factors citing examples from different countries.

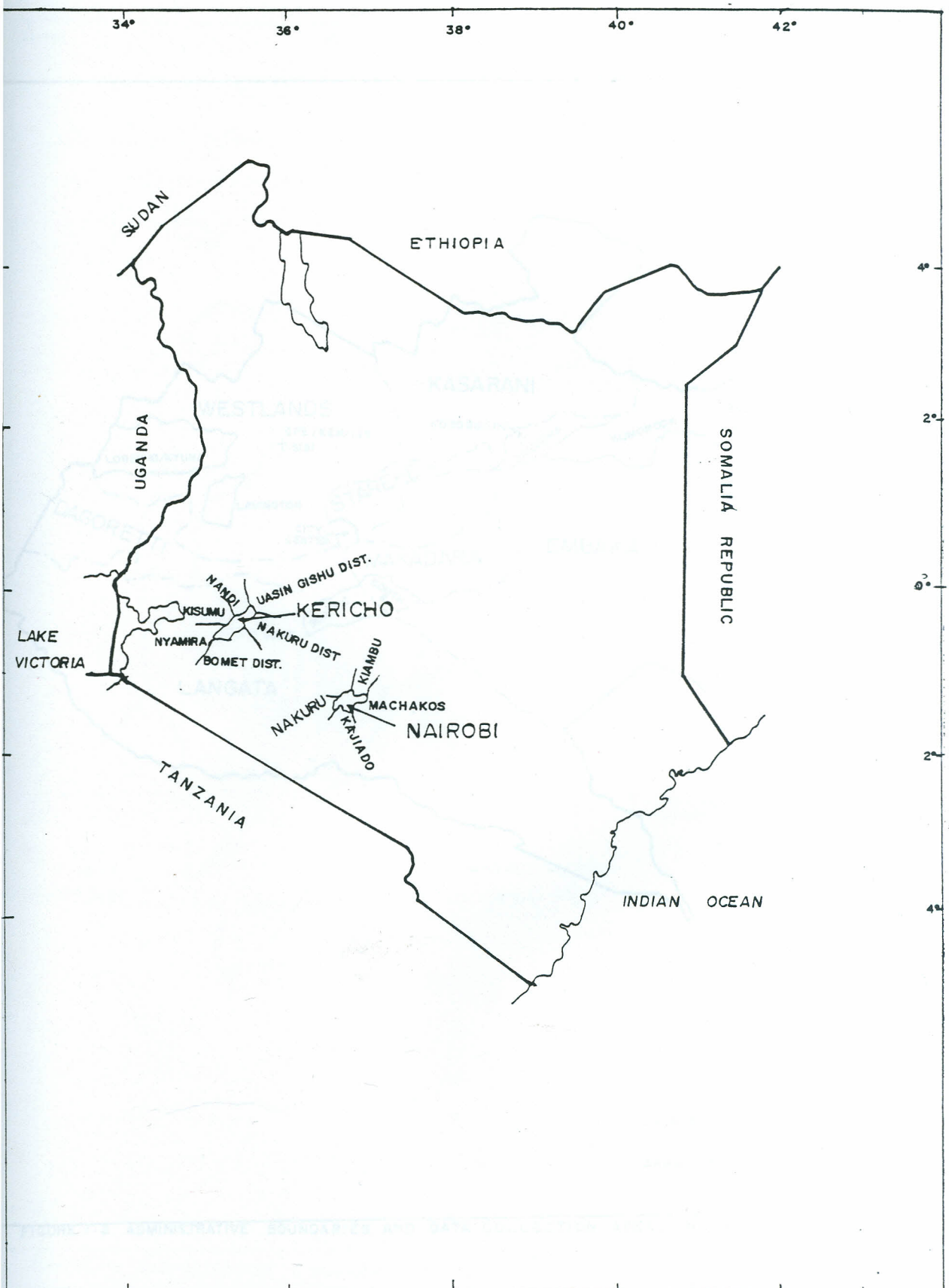

FIGURE:1 MAP SHOWING LOCATION OF NAIROBI CITY AND KERICHO DISTRICT IN KENYA

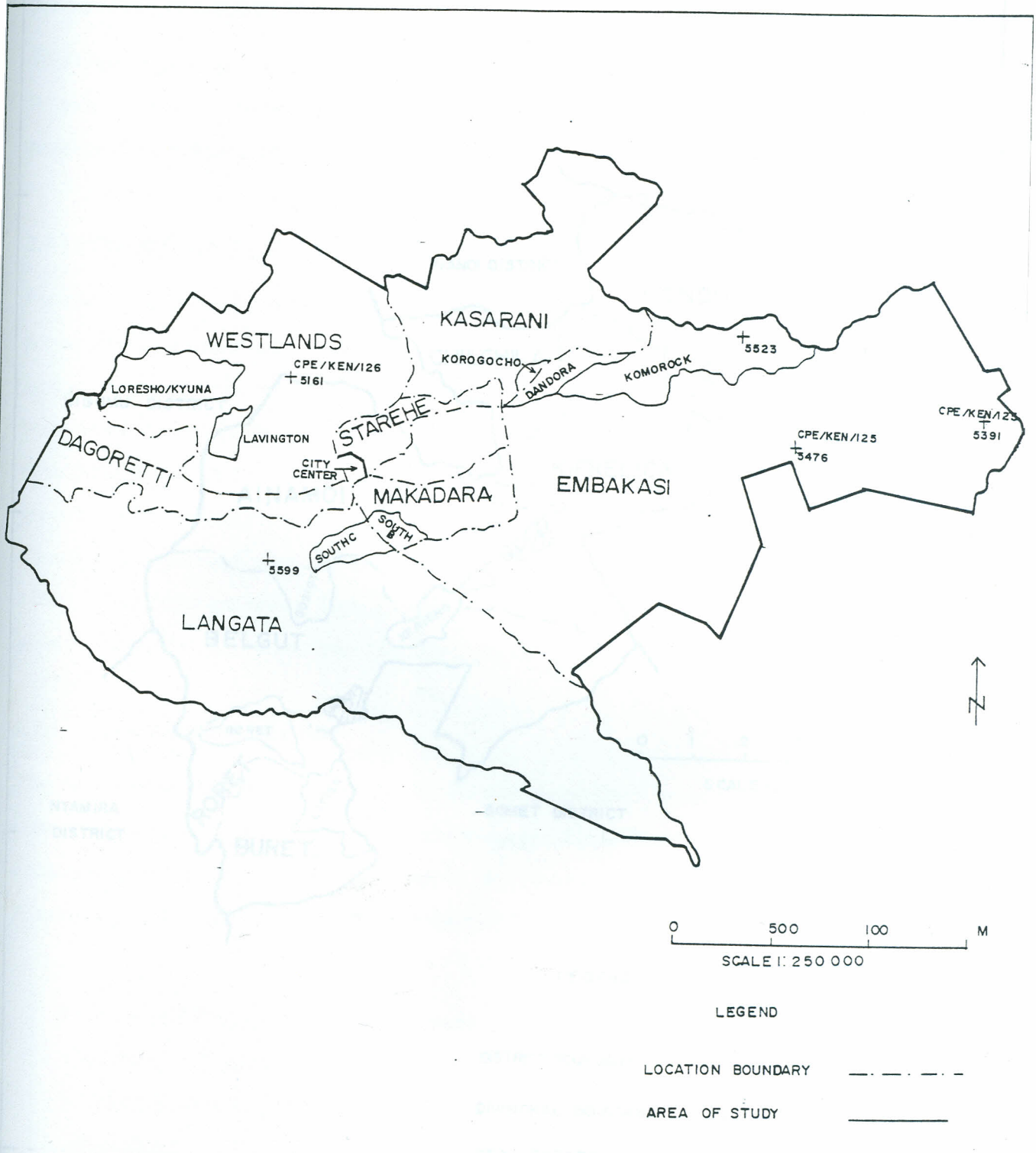

FIGURE 1.2 ADMINISTRATIVE BOUNDARIES AND DATA COLLECTION AREAS IN NAIROBI

SOURCE SURVEY OF KENYA

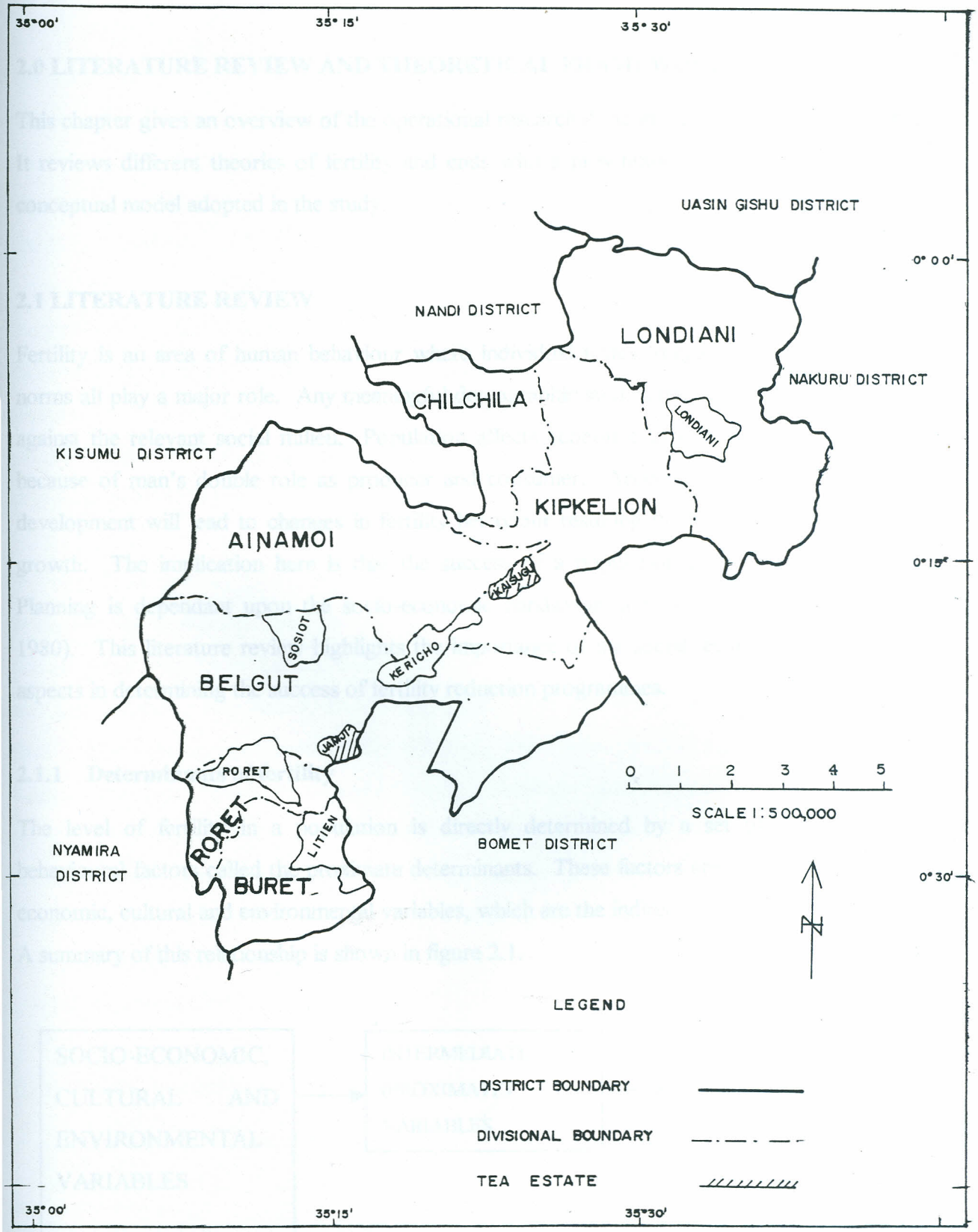

FIGURE 1.3 ADMINISTRATIVE BOUNDARIES OF KERICHO DISTRICT AND DATA COLLECTION AREAS

SOURCE SURVEY OF KENYA

CHAPTER TWO

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This chapter gives an overview of the operational research done in various studies on fertility. It reviews different theories of fertility and ends with a presentation and explanation of the conceptual model adopted in the study.

2.1 LITERATURE REVIEW

Fertility is an area of human behaviour where individual tastes, religion, culture and social norms all play a major role. Any meaningful demographic studies must, therefore be effected against the relevant social milieu. Population affects economic growth and social progress because of man's double role as producer and consumer. Acceleration of socio-economic development will lead to changes in fertility behaviour resulting in slow rates of population growth. The implication here is that the success of a population programme like Family Planning is dependant upon the socio-economic conditions in which it is operating (Sozi, 1980). This literature review highlights the importance of the social, economic and cultural aspects in determining the success of fertility reduction programmes.

2.1.1 Determinants of fertility

The level of fertility in a population is directly determined by a set of biological and behavioural factors called the proximate determinants. These factors are a function of socio-economic, cultural and environmental variables, which are the indirect determinants of fertility. A summary of this relationship is shown in figure 2.1.

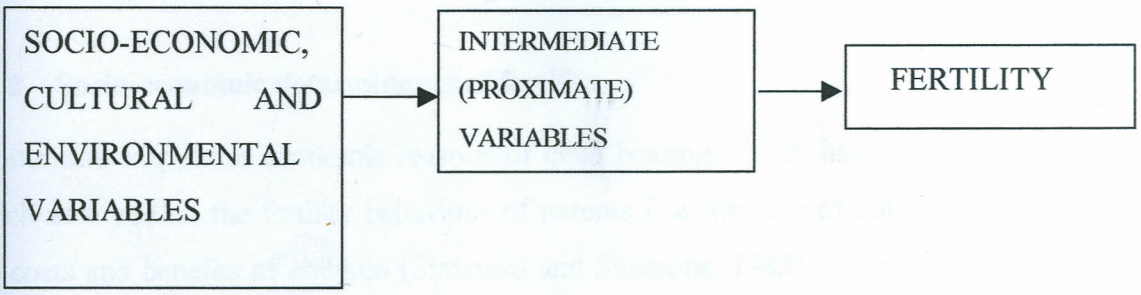

Figure 2.1 Determinants of fertility (Adapted from Bongaarts 1981)

Proximate determinants of fertility include the proportion of women married or in sexual unions, coital frequency, post partum abstinence, lactational amenorrhoea, contraception, induced abortion, natural and pathological sterility. An understanding of the operation of the proximate determinants of fertility improves the knowledge of operation of the socio-economic determinants, (Bongaarts et.al.1990, Bauni 1990).

The principle proximate determinants of natural fertility are marriage patterns and duration of breast-feeding. Natural fertility can vary overtime if marriage and breastfeeding behaviour changes. In the early phases of demographic transition, large proportions of population do not control fertility with contraception. In this case, variations in the proximate determinants of natural fertility can have a substantial impact on actual fertility.

The overall amount of time during which a woman is in a union determines the overall exposure to child bearing. This time is determined by the age at first marriage, proportion of women never married, frequency of divorce and widowhood. Consideration of the role of marriage in limiting exposure to child bearing must also take into consideration the level of extra marital exposure of women before marriage. Even within marriage, particular forms of marriage can affect exposure to child bearing. Arranged and polygamous marriages, for example, tend to be associated with lower fertility than monogamous marriages. There is no necessary connection between fertility and contraceptive prevalence on the onset of fertility transition. It is quite possible for fertility to remain constant, or even rise temporarily as contraceptive use increases. This is because other proximate determinants can exert offsetting upward pressure on fertility.

2.1.2 Socio-economic determinants of fertility

Economists emphasize economic reasons of child bearing. They have propounded theories, which assume that the fertility behaviour of parents is a function of conscious calculation of the costs and benefits of children (Simmons and Simmons, 1983). Sociologists, on the other hand, stress the socio-cultural environment (customs, values, norms and beliefs) where child bearing takes place. There is need to merge the two viewpoints for a more comprehensive

study of fertility (Bogue et.al. 1993).

In the 1987 African Population Conference in Dakar, Senegal, it was noted that future trends of fertility levels in Africa would largely depend on the changes in the socio-economic and cultural factors that have traditionally determined fertility and adoption of modern contraceptive practice. A growing body of demographic and economic research indicates that a wide range of socio-economic measures have demographic consequences. These include the age at first marriage, raising levels of education, female labour force participation and use of capital-intensive technology. Low levels of income and education, low health status and less intensive urbanization are some of the socio-economic factors explaining the persistence of the high fertility in Kenya (Sozi, 1980).

2.1.2.1 Education

Fertility has been closely associated with female educational levels. Education is a primary source of fertility decline. With the current shifting of costs of education to parents in the form of loans and fees, parents are increasingly considering the cost of educating their children in making fertility decisions. The most important factor in lowering fertility is the proportion of the community attaining some level of education. Lower levels of fertility are usually associated with higher levels of education. Highly educated women are more likely to delay marriage and to work for paid employment in the formal labour market after leaving school. They seek to avoid repeated pregnancies and periods with children. Consequently, their demand for children may be inversely related to their educational level. Literacy skills may empower women with more decision-making authority in the household. Initiation into childbearing is a factor in the termination of education especially for the younger school going adolescents (Cohen, 1993). Such girls are more likely to have larger families than their counterparts who proceed to higher levels of education. Low levels of education may actually be associated with relatively high fertility. Low levels of education may break down birth spacing practices including long breast feeding intervals and post partum abstinence without lowering fertility desires or increasing age at marriage (Cohen 1993, Mabogunje 1981). Educational programmes that support a policy to reduce fertility include expanding and improving primary education and increasing adult education for women. This study analysed

the relationship between the level of education and a woman's fertility among the different ethnic groups in urban and rural areas and between the different socio-economic groups. Results of this analysis are presented and discussed in Chapter Four.

2.1.2.2 Age at first marriage

Rising the age at first marriage among women tends to lower their level of fertility. It lengthens the interval between generations thus shortening the period during which the woman is likely to have children. It also gives women more interests to take with them into married life (World Bank, 1980). It however, tends to open-up non-marital options such as cohabitation and premarital child bearing (McNicoll and Odile, 1987). Age at first marriage is strongly affected by religious, customary and civic laws, attitudes towards marriage and socio-economic conditions (Bauni, 1990). The Impact of age at first marriage on fertility depends on whether or not the age at first birth also increases. In South Korea and Peninsular Malaysia, changes in the proportion of married women accounted for half as much decline in crude birth rate as did changes in marital fertility. China and Latin American countries place great stress on delaying marriage in their programmes to reduce population growth (Agency for International Development, 1979). This study investigated the differences in age at first marriage among women in five ethnic groups in the City of Nairobi and Kericho District.

2.1.2.3 Status of Women

The position of women in the society has a great impact on their fertility, health, education and household economics. The debate on population issues rarely examines the relationship between demographic problems and the status of women (African Population Conference, 1987). Indicators of the status of women include their literacy levels, proportion of adolescent mothers, maternal and pre-natal care and economic status.

Early marriages, frequency of polygamy, unequal work burden between the sexes and low educational levels of women perpetuate their low status. There is a strong social pressure for women to marry and produce children thus extend their kinship network. Community praise of the role of wife and mother and severe censure of the unmarried or childless woman creates an intense desire for family roles. Early marriages, usually by older men foster the woman's

feelings of dependence within the husband's family (World Bank, 1986).

Women play an essential role, which will contribute to the re-activation of the economies and facilitate the success of new population policies. Improvements or change of their status from the legal and cultural angles will be a requirement for changing their demographic behaviour. Many women with low paying jobs outside the home undergo untold hardship out of necessity. This work is at times seen as lowered status and shame because the woman must go to work rather than stay at home and care for the household (Agency for International Development, 1979)

Raising the status of women requires opening up for them opportunities for economic self-sufficiency, security and integrated development. Economic opportunities include rights to land, access to credit and energy facilities, managerial advice, agricultural extension services and training. Arudo (1993) argued that provision of improved techniques in rural Kenya still emphatically ignore women. Distribution and control of resources should be addressed together with other strategic needs of women. There is need for empowerment of women to see themselves as active agents and subjects of social change (Sen. et. al. 1994). This requires fundamental changes at many levels of society especially in the relationships within the household and family.

Women in the Philippines and Indonesia, despite Islamic influences, have a great deal of autonomy and status. In Indonesia, they reign supreme in the household and make major decisions in allocation of family resources and in the education of children. This study investigated the status of women by looking at their incomes and occupations together with their role in decision-making in their families. The question of inheritance was also investigated as a factor determining the status of women.

2.1.2.4 Costs and Benefits of Children

Children contribute to family and clan immortality, emotional well being, affection and psychological security. They also contribute to economic security and are therefore, perceived as a direct benefit to the family. The micro economic theory of fertility recognises children's

work input to the household productivity as a factor influencing fertility behaviour of parents in peasant society (Agency for International Development, 1979). In rural areas, economic benefits and security in children are still given first ranking. The transitional urban poor show a higher sensitivity to costs of children than the rural people or upper class urbanites. In Kenya, children are involved in a number of activities such as petty trade, working on the farm, source of bride wealth and support of the family especially the older working children as shown in table 2.0. The African woman and her children make up an autonomous economic unit. She is likely to perceive of her children as economic support and old age security (McNicoll and Odile, 1987).

Table 2.0 Percentage of children under 14 years doing some household chores among the Luo

ACTIVITY	% of children doing the work
Child care	61
Carrying water	45
Cooking	55
Cleaning	44
Tending livestock	38

Source: McNicoll and Odile (1987)

A similar study carried out in western, central, eastern and coastal agricultural areas of Kenya in early 1980's found out that children contributed up to 75 % of all farming and herding which amounted to thirty hours per week. School going children still provided 57 % of the total labour to the farms. The Kenya national labour-force survey of 1977/78 found out that 42 % of boys and 36 % of girls aged 8 to 14 who lived on small farms worked in agriculture. Traditional recourse to child labour has therefore been predominant in Kenya.

With the current economic crisis, children are increasingly being regarded as additional burden on the parent's meager resources. What constitutes a desirable number of children is being re-evaluated less in terms of their economic value. Changes in demand for children occur with increasing involvement of the individual in non-familial institutions that transcend the local

community and link the individual and families to a wider system of communication and exchange.

For programme administrators, it is important to understand the larger social trends such as appearance on the market of new consumer goods and the motivation to educate children. The demand for new consumer goods and the perception that educated children have new economic and social opportunities may lead to an appreciation of the value of smaller families (Freedman, 1987).

In Sri Lanka, the social and economic consequences of a stagnant economy as well as of a high rate of inflation prompted younger parents to rethink the economic value of children (Crook, 1978). Urbanization, education, higher standards of living and non-familial employment are believed to be conducive to smaller families because they increase the costs of children and the value of investing in them. This study examined the divergent social trends taking place with regard to family size desires.

2.1.2.5 Health and Nutrition

Better health plays a key role in the demographic transition to lower fertility. Lower fertility itself affects other aspects of poverty for example the spread and quality of education. Better nutrition may increase natural fecundity. However, its effects on the health, education and incomes of the poor all contribute indirectly to reduced fertility. Health and nutrition determine whether children can go to school regularly enough to finish the primary years and have the mental and physical energy to learn (World Bank, 1980).

Good health also means a reduction in child and infant mortality. With decrease in mortality, fertility is expected to decrease. In spite of the advances in child survival, an estimated 31,000 children under five years in the world, still die every day from respiratory infections, diarrhoea, malaria, measles and malnutrition (Shane, 1997). Half of all child deaths are thought to be associated with malnutrition. Many of these deaths can be prevented through vaccination, adequate nutrition, safe drinking water and sanitation. With high infant and child mortality, parents feel compelled to have more children as a form of security in the event of child death.

2.1.2.6 Place of residence

Change in family size norms is related to the general process of modernization, particularly education and exposure to urban contacts and the influence of affluent members of the community. Continued urbanization is loosening extended family ties and raising the private costs of children to couples who are less tied to extended family networks (Crook, 1978). The place of residence may have strong effect influencing a woman's values, how she spends her time and her view of the world. Women in urban areas may have their values changed as they are exposed to Family Planning and more western attitudes (Foote. et. al. 1993). Urbanization and separation of men and women has brought diminution of responsibility in many men and left many women to struggle on their own. The high cost and value of children seems to have major concerns to a substantial number of rural people. Migrants to the city or even rural people who settle in different locations exhibit changed fertility behaviour as part of their perceptions of new ways of life (Foote et.al 1993). In this study, the influence of place of residence on fertility was investigated by comparing the number of children the rural and urban women had. In the urban area, comparison between the high, low and medium socio-economic status groups was done based on the place of residence. This kind of classification, however, was not possible in the rural district.

2.1.3 Cultural factors

There are deeply rooted and persistent elements of culture that may influence family planning particularly in so far as they affect the demand for children. These must be understood in order to determine which policy direction to take. Family Planning Programmes should respect the cultural reality of each group. The importance of the cultural aspect can be seen in the peoples' objection to the introduction of sex education or family life education in schools despite numerous government efforts. Programmes that emphasize on provision of contraceptives to adolescents should consider the African culture and focus on cultural values that can prevent the young generation from premarital births.

Regulation of fertility is not a recent discovery from the Western countries. Indigenous African societies have always been preoccupied with this matter although their capacity to maintain vigilance has been eroded with recent developments. Achievement of grand maternal status,

for example, leads in many societies to permanent sexual abstinence and this marks a cultural as opposed to a biological end of the reproductive period of a woman's life (Lesthaeghe et. al., 1981). As part of the overall strategy, successful programmes take into account aspects of the socio-economic, political and cultural system that determine normative values about how many children are wanted and the means for spacing and limiting births (Mabogunje, 1981).

Although there is a significant unmet need for family planning, the programmes have achieved little success and prevalence rates are low. Even with a safe and effective family planning method for every woman, an estimated 150 million women in developing countries want to delay or stop child bearing but are not using contraceptives (Freedman 1987, Shane 1997). Contraceptive use per se cannot therefore make major changes in strong cultural and institutional forces. Such changes require skills and political power not found in the Family Planning Programmes. Programmes that confine their efforts to supply of contraceptives alone deal with women only in their reproductive role. The Agency for International Development (1979) asserts that demographic change cannot be achieved only through Family planning. Fertility regulation is a far greater socio-economic and political problem than just one of numbers. The purpose of family planning should therefore be broadened to include aspects of socio-economic development.

There is need for humility, caution and pragmatism in the promotion of programmes affecting population in general and Family Planning in particular. Ideas about population and Family planning should be spread in the full knowledge of African traditions, which do offer a solid basis for them. Family Planning should improve the well being of individuals and help couples realize their own fertility objectives. It should also help to improve the health of mothers and children.

The World Bank (1984) clearly stated that population control is not the panacea for development in Africa. Lower fertility is only an intermediate objective. Slower population growth will not solve any of the development problems by itself. It will only help to buy time to accumulate the resources and train manpower. A commitment to lower fertility must not therefore mean achieving it at all costs. With sufficient capital skill, managerial know how and technical improvement, the difficulties of rapid population growth could be ameliorated.

Implementation of Family Planning entails in part the change of attitudes, customs and beliefs of the target groups. Desired changes in these will only be brought about by a combination of Family Planning with other activities intended to bring about socio-economic development (Sozi, 1980). Such activities include provision of adequate health facilities, educational opportunities, diversification of job opportunities, adequate nutrition, emancipation of women and equitable distribution of national wealth. These evolve relating to parity, spacing and age at marriage. The completed fertility of a woman is an object of normative controls, which come to reflect majority behaviour. The women conform and rely on them for their own calculations of costs and benefits of children (Crook, 1978). Within the context of traditional norms, there is considerable untapped scope for progress in regulating fertility. In the past, high fertility in Africa has been controlled by social pressures against premarital sex, practice of post partum sexual abstinence and long breastfeeding periods that led to lengthy lactational amenorrhoea. Modern Family Planninng Programmes can build on these longstanding African traditions, which are now breaking down, to space or even stop births. (World Bank, 1986). Marriage patterns in Africa are affected by socio-economic and cultural forces most of which lead to high fertility. Powerful pro-natalist forces are built in African kinship system and in traditional relationships between men and women (World Bank, 1986). The extended family in which the costs of high fertility are widely shared is still persistent in many parts of the country. Traditional cultures place a high premium on high fertility and some link children to immortality. Successful programmes actually protect traditional principles. This study looked at some of the social norms pertaining to fertility in the different groups of people. The role of adoption and fostering was investigated in line with their effects on fertility.

Even when taking income and educational differences into account, there are still national and regional differences in fertility, which can only be explained by common culture. In the 19th century Europe, for example, major declines in fertility followed a similar trend defined by a common language or culture (World Bank, 1980).

2.1.4 Breast feeding and lactational amenorrhoea

Bongaarts et. al. (1990), estimated that fertility in Africa would increase by 72% if the fertility inhibiting effects of breast feeding and post partum abstinence were removed. These fertility-

lowering practices have probably evolved principally to ensure exceptionally long birth intervals to combat high rates of infant mortality.

For a woman, the duration, intensity and pattern of breast-feeding determine the length of lactational amenorrhoea. In a number of societies, sexual relations are not permitted while a woman is breastfeeding. Lactational amenorrheoa and post partum abstinence are major determinants of fertility, having the potential of roughly doubling average birth interval thereby halving fertility (Foote et. al. 1993, Bauni 1990).

Post partum non-susceptibility is one of the most important determinants of fertility in Africa. The practice of spacing children for health of both mother and child is still a powerful fertility reducing practice.

Increased female education and urbanization are generally correlated with decreasing duration of breast feeding and post partum abstinence which lead to shorter intervals between births and thus higher fertility.

Child spacing in the African tradition was highly regarded because it guaranteed the rights of women to live a normal life of social and economic involvement (Mabogunje, 1981). The culturally accepted restraint is often ignored in conventional descriptions of fertility in less developed societies. The social context within which the restraint was practiced and the institutional support developed around it were hardly investigated. African societies have organized the mechanism for keeping population growth and destiny in line with traditional technologies and resources by observing several, usually shorter periods of abstinence. Caldwell (1977) showed that when all these separate periods of abstinence were added up for the Yoruba of Ibadan in Nigeria, and their impact on fertility calculated, a substantial proportion of a woman's reproductive age span remained unused. Family planning officials must understand that the expected effects from a rise in contraceptive prevalence may be offset by a decrease in prevalence, duration and intensity with which these traditional practices are utilized (Freedman, 1987). This study set out to examine the salient features of traditional child spacing practices among five ethnic groups in Kenya. It also examined the factors that are inducing wide range of changes in these practices and potential policy interventions.

2.1.5 Ethical considerations

Family Planning Programmes are faced with many ethical questions. An important consensus is not to force anyone to practice family planning inconsistent with his/her moral, philosophical or religious beliefs. There should be a revival of traditional methods, even with increasing reliance on modern methods, in order to cater for all categories of people (Kenya, 1984).

Where the financial and institutional bases for health and education are being eroded by micro economic policies, the priority accorded by some funding agencies to population control as a precondition for development assistance is indeed disingenuous. World Bank, (1990) for example, accorded utmost priority to population assistance. This mentality that population control should take precedence over other development investment is a narrow one and is considered unethically sound and ineffective. A human development approach within which health, empowerment and rights of women are the central objectives is supported. It is also very essential to ensure adequate planning to accommodate additional people who are born (Sen. et. al. 1994).

2.2 THEORETICAL FRAMEWORK

A fertility theory refers to a coherent body of analyses that link the characteristics of a society and economy to individual fertility decisions and out comes (McNicoll, 1980). Based on this definition, it is widely accepted that we do not have an adequate theory of fertility. When dealing with socio-cultural determinants of fertility, existing theories are best conceptualized at a macro level. Although the fundamental properties of key theories are located conceptually at the macro level, it is desirable to link the macro properties of fertility behaviour to its micro properties (Freedman, 1987). It is important to judge theories of fertility with respect to their ability to explain fertility variation as observed at the individual level. Following is a review of some theories thought to be useful in this study.

2.2.1 Modernization theory

The modernization theory explains how demand, supply and regulation costs interact in determining fertility and fertility control behaviour. In this theory, fertility is seen as

determined directly by a set of proximate determinants with modernization operating indirectly on fertility through these determinants. The theory singles out one subset of proximate determinants that relate to deliberate fertility control and inserts another set of variables: supply, demand and regulation costs. The various modernization variables are seen to impinge directly on supply, demand and costs of regulation.

The demand of children is the number of surviving children parents would want if fertility regulation were free. It depends on household tastes, incomes and child cost considerations, which include the economic and non-economic returns from children. Supply refers to the number of surviving children a couple would have if they had no deliberate attempt to limit family size. It reflects the natural fertility and chances of child survival. The costs of regulation include the couple's attitudes towards and access to fertility control methods and supplies.

The immediate determinants of demand for children are income, prices and tastes for goods. The number of children desired would be expected to vary directly with the price of goods, relative to children and inversely with the strength of tastes for goods. Supply of children depends on natural fertility and the probability of a baby surviving to adulthood. Increase in infant and child survival prospects would increase the potential supply of children. The potential supply of and demand for children jointly determine the motivation for fertility regulation. Excess supply creates demand for ways to limit fertility. It is assumed that only if there are economic and social changes leading people to desire smaller families will deliberate fertility control be adopted (Easterlin and Crimmans, 1985).

Common features of the theory include advances in public health, school attendance, urbanization, and introduction to new goods and Family Planning Programmes. Other aspects of the theory include per capita income growth, female employment in modern sector, changes in family structure, mass media, modernization of government administration and changes in human attitudes and personality (Axim, 1992). A common approach to identifying links between modernization and fertility is to regress fertility on measures that reflect different aspects of modernization (Easterlin and Crimmans, 1985)

Modernization influences fertility in two ways: the parental demand for children and willingness to translate the desires into appropriate forms of reproductive control (Hobcraft and Cleland 1985). It is seen to operate indirectly on fertility through its proximate determinants. It tends to lower the demand for children, raise potential supply and reduce regulation costs.

The modernization process shifts the typical household from where it is regulated by a variety of social and biological mechanisms working through natural fertility to a position where it creates fundamental change in the circumstances of family reproduction. The socio-economic determinants of fertility are mainly the result of modernization hence the importance of this theory in the study.

2.2.2 The Economic theory of fertility analysis

According to this theory, children are seen as a special kind of good. Fertility is seen as a response to the consumer's demand for children relative to other goods (Easterlin and Crimmans, 1985). Application of the theory to household choice has resulted in considering the importance of the husband and wife's earnings in determining family size. It has also helped in assessing how the total family income and household earning potential influence fertility decision. These considerations have helped clarify causal interrelations between lower fertility and women's employment. In addition, the theory has led to a more explicit recognition of the value of the parents' time in relation to competition for it and between children and economic goods. A combination of economic and sociological analysis is necessary here since the economists emphasize on price and income without having regard for tastes and other preferences (Bogue, 1993). In this study, the theory was important in evaluating the costs and benefits of children.

2.2.3 The Demographic transition theory

The demographic transition theory is a descriptive interpretation of demographic changes, which took place in Europe and North America during the nineteenth century. It describes the actual demographic transition from high rates of fertility and mortality to low ones. Before the transition, the death and birth rates are high. The intermediate transitional stage occurs when

birthrates drop following the fall in mortality rates. At the end of this transition, birth and death rates reach a stationary low rate where the population growth rate is zero.

The theory emphasizes on identifying different ways in which the process of socio-economic development may endanger, within the household, a new type of concern as far as reproduction is concerned. In Europe and North America, there were changes towards fixed salaries, increasing costs of children, lack of benefits from labour, limited housing and working away from home. With the ongoing structural adjustment programmes, a comparable change is taking place especially in the urban areas. The theory was useful in examining the impact of these changing socio-economic conditions on fertility.

2.2.4 Socio-psychological theory of fertility

A demographic transition is actually based on unique and complex combinations of social and psychological forces. Socio-psychological data in demography includes studies into what is the desired family size. Individuals may calculate the number of children they expect to have by the relative importance of their own desires, their spouses or other reference groups, long-term financial situation, fecundity problems and use of contraception (Bogue, 1993).

The socio-psychological theory brings into focus three aspects: the demographic system, social aggregate system and the social action system. The demographic system includes the population size, composition, distribution, fertility, mortality and migration. The social aggregate system encompasses the race, ethnic background, marital status, family characteristics, labour force participation, occupation, industry, education, income, religion, attitudes, values and beliefs. The social action system includes informal groups, associations, communities, marriage and family institutions, economic, health, welfare and educational institutions.

The theory was useful in the study of the major normative and psychic costs of contraception and the social and economic changes that are taking place. In looking at the sociological theories of fertility, it is important to note that demographic processes are both reflective and behavioural. They involve human decisions, which affect other components of the social

system. Apart from spreading poverty or diminishing resources, demographic response is sometimes prompted by personal rather than national goals. An individual's desire to get ahead and appear progressive and respectable, for example, may force him to modify his reproductive behaviour.

Another theory taken into consideration was Caldwell's theory of fertility decline. The theory brings into focus the institutional structure of the factors that support high fertility and eventually determine its decline. In this study, the institutions that support high fertility were examined in each of the groups investigated. Easterlin's paradigm, earlier described, was useful in determining whether existing fertility differentials among the selected groups reflected differences in desired family size as well as variation in the proximate determinants of fertility.

2.3 THE EXPANDED MODEL

The expanded model is a classificatory scheme that addresses the socio-economic and cultural forces affecting population change. It analyses how policy blue prints are translated into action and how these actions influence demographic behaviour and human welfare.

Population programmes support socio-economic changes. When put in fertility analysis, they tend to focus on impact to determine the extent to which fertility declines can be attributed to publicly supported Family Planning Programmes. Population programmes are rarely seen as social units located within, and shaped by larger socio-economic and cultural or political context. Policy decisions should be based on an appreciation of the total situation including the awareness of strategies most likely to succeed in a given context.

The expanded model combines the socio-demographic model proposed by Freedman (1987) with the traditional organization model. The socio-demographic model explains individual fertility behaviour in terms of the socio-cultural context in which it occurs. It does not limit itself to the nature of the programmatic action that has taken place.

The model appreciates that programmes are likely to flourish under conditions of social, political and economic development and falter in their absence. It also gives an independent

place to programme factors by specifying population policy, programmes and political administrative system as separate categories of determinants of programme performance. It also assesses the extent to which the system is committed to economic development and social change in distributive justice and social welfare.

The expanded model elaborates a wide range of indirect policies that have implications on fertility. It gives an integrated approach to fertility limitation and seeks to examine the nature and impact of inter-linkages between all branches of government that participate in its implementation. The model sees the political, administrative system and socio-economic structure as interactive. All sets of variables play independent roles and each has some impact on the other.

2.3.1 Discussion of the model

Cultural factors

The model begins with hard facts and moves backwards in a causal chain to more diffuse variables. The proximate determinants of fertility are a function of socio-economic and cultural factors. As shown in figure 2.1, the cultural setting (social norms, cultural values, customs, beliefs and reproductive norms) have an impact on the socio-economic factors, which in turn have a bearing on implementation of population programmes. Cultural specifications on division of labour, for example, may hinder women's participation in labour force, thus affecting their economic status. Cultural factors also affect the intermediate determinants of fertility such as duration of breastfeeding and postpartum abstinence. Cultural practices relating to nutrition and health affect mortality rates. Cultural factors directly influence implementation of programmes for example in places where large families are valued.

Socio-economic factors

These factors lead to changes in intermediate variables such as contraceptive use, induced abortions and proportion of women married. High socio-economic standards are likely to result in successful implementation of population programmes by providing the necessary conditions for small family desires. They also ensure the availability of adequate health services, which help to reduce infant mortality rate and increase life expectancy. Socio-

economic conditions thus affect mortality rates and according to the demographic transition theory, reduced mortality rates are a step towards lowering the birth rates. Population programmes in turn contribute to improved socio-economic conditions by providing educational and health facilities for women and children. From the model, it can be concluded that socio-economic and cultural factors are important determiners of successful implementation of population programmes. The focus of this study was to analyse how the socio-economic and cultural factors influence implementation of Family Planning Programmes. The expanded model is therefore suitable for this study because it brings together the socio-economic and cultural factors and relates them to population programmes.

CONCLUSION

This chapter has critically examined relevant theoretical models and other explanatory variables to show the relationship between socio-economic factors, cultural factors and the adoption of family planning methods. It has also attempted to relate these variables to the study problem. In addition, it has argued the choice of the expanded model as the conceptual model for the study. The following chapter elaborates on the methodology adopted in the study.

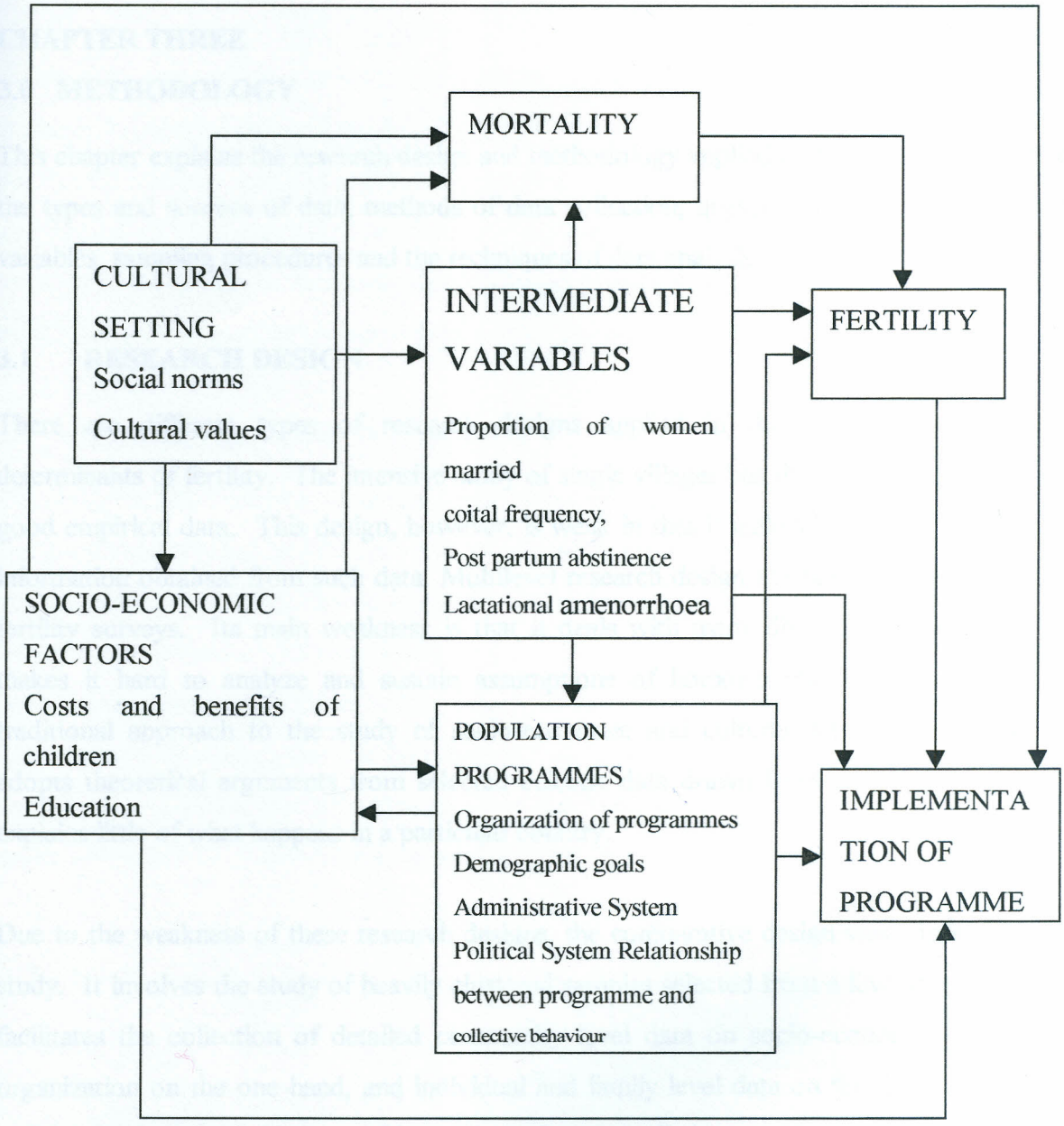

Figure 2.2 Expanded model of fertility

CHAPTER THREE

3.0 METHODOLOGY

This chapter explains the research design and methodology applied in the study. It focuses on the types and sources of data, methods of data collection, questionnaire design, selection of variables, sampling procedures and the techniques of data analysis.

3.1 RESEARCH DESIGN

There are different types of research designs applied in the study of socio-cultural determinants of fertility. The intensive study of single villages has the advantage of collecting good empirical data. This design, however, is weak in that it makes it difficult to generalize information obtained from such data. Multilevel research design has had application in world fertility surveys. Its main weakness is that it deals with many diverse communities. This makes it hard to analyze and sustain assumptions of homogeneity (Smith, 1989). The traditional approach to the study of socio-economic and cultural determinants of fertility adopts theoretical arguments from selected eclectic data drawn from around the world. It explains little of what happens in a particular country.

Due to the weakness of these research designs, the comparative design was adopted for this study. It involves the study of heavily clustered samples selected from a few communities. It facilitates the collection of detailed community level data on socio-economic and cultural organization on the one hand, and individual and family level data on fertility and economic activity on the other. It also enables an intensive controlled comparison to be made between the different selected groups. A more complete explanation of community level phenomena is given through the distribution of individual level characteristics that are associated with fertility. This approach is consistent with the socio-economic perspectives regarding the determinants of fertility and fertility decline. It also supplies much of the mediation needed between global and individual levels of analysis. In addition, it provides a better measurement of macro characteristics at a community level. The community comparison approach, however, lacks a temporal perspective. A longer study of a variable may therefore reveal a transitory state of affairs, in the course of a much larger process of institutional and demographic change (Smith, 1989).

In carrying out the comparisons, the study adopted the developmental, systematic and evaluation perspectives. The developmental approach was applied in examining a cross section of cultural and socio-economic groups. The systematic analysis was used in the description of facts and characteristics of Family Planning Programme. The evaluation approach was useful in examining the ongoing programme focusing on its efficiency and effectiveness. These approaches were useful in covering all the objectives of the study.

3.2 VARIABLES USED IN THE STUDY

The independent variables were the socio-economic and cultural determinants of fertility. Socio-economic variables include: level of education, employment and status of women, costs and benefits of children, health, occupation and income. These may influence any of the intermediate variables affecting fertility. Cultural variables include lactational amenorrhoea, postpartum abstinence, cultural norms, beliefs, customs and attitudes towards family planning. The Principle dependant variable was fertility, which was taken to be the number of children a woman had. Fertility can interact with other socio-economic and cultural variables both as a cause and an effect. Table 3.1 shows the list of variables used in the study.

Table 3.1 Demographic, socio-economic and cultural variables investigated in the study

Variable	Questionnaire Item
Demographic variables	
V1 – Age	1
V2 - Age at first marriage	8
V3 - Age at first birth	11
V4 - Number of sons	10
V5 - Number of daughters	10
V17 - Lost children through death	16
V18 - Number of children lost through death	17
Socio-economic variables	
V6 - Level of Education	2

V7 - Income per month 5

V8 - Marital status 7

Variable Questionnaire 1tem

V9 - Occupation 4

V11 - Social status (High Medium low) based on place of residence applied only in Nairobi.

V13 - Duration of breastfeeding 12

V23 - Work done by children 22

V24 - Ideal family size 23

V28 - Desired family size 27

V29 - Reasons for the desired size 28

V37 - Knowledge of modern methods of Family planning 36

V38 - Modern methods known 37

V40- Distance to the nearest family planning clinic 40

V42 - Number of people using modern methods 41

V43 - Recommendations regarding modern and Traditional methods 42

V44 - Awareness of family life education 43

V45 - Attitude towards family life education 44

V46 - Reasons for the attitude 45

V47 - Worries over teenage pregnancies 46

V48 - Solutions suggested 47

V49 - Reasons for the increase of single mothers 48

V50 - Problems faced by single mothers 49

V51 - Solutions to the problems 50

Cultural variables

V14 - Person looking after children 13

V15 - Advice on child rearing 14

V16 - Information given 15

V19 - Children living away from parents 18

V20 - Reasons for living away from home 19
V21 - Parents living with other peoples children 20
V22 - Reasons for living with them 21
V25 - Attitude towards childless women 24
V26 - Attitude towards women with many children 25
V27 - Decisions regarding number of children 26
V30 - Old age insurance 29
V31 - Care in old age 30
V32 - Women inheriting property 31
V33 - Knowledge of traditional Family Planning Methods 32
V34 - Traditional methods known 33
V35 - Attitudes towards traditional methods 34
V36 - Reasons for the attitude 35
V39 - Attitude towards modern methods 38
V40 - Reasons for the attitude 39

3.3 TYPES AND SOURCES OF DATA

This study involved collection of primary data on the socio-economic and cultural factors influencing fertility and secondary data on the evaluation of Family Planning Programme of Kenya. Primary data were collected between May and September 1998 in Kericho District and the City of Nairobi. Fieldwork involved administration of a carefully constructed questionnaire (appendix 1) to the sampled people in selected places in the two study areas. The questionnaire was designed to investigate the socio-economic and cultural factors that have a bearing on fertility. Both closed and open-ended questions were asked.

Secondary data were collected from archival of material on population. Sample surveys, Demographic and Health Surveys (DHS) reports, census reports, research journals, reports of world population conferences and newsletters on population related issues were among the documents reviewed. The Population Studies Research Institute (PSRI) and the Central Bureau of Statistics (CBS) libraries provided useful information. Information from these sources was used in evaluation of the Family Planning Programme of Kenya.

3.3.1 Data collection in Kericho district

As mentioned in section 1.7, selection of study sites was based on ethnic composition. This was in order to capture the cultural differentials in fertility. Data were collected in Sosiot, Roret, Londiani, Kericho Township and two tea estates namely Jamji and Kaisugu. The Luo were found in Sosiot, the Kisii in Roret and the Kikuyu in Londiani. The Luhya were found in the two tea estates. In the Township division, all the five ethnic groups were found. Twenty women were interviewed from each ethnic group. Purposive sampling was applied. It was preceded by a visit to the area and discussion with local leaders. Following the visits, the researcher made a list of the households, which had the required characteristics. From this, a random selection was done. Women of child - bearing age (13 - 49 years) were interviewed.

Data were collected with the help of a research assistant. A two-day training session was held where each item of the questionnaire was discussed. This was followed by two days of pre-testing of the questionnaire. The researcher asked the questions while the assistant recorded the information. Some adjustments were made to the questions that were not clear to the respondents. With the consent of the interviewee, the interviews were taped and later transcribed on the questionnaires. Note taking was done together with the recording. At the end of the day, a brief report on each of the respondents was made regarding any observations that could be of use in the discussion of the results.

3.3.2 Data collection in Nairobi

Selection of sampling units was done as to capture the socio-economic differentials in fertility. Interviewees were selected from high, medium and low socio-economic groups. The residential places were used to select respondents from these groups. A sample of thirty- three respondents from each of these socio-economic groups was taken. The sample comprised at least six respondents from each of the five ethnic groups. This was in order to capture the cultural differentials in fertility.

The areas chosen for the study were Lavington and Loresho for the high-income group, Komarock, South B and South C for the middle income, and Korogocho and Dandora for the low income. A reconnaissance visit was done before the research. This was to establish the households with the required characteristics. Appointments were then made with the mothers

of the households and the interviews conducted at the scheduled times. The interview procedure was the same as the one used in Kericho district. Selection of the two study areas helped to get data on both the rural and urban socio-economic and cultural differentials in fertility. It also provided for comparison between the people of the different ethnic groups in the urban and rural area.

3.4 TECHNIQUES OF DATA ANALYSIS

Descriptive analysis was applied in the evaluation of the Family Planning Programme of Kenya. Data obtained from the different sources was used for this analysis. Descriptive analysis was also used in discussing the results obtained from the statistical analysis. Information collected using the questionnaires was coded and analysed using the Statistical Package for Social Sciences (SPSS). Summaries of frequencies and percentages were given. Correlation analysis was done between the different variables and fertility. The data were then subjected to Principal Component Analysis (PCA) and stepwise regression analysis.

3.4.1 Principal Component Analysis

Fertility is affected by many interrelated socio-economic and cultural factors. The underlying factors were identified using the Principal Component Analysis. PCA in geography is important in identification of groups of related variables. These include overlapping groups, which occur when variables have high loadings on more than one component. This analysis helps in extraction of components, which account for most of the variation among the scores on a set of variables at each stage.

Extraction of the principal components involves converting the values in the matrix into correlations. The correlations are then summed up for each variable to determine how well it is correlated with all the others. The correlations between the variables and the principal components are called loadings. They are interpreted in the same way as the product moment correlation coefficient (r). The squares of the loadings indicate the proportion of the variance accounted for by the components, which are called the *Eigen* values. They are calculated as:

$$_i = {}^{n}L_{ij}^{2}$$

Where, L_{ij} is the loading for variable j on component i and $_i$ is the *Eigen* value for, component

i.

The *Eigen* value must be related to the total variance in the correlation matrix. A matrix of correlations among variables is composed. . There is a potential for the component to account for all the variances. If the component did account for all the variance, then all of the coefficients in the matrix would be +1.0 or - 1.0. If the *Eigen* value is expressed as a ratio of n, we have the percentage of the variance in the set of variables, which is correlated with component one. This is referred to as the percentage of trace.

The second component is extracted by subtracting from the original correlation matrix all the proportions of the inter correlations which are a function of the correlation of the individual variable with the component. The last value is the correlation between x_1 and x_2 once the influence of component one has been removed and it is equivalent of partial correlation $r_{12.1}$. Having extracted the first component, a residual correlation matrix containing all the values of $r_{ij} = (L_{1i})\ (L_{ij})$ is formed where j and I are variables. These are the correlations between the variables once the effect of the first component has been removed. The principal component is then extracted from this matrix of partial correlation coefficients to form the second component of the total analysis.

The method of Principal Component Analysis with varimax rotation groups variables together according to their importance in terms of the dependant variable. This is in order to provide the extraction of the Eigen values. It is usual to extract and interpret Eigen values that contribute at least an amount equal to the mean of all Eigen values. To determine which of the principal components have the greatest impact on fertility, factor analysis was applied. Factor analysis is a technique for representing the relationship among a set of variables in terms of a smaller number of underlying hypothetical variables. It provides a simpler and more easily grasped framework for understanding the network of relationships among those variables (Keeves, 1988).

In factor analysis, only the largest components in terms of the *Eigen* values are of interest. Successful component analysis indicates that each variable adds some unique elements to its spatial distribution but that the general component dominates. The larger the loading, the more important the variable is in the interpretation of the component. Results of the Principal

Component Analysis for factor analysis are discussed in chapter four.

3.4.2 Stepwise Regression Analysis

Stepwise regression provides a means of choosing independent variables, which give the best prediction possible for the dependent variable with the fewest independent variables. The method is used where there are a large number of regressors. It is a useful device to help sort out the relative importance of the regressors. Where there is no priori specification of entering the regressors, the most important regressors are entered using the sequence that will make R^2 rise as quickly as possible (Wonnacolt & Wonnacolt, 1979).

In this study, the variables were classified under demographic, socio-economic, cultural factors. Stepwise regression was then run separately for Nairobi and Kericho to determine the most significant variables responsible for the explanation of fertility. The first step was to choose the socio-economic and cultural independent variables that had the highest simple correlation with fertility. The next independent variable to be added was the one that contributed most to the unexplained variation in the dependent variable in conjunction with the first variable. The procedure was terminated at any stage when addition of further variables brought no significant increase in the proportion of variance in the dependent variables hence eliminating the less important variables in explaining fertility.

In the first step of the stepwise regression analysis, the value of beta means that if the variable being measured increased by 10%, the number of the dependent variable would be expected to rise to the value indicated. In this first step, the other independent variables are controlled. In the next step, R^2 simply means that the first variable and the one being tested jointly account for the R^2 value of the variable in question. The combined effects of the two variables on the dependent variable may reduce the B and Beta coefficients. Negative sign of the regression coefficient denotes a change of influence on the dependent variable. Very small and negative coefficients of variables in subsequent steps show their insignificant impact on the dependent variable (Kisovi, 1984).

CHAPTER FOUR

4.0 RESULTS

This chapter presents and discusses the results of the data analysis. Specifically, a descriptive analysis is given to compare the socio-economic and cultural factors that influence fertility in the two study areas. Correlations between fertility and demographic, socio-economic and cultural variables are presented. Results of the Principal Component Analysis and stepwise regression analysis are also presented.

4.1 DESCRIPTIVE ANALYSIS OF DIFFERENT VARIABLES FOR THE CITY OF NAIROBI AND KERICHO DISTRICT

This section compares the responses to the questionnaire items in Nairobi and Kericho. It covers the third objective of the study. Appendix four gives a summary of the comparison of variables investigated in Nairobi and Kericho.

Age and Marital status

Age at first marriage and age at first birth were considerably lower in Kericho compared to Nairobi. Forty six percent of women got married in the 15 to 19 year age group in Kericho compared to only fifteen percent in Nairobi. Fifty four percent of the women in Kericho had their first birth in the 15 - 19 age group; compared to sixteen percent in Nairobi. Sixty one percent of the births and fifty eight percent of the marriages in Nairobi took place in the 20 – 24 age group.

Nineteen percent of women interviewed in Nairobi got married in the 25 – 29 year age group compared to only 7.8 % in Kericho. Twenty one percent of the women in Nairobi got their first child in that age group compared to 9.7 % in Kericho. In both places, most women were married or had a child by the age of thirty.

Eighty three percent of the women interviewed in Nairobi were married. In Kericho, the proportion was 79.6 %. More women were widowed in Kericho, 12.6 %, than in Nairobi, 5.1 %. The higher proportion of married women in Nairobi was unexpected. Women who were in

unstable unions mostly considered themselves married. Another explanation can be found in the nature of women interviewed in Kericho especially the non-Kalenjin. Most of these women were migrants who came to trade or work in the tea estates. They were mostly single mothers who came to the district to earn a living.

Level of education

Fifty two percent of the women in Nairobi had received some secondary education compared to only twenty four percent in Kericho. The proportion of women with less than five years of schooling was high at twenty four percent in Kericho compared to only five percent in Nairobi. Fourteen percent of women interviewed in Nairobi had acquired post-secondary education in universities or colleges. Only 5.8 % had reached similar levels in Kericho.

Income, occupation and economic status

Income levels were much higher in Nairobi compared to Kericho. Over twenty two percent of respondents in Nairobi earned over 50,000 Kenya shillings per month compared to 3.9 % in Kericho who earned over 20,000. Sixty two percent of respondents in Kericho earned less than 5,000 a month. Forty five percent of the women in Kericho were engaged in agriculture and twenty four percent in small businesses. The rest were either formally employed or simply housewives. In Nairobi, forty four percent were in business. Twenty percent were employed in various sectors and sixteen percent were in the informal sector. Thirteen percent were housewives mainly from the high-income areas. In Nairobi, the interviewees were selected on the bases of their socio-economic status. Twenty five percent were from the high socio-economic group, forty two percent from the middle class and thirty two percent from the low-income areas. This criterion was not applicable in Kericho, as it is very difficult to classify a rural area in to these categories.

Duration of Breast feeding and baby sitting

In Nairobi, thirty nine percent of the women breast-fed their children for about one year. Fifty two percent of the women in Kericho had longer breast-feeding duration of over eighteen

months. Fifty two percent of urban women employed house workers to look after their children. Fifty one percent of the rural women looked after their own children. The problem of getting suitable maids to look after the babies led some of the women in Nairobi to rethink their fertility decisions.

Advice on child rearing

Fifty four percent of urban and fifty three percent of the rural women received some advice on child rearing. Most of the information was on nutrition and health. This question was asked in order to find out if women received any information on family planning from their peers. Very few reported having received such information.

Infant/child mortality

Twenty nine percent of respondents in Kericho reported having lost a child compared to twenty two percent in Nairobi. Twenty two percent of women in Kericho had lost at least two children compared to only seven percent in Nairobi. This shows that infant and child mortality are still high especially in the rural areas. This is another area of consideration to policy makers on population related issues.

Fostering

Proportion of children not living with their parents was ten percent in Nairobi and fifteen percent in Kericho. The main reasons for fostering were economic hardships and death of parents. Forty two percent of respondents in Nairobi and thirty two percent in Kericho were living with their relatives' children. In Nairobi, eighteen percent of the respondents stayed with relatives who were over twenty years old. Most of them were attending post-secondary educational institutions or looking for jobs. This shows that the cost of bringing up children is still highly shared within the extended family.

Work done by children and ideal family size

In Nairobi, forty one percent of the children did homework after school. In Kericho, forty four percent did house work. Only twelve percent studied. In Kericho District, the ideal family size was three or four children whereas in Nairobi it was five or more. This shows that although women in Nairobi had fewer children, they still considered large families as the ideal. Another observation was the high value of children as a source of labour in the rural district.

Desired family size

Desired family size was lower in Kericho. Seventy five percent of women said they wanted two or three children. In Nairobi, twenty nine percent wanted three or four children. Proportion of women who wanted five or more children was 12 % in Nairobi compared to 3.9 % in Kericho. Most of the respondents were not willing to give absolute numbers to this question. Nine percent of women in Nairobi and 3% in Kericho gave non- numeric answers to the question.

Asked to give reasons for their answer, sixty one percent of respondents in Kericho and fifty one percent in Nairobi said the cost of living was very high. Fifteen percent of the respondents in Kericho and seventeen percent in Nairobi said that the cost of education was very high. Twenty five percent of women in Nairobi and 6.8 % in Kericho valued children as blessings. Thirteen percent of women in Kericho and 6.1 % in Nairobi said they wanted many children for fear of child death. This suggests that despite the high cost of living, children are still highly valued in both rural and urban areas.

Attitude towards childless women

Childless women were looked down upon in both Kericho and Nairobi. This was reported in 81.8 % of cases in Nairobi and 65 % in Kericho. A thirty-year old lady in a middle class estate reported being looked down upon by her work mates because she did not have a child. The high proportion of childless women recorded in Nairobi was due to the high age at first birth and first marriage. In Kericho, polygamy was commonly practiced in case of childlessness. The childless woman considered her co-wife's children as her own. Among the Kalenjins, it was usual for a childless woman to "marry" another woman to beget children for her. This supports the argument that children are still very highly valued in both the rural and urban areas in Kenya.

Attitude towards women with many children

Forty six percent of respondents in Nairobi and sixty eight percent in Kericho reported that women with many children were respected. However, it was observed that the trend was beginning to change. Such women were increasingly being regarded as unfortunate and poor. This was reported in 13.1 % of cases in Nairobi and 13.6 % in Kericho. Women who had

many children were considered primitive in 28.3 % of cases in Nairobi and 11.7 % in Kericho.

Decisions on child bearing

Husbands and wives were increasingly making decisions on the number of children they wanted to have. This was recorded by over fifty percent of respondents in both the rural and urban area. In 14.6 % of cases in Kericho, husbands made the decisions alone compared to 9.1 % in Nairobi. Eighteen percent of the women in Nairobi and 11.7 % in Kericho made no decisions at all. They reported that the number of children they had was determined by their economic conditions. Women who had their children through caesarian section reported that their decisions were determined by their health condition. This shows that health and economic conditions were the major determinants of fertility decisions in most women in the areas studied.

Old age security and inheritance of property by women

About fifty percent of urban and fifty five percent of rural respondents hoped to be taken care of by their children in their old age. It was noted that old age security was not a priority to many. Over twenty percent of women from both places said they had never thought of it. The idea of homes for the aged was not a popular one. Only three percent said they wanted to go to such institutions. Pension schemes were popular as a source of support during old age.

Women in both places rarely inherited property. Only 5.8 % of women in Kericho and 8.1 % in Nairobi reported having inherited property from their parents. These women were mainly from the high socio-economic status groups among the Kikuyu and Kalenjin. Unmarried mothers were reported to inherit property especially among the Kikuyu.

Knowledge and attitude towards traditional methods of family planning

Eighty eight percent of urban and sixty two percent of rural women knew of traditional methods of family planning. Breastfeeding and abstinence were the most well known traditional methods. Forty four percent of urban and thirty nine percent of the rural women considered traditional methods still effective. Twenty nine percent of respondents in Nairobi and twenty percent in Kericho considered them outdated. Asked to give reasons for their answers, thirty three percent of respondents in Nairobi and twenty two percent in Kericho said the methods encouraged unfaithfulness. Forty one percent of respondents in Nairobi and 36.9 % in Kericho said that, used properly, they help to space children. Eight percent said the

methods were ineffective because they conceived even when still using them. These results show that traditional methods, especially breastfeeding and abstinence, are still popular among a sizeable proportion of women. Policy makers in population programmes could therefore promote the use of these traditional methods.

Knowledge and attitude towards modern methods of family planning

Virtually all women knew of the modern methods. The pill was the most well known method. Over ninety percent of respondents in Nairobi and eighty five percent in Kericho knew this method. The injection was known by 9.7 % of respondents in Kericho. These women said they preferred the injection because they could use it without their husbands' awareness. Over forty eight percent of urban and 56.3 % of rural women approved of the modern methods. Thirty eight percent of the urban and twenty nine percent of the rural women disapproved of them. About ten percent said they were immoral. Asked to explain their answers, over fifty six percent of cases in Nairobi and seventy percent in Kericho said they had many side effects.

Recommendations from informants

Asked to give recommendations on family planning methods in general, 37.4 % of the respondents in Nairobi preferred natural methods. Eighteen percent wanted more education and eight percent suggested more research into the methods. Of the rural women, 39.8% recommended more education, 8.7 % wanted more research and 13.8 % wanted natural methods.

Most of the women said that they used the modern methods in spite of the many problems they brought them because of the high cost of living. "Many women undergo untold suffering as a result of using these methods but what can we do since we have to space our children," one woman in a middle class estate in Nairobi commented. Users complained of many side effects, of which they were not alerted. Women using coils, for example, complained of excessive bleeding.

The urban women experienced fewer side effects as they went for regular medical check-ups and had a good diet. Rural women, who seldom had access to these services, faced more side effects. Women especially in rural areas need to be educated on the methods. Posters are a

well-known method in the Information, Education and Communication campaign (IEC). Some women interviewed at Kericho municipality complained that such devices give very little information and few of the women visiting family planning clinics read them. Even the radio, which supposedly reaches a greater majority of the people, is not a very reliable tool as few women in the rural areas have time to listen to programmes on radio.

It therefore remains for the medical personnel in the hospitals and clinics to give sufficient information on family planning based on the individual's needs. Side effects are a major issue in artificial family planning. Recipients should, be clearly informed on possible side effects before they adopt any method. More options, for example traditional and natural methods, should be opened for people who cannot use contraceptives, either for health reasons or as a matter of principle.

Family Life Education and teenage pregnancies

Over seventy seven percent of urban and fifty nine percent of rural women had heard of family life education. Fifty two percent of urban and sixty three percent of the rural women approved it. Over forty five percent of cases in Nairobi and sixty five percent in Kericho expressed fears that such education given in a classroom situation would promote promiscuity. Fifteen percent of the urban women said it was the duty of parents to educate their children on such sensitive issues. Many respondents were uncertain about the content of the education. Parents and other interest groups should not be left out in the implementation process of this education. The content of such a subject should also be made public in order to dispense off fears expressed by many that the curriculum aimed at introducing contraceptives to school children. Over 80 % of women in both the rural and urban areas recommended moral education to teenagers as a way of curbing the problem of teenage pregnancies. Legal measures, for example setting a minimum age at marriage, were also suggested as a way of dealing with the problem.

Single mothers

This question was only administered in Nairobi as part of the adjustment done during the study. The major causes of single motherhood were family quarrels (34.3 %), immorality (21.2 %) and ignorance (20.2 %) especially among teenagers. Over forty five percent of

respondents said that the greatest problem faced by single mothers was lack of money to support their children. Other problems faced were psychological (34.3 %) and security, 10.1%. Thirty percent suggested counselling as a solution to the problem.

4.2 COMPARISON OF DATA BASED ON RURAL/URBAN RESIDENCE AND TRIBE

This section also covers the third objective of the study. It gives a descriptive analysis of the demographic, socio-economic and cultural factors that influence fertility in the different ethnic groups in Nairobi and Kericho district.

4.2.1 Comparison between rural and urban Kalenjin

Childlessness was found to be a major cause of polygamy among the Kalenjin community in the rural area. Forty five percent of the women interviewed reported that a second wife was married if the first one was childless. Twenty percent reported that adoption of children was done where a barren woman 'married' another woman to bear children for her. This shows the high value attached to children in the community. Twenty five percent reported that the practice of modern family planning was against their beliefs and advocated the use of natural methods. Thirty percent said that modern methods of family planning had many side effects on them. Fifteen percent gave special reference to the coil, which they claimed brought about cancer. Asked to make recommendations, forty percent said they would like to be educated more on the methods. This suggests that most of the rural women were ignorant about the methods and hence the need for more education.

Among the urban Kalenjin, most of the first marriages and births occurred in the 20-24 year age group. This signifies the high age at first birth and first marriage recorded in Nairobi compared to Kericho. The urban women recorded low desired family size of 2 or 3 children compared to 4 among the rural ones. Short breastfeeding duration of less that one-year was recorded, in 47.3 % of the respondents. This was unlike the other ethnic groups where majority breastfed for at least two years. Son preference was prevalent among the rural and urban women. Over 80% of the interviewees had received some secondary education. This

explains the short breastfeeding duration and the low family size desires.

4.2.2 Comparison between the rural and urban Kisii

Children were found to be highly valued among the rural Kisii. Fifty five percent of the respondents reported that the husband married another wife if one was childless. Forty five percent reported many side effects from the use of modern methods of family planning. They claimed that a woman using modern methods was not able to do hard manual work. This community also placed a high value on sons. This was noted in the question on desired family size where many said that it depended on the number of sons. As a solution to the problem of teenage pregnancies, sixty percent advocated for moral education.

Of the urban Kisii, forty percent of the respondents reported that childlessness led to marriage of a second wife. Twenty percent recommended adoption of natural methods while thirty percent advocated for modern methods. Thirty five percent reported many side effects with the use of modern methods. Fifteen percent of these gave special reference to the coil. Another fifteen percent reported that women who had many sons were respected. Fifty five percent recommended moral education as a way of dealing with teenage pregnancies. Twenty percent of the Kisii in the middle-income group were living with relatives who were over twenty years and looking for jobs or in post-secondary institutions. Ten percent mentioned housing as a major factor determining family size. The middle class women stressed the need for a small family in order to give the children the best education.

4.2.3 Comparison between the rural and urban Luhya

Forty percent of the rural respondents reported that second wives were married if the first one was barren. It was also observed that child deaths were much feared. Many women said they wanted to have many children as a form of insurance against loss through deaths. The Luhya also valued last-born sons whom they said were the best children and "ikongwe's" that is pillars of the household. Forty five percent reported problems with the use of modern methods especially the coil which some claimed to have conceived while still using it.

Among the urban Luhya, most of the births and marriages occurred in the 20-24 and 25-29 age groups. This shows that unlike the rural areas, age at first birth and age at first marriage

were higher. Forty seven percent had received at least some secondary education. Thirty nine percent of the urban Luhya breast-fed for one year. Sixty eight percent desired 2-4 children. Family sizes among the Luhya were high with forty seven percent having more than four children. "To have one child is like to have one eye, one is never a good number!" one interviewee reported. Like in the rural area, male children were valued as carriers of the family name. One woman reported that a man without sons was laughed at in beer parties. Lack of sons was a major cause of polygamy in this community.

Sixty three percent of the urban respondents reported that modern methods of family planning had many side effects. Twenty percent recommended the use of natural methods. Like the urban Kisii, there were a few reported cases of young adults living with their relatives in the middle and high-class areas.

4.2.4 Comparison between the rural and urban Luo

A unique observation among the Luo was that Fifty two percent of those interviewed had lost at least one child. Half of the women interviewed in this group had received between 0 - 4 years of education. Age at first birth and age first marriage were low with sixty two percent of the respondents getting their first child below twenty years and sixty seven percent marrying below that age. Over half of the respondents reported that marriage of a second wife took place if a woman had no children. Male children were also highly valued. Twenty percent of the women said their desired family size was dependent on the number of sons. " Even if one has ten children, without a boy, that family is incomplete," one respondent said. Forty five percent reported having many side effects with modern contraceptives, which they associated with death, sterility and miscarriages.

In Nairobi, thirty seven percent of the women interviewed had lost at least a child. Over fifty percent had received some secondary education and a similar proportion breast fed for at least two years. Desired family size was exceptionally high with nearly fifty percent wanting five or more children. The Luo regarded children as wealth and those with many were honoured. "Women suffer silently as a result of use of contraceptives, no number is too many" one

respondent said. Burial rites were found to be very popular in this community. A childless woman was denied these rites: she was buried outside the homestead with a thorn stuck on her body as a symbol of the pain she had caused to her society for not having children.

4.2.5 Comparison between the rural and urban Kikuyu

Polygamy due to childlessness was reported by twenty five percent of women in the rural district. Twenty percent advocated the use of natural methods while fifteen percent advocated for modern methods. Thirty percent reported side effects with the use of the modern methods. A unique cultural feature influencing fertility in this community was naming system. Many women said they wanted at least four children so that they could name their parents.

Fifteen percent reported living with their grand children. This suggests a high incidence of non-marital fertility in this community. Age at marriage was higher among Kikuyu women living in Nairobi. Sixty eight percent of the respondents married in the 20 - 24 age group unlike in Kericho district where many marriages were recorded in the 15 - 19 year age group. A few cases of marriages after thirty years were reported. Fifty six percent of the first births were recorded in the 20 - 24 year age group. Twenty four percent of the first births were recorded in the 25 - 29 and 30 - 34 age groups. This shows that age at first birth is very high among urban Kikuyu. The level of education was high in Nairobi with a large percentage of women having completed secondary education. Desired number of children was high among low-income women. This can be explained by the traditional naming system as mentioned earlier. Most of the women in the high-income areas declined to answer the question on desired family size.

Fifty percent of the women recommended the use of natural family planning including those who were users of artificial methods. Fifty one percent reported side effects with seventeen percent giving special reference to the coil. Pressure from in-laws to get more children was reported among the middle class who had only two or three children.

Fifty one percent of the respondents reported that unmarried women inherit property from their parents. In the high-income group, thirty percent reported that they inherited property from their parents even if they were married. A similar trend was recorded among the high-

income Kalenjin. Housing problems were reported as a determining factor to the desired family size.

In summary it can be said that, in all the five ethnic groups, childlessness was a major cause of polygamy. Children and especially sons were highly valued in the five groups. A good proportion of women from both the urban and rural area reported having had side effects with the use of modern methods.

Section 4.1and 4.2 have given a descriptive analysis of the demographic, socio-economic and cultural factors which influence fertility in the two study areas. The following section presents the statistical analysis of the factors highlighted in the previous sections. The correlations between fertility and the different independent variables are given. Only those variables with a strong to moderate correlation with fertility are given. Principal Component Analysis and stepwise regression were then carried out using those variables with high correlations. This was done in order to determine the most important factors that influence fertility in each cluster.

4.3 DEMOGRAPHIC, SOCIO-ECONOMIC AND CULTURAL VARIABLES WHICH INFLUENCE FERTILITY IN KERICHO DISTRICT

The first objective of this study was to investigate the socio-economic and cultural factors, which influence fertility. The second objective was to determine the ones that have the greatest explanatory power on fertility. The first objective was achieved by computing the correlation coefficients between fertility and all other variables hypothesized in the study. The correlations presented in this section were significant at the 0.05 significance level. The second objective was achieved by carrying out the Principal Component Analysis and stepwise regression analysis.

Table 4.1 shows the correlations between the total number of children per woman (dependent variable) and the different variables by cluster for Kericho district.

Table 4.1 Correlation between fertility and different variables by cluster for Kericho district

Variable	Correlation
Demographic variables	
Age (V1)	0.436
Age at first marriage (V2)	-0.314
Age at first birth (V3)	-0.174
Lost children through death (V17)	-0.149
Number of children lost (V18)	-0.105
Socio-economic variables	
Level of education (V6)	-0.184
Work done by children (V23)	
Childcare	0.276
House work	0.263
Farming	0.177
Ideal family size (V24)	0.294
Desired family size (V28)	0.213
Knowledge of modern methods of family planning (V38)	
Knowledge of the pill	-0.148
Natural family planning	0.142
Attitude towards modern methods (V39)	-0.199
Reasons for the attitude (V40)	0.154
Number of people using methods (V42)	-0.15
Cultural Variables	
Advice on child rearing (V15)	0.181
Information given (V16)	0.188
Reasons for fostering children (V20)	0.207
Reasons for adopting children (V22)	-0.141
Attitude towards women with many children (V26)	0.178
Knowledge of traditional methods of family planning (V33)	
Breastfeeding	-0.163

Abstinence	-0.188
Attitude towards traditional methods	0.154

Source: Field data 1998

DISCUSSION

The correlation between fertility and age (V1) was 0.436. This means that the older a woman is, the more children she is likely to have. The correlation between fertility and age at first marriage (V2) was –0.314 and –0.174 between fertility and age at first birth (V3). This shows that raising the age at first birth and age at first marriage lowers a woman's fertility. Early marriages mean that a woman is exposed to childbearing over a longer period of time in her reproductive age. Delaying marriage shortens the period of exposure.

The correlation between fertility and level of education (V6) was –0.184. This means that raising the level of education and improving the social mobility of women in their professions lowers their fertility.

Child death was another factor that influenced fertility. The correlation between fertility and the number of children lost through death was –0.149. Twenty one percent of women interviewed had lost at least two children. These women wanted to have more children for fear of further child deaths.

The correlation between fertility and work done by children (V23) was 0.276 for childcare, 0.263 for housework and 0.177 for farming. Women relied on their children to help in many household chores. For this reason, women in Kericho district wanted to have more children.

Women with more children are more likely to have some of them living with relatives. This can be deduced from the correlation of 0.207 between fertility and reasons for fostering children to relatives. There was a correlation of –0.141 between fertility and reasons for adopting children from relatives. This suggests that members of the extended family share among themselves the high cost of bringing up children by either fostering or adopting.

The correlation between fertility and desired family size (V28) was 0.213. This implies that

the number of children one has is an indication of their desired family size. A correlation of 0.294 was recorded between fertility and ideal family size. This shows that a woman's fertility decision was influenced by what the society considered ideal.

Use of traditional methods of family planning (V34) influences fertility. The correlation between V34 and fertility was –0.163 and -0.188 for breastfeeding and abstinence respectively. Attitude towards traditional methods had a correlation of 0.154. This shows that women in Kericho have a positive attitude towards traditional methods of family planning. The correlation between fertility and modern methods of family planning was -0.199. This shows a negative attitude towards those methods. The correlation between fertility and the number of people using modern methods was –0.15 showing a low user rate. The only modern method with a significant correlation of 0.142 was natural family planning.

4.4 DEMOGRAPHIC, SOCIO-ECONOMIC AND CULTURAL VARIABLES WHICH INFLUENCE FERTILITY IN THE CITY OF NAIROBI

Table 4.2 shows a summary of correlations between fertility and other demographic, socio-economic and cultural variables by cluster for the city of Nairobi.

Table 4.2 Correlation between different variables by cluster for the City of Nairobi

Variable	Correlation
Demographic variables	
Age (V1)	0.624
Age at first marriage (V2)	-0.226
Age at first birth (V3)	-0.241
Lost children through death (V17)	-0.163
Number of children lost (V18)	-0.102
Socio-economic variables	
Respondent's status	-0.217
Level of educational (V6)	-0.615
Work done by children (V23)	

Home work	-0.388
Watch TV	-0.632
Ideal family size (V24)	0.198
Desired family size (V28)	0.237
Modern methods known (V38)	
Injection	0.216
Virginal methods	0.148
Natural methods	0.271
Attitude towards family life education (V45)	0.200
Worries over teenage pregnancies (V47)	-0.171
Cultural variables	
Religion (V10)	-0.220
Information on child rearing (V16)	-0.17
Fostering of children (V19)	-0.109
Adoption of children (V22)	-0.248
Attitude towards women with many children (26)	-0.171
Women inheriting property (V32)	-0.142
Duration of Breastfeeding (V13)	0.203
Traditional methods known (V34)	
Abstinence	0.157
Polygamy	0.177
Attitude towards traditional methods (V35)	-0.222
Reasons for the attitude (V36)	0.204
Decisions on number of children (V27)	0.350

Source: Field data 1998

DISCUSSION

Age and age at first birth had slightly high correlations in Nairobi compared to Kericho. This is an indication that these variables have a greater influence on fertility in the city. Age at first marriage had a higher negative correlation with fertility in Kericho as compared to Nairobi. This suggests lower age at first marriage in the rural district.

On the socio-economic variables, we find that the ideal family size had a lower correlation in Nairobi. This shows that the urban woman does not rely so much on what the society considers ideal in making her fertility decisions. On the other hand, desired family size had a slightly higher correlation in Nairobi compared to Kericho. This suggests that the urban women take into consideration their desired family size when making fertility decisions. The injection, virginal methods and natural family planning had high correlations with fertility in Nairobi. In Kericho, only the pill and natural family planning had high correlations. Socio-economic status, attitude towards family life education and worries over teenage pregnancies had high correlations in Nairobi but not so in Kericho. Socio-economic status was assumed to be the same in Kericho but in Nairobi it was found that more economically well up women had fewer children. Attitude towards family life education and worries over teenage pregnancies recorded very low correlations of -0.012 and 0.066 respectively in Kericho. The significance of these variables in Nairobi can be attributed to exposure to information and leisure activities.

4.5 PRINCIPAL COMPONENT ANALYSIS FOR KERICHO DISTRICT

The variables discussed under sections 4.3 and 4.4, by cluster, were subjected to Principle Component Analysis. The results are presented in this section.

Demographic variables

Four components were extracted. The first two components accounted for seventy percent of the variation in fertility. Table 4.3 shows the Eigen values and table 4.4 shows the contribution of each of the variables to the first two components.

Table 4.3 Principle Component Analysis for demographic variables in Kericho District

Dimension	Eigen value
1	0.4364
2	0.2753
3	0.2050
4	0.1823

Source: Field data 1998

Table 4.4 Contribution of the demographic variables to the first two components

Variable	Row sums	Dimension	
		1	2
Age	1.528	0.127	1.06
Age at first marriage	1.063	0.937	0.032
Age at first birth	1.145	0.98	0.034
Lost children through death	1.14	0.183	0.286
Number lost	1.611	0.111	0.211

Source: Field data 1998

Table 4.4 shows that the most important demographic variables influencing fertility are; age, age at first marriage and age at first birth. These variables accounted for up to 98% of the variation in fertility.

Socio-economic variables

Table 4.5 shows that nine components were extracted. They all accounted for 73% of the variation in fertility.

Table 4.5 Eigen values for the socio-economic variables in Kericho district

Dimension	Eigen value
1	0.1174
2	0.1026
3	0.0987
4	0.0941
5	0.0882
6	0.0795
7	0.0729
8	0.0685
9	0.0633

Table 4.6 Contribution of the socio-economic variables to the first two components

Variable	row sums		Dimension2
Level of education	1.027	0.321	0.145
Work done by children			
House work	0.687	0.136	0.258
Home work	0.419	0.189	0.008
Farming	0.689	0.003	0.194
Desired family size	0.819	0.141	0.224
Knowledge of modern methods			
Pill	0.749	0.105	0.132
Injection	0.321	0.114	0.002
Attitude towards modern methods	2.231	0.374	0.098
Reasons for the attitude	2.289	0.156	0.089

Source: Field data 1998

From the table, education, work done by children, modern methods of family planning namely the pill and injection, desired family size and attitude towards modern methods were the most important socio-economic factors influencing fertility in Kericho district.

Cultural variables

Eight components were extracted. Table 4.7 shows the components extracted and table 4.8 shows the contribution of the first two components.

Table 4.7 Eigen values for the cultural factors in Kericho district

Dimension	Eigen value
1	0.3717
2	0.2949
3	0.2416
4	0.2008
5	0.1952
6	0.1863
7	0.1736
8	0.1637

Source: Field data 1998

Table 4.8 Contribution of the cultural variables to the first two components.

Variable	Row sums	Dimension 1	2
Advice on child rearing	2.634	0.712	0.842
Information given	4.811	0.669	0.248
Fostering children (reasons)	2.223	0.029	0.26
Living with other people's children (reasons)	2.702	0.05	0.164
Attitude towards childless women	6.906	2.949	1.856

Source: Field data 1998

From these results, it can be deduced that the type of advice given on child rearing is important in determining fertility. The costs of bringing up children are highly shared among members of an extended family. This is shown by the high value of fostering and adopting children. From the high value of the altitude towards childless women, it can be concluded that children are highly valued in the district. This can further be supported by the high value of work done by children as seen under the socio-economic variables.

4.6 PRINCIPAL COMPONENT ANALYSIS FOR THE CITY OF NAIROBI

Demographic variables

Table 4.9 shows and 4.10 show the Eigen values of the demographic variables in Nairobi and their contribution of the variables to the first two components respectively.

Table 4.9 Eigen values for demographic variables in Nairobi

Dimension	Eigen value
1	0.3969
2	0.385
3	0.3059
4	0.1808
5	0.1675

Table 4.10 Contribution of the variables to the first two components

Variable	Row sum	Dimension	
		1	2
Age	1.274	0.043	0.93
Age at first marriage	1.32	0.507	0.113
Age at first birth	1.281	0.542	0.232
Lost children through death	1.001	0.553	0.201
Number lost	0.709	0.394	0.129

Source: Field data 1998

Table 4.10 shows that age at first marriage and first birth are important variables that affect fertility in Nairobi. Unlike in Kericho, these factors account for lower variation in fertility. This can be explained by the already high age at first birth and first marriage existing among women in Nairobi. The values for loss of children through death are much higher in Nairobi compared to Kericho. Although child deaths were higher in Kericho, its impact on fertility decisions was not as strong as in Nairobi because the rural women had many children compared to women in the city. This therefore acts as a form of insurance against child deaths.

Socio-economic variables

Under this set of variables, six components were extracted. These are shown in table 4.11 and their contribution to the first two components is shown in table 4.12.

Table 4.11 Eigen values for the socio-economic factors in Nairobi

Dimension	Eigen value
1	0.2407
2	0.1009
3	0.091
4	0.0793
5	0.0759
6	0.0728

Table 4.12 Contribution of the socio-economic variables in Nairobi

Variable	Row sums	Dimension	
		1	2
Economic status	1.05	0.783	0.059
Level of education	0.933	0.691	0.037
Ideal family size	0.81	0.708	0.012
Desired family size	1.026	0.092	0.632
Work done by children (Home work)	0.692	0.429	0.008
Watching TV	0.542	0.381	0.055
Modern methods Injection	0.581	0.262	0.054
Virginal methods	0.769	0.138	0.082

Source: Field data 1998

The level of education, ideal family size and desired family size account for a much higher variation in fertility in Nairobi compared to Kericho. While children are relied upon to help in household chores in Kericho, those in Nairobi spend their time studying or watching television. The modern methods of family planning, account for much higher variation in Nairobi in comparison to Kericho. This suggests a high rate of use of the methods in Nairobi.

Cultural variables

Table 4.13 Eigen values for cultural variables in Nairobi

Dimension	Eigen values
1	0.3798
2	0.2062
3	0.1839
4	0.1634
5	0.1438
6	0.1227

Table 4.14 Contribution of cultural variables to the first two components in Nairobi

Variable	Row sums	Dimensiion	
		1	2
Religion	2.741	1.354	0.13
Fostering children (Reasons)	2.394	1.95	0.108
Adopting children (Reasons)	0.461	0.012	0.107
Attitude towards women			
Who have many children	1.65	0.388	0.276
Decisions regarding family size	1.83	0.553	0.328

Source: Field data 1998

From the table, the most important cultural variables are attitude towards women with many children and decisions regarding family size. As seen in section 4.4 there was a negative attitude towards women with many children. This greatly affects fertility in the urban area. It can be concluded that women in Nairobi make and follow their fertility decisions. This is further proved by the high correlation of 0.35 between fertility and decisions on family size.

4.7 RESULTS OF STEPWISE REGRESSION ANALYSIS

In order to reduce further the variables highlighted in section 4.6, Stepwise regression was done separately for the demographic, socio-economic and cultural variables in each of the two study areas. Results are presented separately for each category.

4.7.1 Results of Stepwise regression analysis for Kericho district

Demographic factors

Age was the most important factor explaining 12.3 % of the variation in fertility. Age at first marriage was the second most important variable explaining 6 % of the variation. This shows that these two variables are the most important ones in explaining variation in fertility. Results are presented in Table 4.15 and 4.16 respectively.

Table 4.15 Regression equation showing the relationship between Age (V1) and fertility

Variable entered on step number 1----------V1 (Age)

Multiple R = 0.35085

R Square = 0.12310

Adjusted R Square = 0.11336

Standard Error = 2.86025

Analysis of Variance	DF	Sum of Squares	Mean Square
Regression	1	103.36000	103.36000

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
Age (V1)	0.63326	0.178161	0.350854	3.554	0.0006
(Constant)	1.084345	0.815593		1.330	0.1870

Table 4.16 Regression equation showing the relationship between fertility (dependent variable) age (V1) and Age at first marriage (V2)

Variable entered on step number 2----------V2 (Age at first marriage)

Multiple R =0.42753

R Square =0.18278

Adjusted R Square =0.16442

Standard Error =2.77666

Analysis of Variance	DF	Sum of Squares	Mean Squares	F	P
Regression	2	153.47450	76.73725	9.9531	0.001
Residual	89	686.17768	7.70986		

----------Variables in the equation----------

Variable	B	SE B	BETA	T	Sig T
Age	0.676848	0.173798	0.375001	3.895	0.0002
Age at first Marriage	-0.009209	0.395843	-0.245495	-2.550	0.0125
(Constant)	2.533125	0.974575		2.599	0.0109

Socio-economic factors

Among the socio-economic factors, work done by children was selected as the most important variable explaining 41.6 % of the variation in fertility. The value of children in household chores can therefore not be ignored in formulating and implementiong rural based population programmes. Table 4.17 shows the results of this analysis.

Table 4.17 Regression equation showing the relationship between the work done by children and fertility

Variable entered on step number 1----------(V23) Work done by children

Multiple R	=0.64504
R square	=0.41607
Adjusted R Square	=0.35768
Standard Error	=2.00240

Analysis of variance	DF	Sum of Squares	Mean Square	F	P
Regression	1	28.57046	28.57046	7.1255	0.05
Residual	10	40.09620	4.00962		

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
V23	-0.931646	0.349015	-0.645039	-2.669	0.0235
(Constant)	7.936709	1.700887		4.666	0.0009

Cultural factors

Under the cultural variables, attitude towards childless women accounted for 5 % of the variation in fertility. The low percentage of this variable suggests declining force of cultural

values in fertility. However, it highlights further the high value of children among the rural communities. Results are shown in table 4.18.

Table 4.18 Regression equation showing the relationship between fertility and attitude towards childless women

Variable entered on step number 1----------(V25) Attitude towards childless women

Multiple R =0.22366

R Square =0.05002

Adjusted R Square =0.04033

Standard Error = 2.89701

Analysis of Variance	DF	Sum of Squares	Mean Square	F	P
Regression	1	43.30910	43.39266	5.1703	0.05
Residual	98	822.48090	8.3927		

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
Attitude towards Childless women	-0.909473	0.400359	-0.223657	-2.272	0.0253
(Constant)	5.810924	1.011254		5.746	0.0000

4.7.2 Results of Step wise regression analysis for the City of Nairobi

Demographic factors

Age was entered on step one under the demographic factors. It explained 35.1 % of the variation in fertility. Age at first marriage was the second most important variable explaining 7.8 % of the variation in fertility. These results are shown in table 4.19 and 4.20 respectively.

Table 4.19 Regression showing the relationship between fertility and age

Variable entered on step number one ----------(V1) Age

Multiple R		=0.59290			
R Square		=0.35153			
Adjusted R Square		=0.34448			
Standard Error		=1.59570			
Analysis of variance	DF	Sum of squares	Mean Square	F	P
Regression	1	126.98784	126.98784	49.9	0.001
Residual	92	234.25684	2.54627		

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
Age	0.602567	0.085325	0.592898	7.062	0.000
(Constant)	0.571724	0474254		1.206	0.2311

Table 4.20 Regression equation showing the relationship between fertility, age and age at first marriage

Variable entered on step number 2----------(V2) Age at first marriage

Multiple R		=0.64757			
R Square		=0.41935			
Adjusted R Square		=0.40658			
Standard Error		=1.51823			
Analysis of variance	DF	Sum of Squares	Mean Square	F	P
Regression	2	151.48649	75.74325	32.79	0.001
Residual	91	209.75819	2.30504		

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
Age	0.623474	0.081436	0.613470	7.656	0.0000
Age at first Marriage	-0.740669	0.227191	-0.261229	-3.260	0.0016
(Constant)	2.022872	0.633831		3.191	0.0019

Socio-economic factors

Knowledge of modern methods of family planning was the most important socio-economic factor explaining 52.6 % of the variation in fertility. Level of education was the second most important factor explaining 25.8 % of the variation. Table 4.21 and 4.22 present the results of these regressions.

Table 4.21 Regression equation showing the relationship between fertility and knowledge of modern methods of family planning

Variable entered on step number 1---------- (V37) Knowledge of modern methods

Multiple R		=0.72560			
R Square		=0.52649			
Adjusted R Square		=0.45885			
Standard Error		=1.06884			
Analysis of variance	DF	Sum of squares	Mean Square	F	P
Regression	1	8.89190	8.89190	7.7835	0.05
Residual	7	7.99699	1.14243		

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
V38	-0.490964	0.175981	-0.725599	2.790	8.89190
(Constant)	6.780120	1.095867		6.187	0.0005

Table 4.22 Regression equation showing the relationship between fertility, knowledge of modern methods and level of education

Variable entered on step number 2---------- (V6) level of education

Multiple R		=0.88594			
R Square		=0.78488			
Adjusted R square		=0.71318			
Standard Error		=0.77815			
Analysis of Variance	DF	Sum of squares	Mean Square	F	P
Regression	2	13.25578	6.62789	10.9458	0.01
Residual	6	3.63311	0.60552		

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
Education level	1.167451	0.434877	0.708616	2.685	0.0363
Methods known	-0.825024	0.178604	-1.219308	-4.619	0.0036

(Constant)	4.596425	1.139382	4.034	0.0068

Cultural variables

Under the cultural variables, decisions regarding number of children were entered on step one and explained 12.9% of the variation in fertility. Reasons for the attitude towards family life education were entered as the second most important variable explaining 7 % of the variation. Results are shown in table 4.23 and 4.24.

Table 4.23 Regression equation showing the relationship between fertility and decisions regarding number of children

Variable entered on step number 1----------(V27) Decisions regarding number of children Multiple R =0.36050

R Square =0.12996

Adjusted R Square =0.11935

Standard Error =1.87591

Analysis of variance	DF	Sum of Squares	Mean Square	F	P
Regression	1	43.10448	43.10448	12.249	0.001
Residual	82	288.56219	3.51905		

----------Variables in the Equation----------

Variable	B	SE B	Beta	T	Sig T
Decisions on Family size	0.567164	0.162054	0.360504	3.500	0.0008
(Constant)	2.131841	0.527492		4.041	0.0001

Table 4.24 Regression equation showing the relationship between fertility, decisions regarding family size and attitude towards family life education

Variable entered on step number 2----------(V46) reasons for attitude towards family life education

Multiple R		=0.44537			
R Square		=0.19836			
Adjusted R Square		=0.17856			
Standard Error		=1.81175			
Analysis of Variance	DF	Sum of Squares	Mean Square	F	P
Regression	2	65.78777	32.89389	10.02	0.001
Residual	81	265.87890	3.28246		

----------Variables in the equation----------

Variable	B	SE B	Beta	T	Sig T
Decisions on family size	0.604727	0.157163	0.384380	3.848	0.0002
Reasons for attitude	0.457581	0.174066	0.262606	2.629	0.0103
(Constant)	0.995042	0.668243		1.489	0.1404

Comparing the results of the stepwise regression analyses for Nairobi and Kericho, it is observed that different socio-economic variables influence fertility in the two places. Whereas the work done by children (explaining 41.6% of variation in fertility) was the most important socio-economic factor explaining fertility in Kericho, knowledge of modern methods of family planning and level of education were the most important socio-economic factors in Nairobi. They explained 52.6% and 25.8% of the variation in fertility respectively. This can be explained by the high level of education and employment opportunities available to women in urban areas. The high value of work done by children implies that women in the rural areas still count on their children to help them in many of the daily chores. This is not the case in urban areas where most families especially in the middle and high-income areas employ house helps to do the work. This study recommends that the population policy programmes focus on increasing the quality of life and education for all women. This requires a social development approach towards population issues.

Although the same demographic factors influence fertility in the two areas, the degree differs. While age explains 35.1% of the variation in Nairobi, it explains only 12.3% in Kericho. Age

at first marriage explains 7.8% in Nairobi and 6% in Kericho. A suitable policy implication would be to rise the minimum age at marriage through proper legislation.

Cultural factors influencing fertility differ in the two areas. Decision regarding the number of children was the most important cultural factor in Nairobi explaining 13% of the variation in fertility. On the other hand, attitude towards childless women was the most important cultural factor in Kericho explaining 5% of the variation in fertility. This shows that the individual decisions on fertility and attitude towards children are still a strong force in fertility. It is therefore important that population programmes aim at helping clients to achieve their fertility desires while still respecting their attitudes towards children.

CONCLUSION

In summary, Principal Component Analysis and stepwise regression analysis have distinguished the important demographic, socio-economic and cultural factors that influence fertility. H_{01}which, states that demographic, socio-economic and cultural factors do not influence fertility, is therefore refuted. The alternative hypothesis that those factors do influence fertility is adopted.

This study has shown that demographic factors influence fertility by a higher degree in Nairobi as compared to Kericho. It has also shown that different socio-economic and cultural factors affect fertility in the two areas. H_{02} which, states that there is no difference between the demographic, socio-economic and cultural factors that influence fertility in Nairobi and Kericho, is therefore refuted. The alternative hypothesis that there is a difference in the demographic, socio-economic and cultural factors that influence fertility in the Nairobi and Kericho district is therefore adopted.

This chapter has investigated and compared the demographic, socio-economic and cultural factors, which influence fertility in the city of Nairobi and Kericho district. It is important to place these factors into the context of the family planning proframme. This forms the subject matter of the next chapter.

CHAPTER FIVE

5.0 FAMILY PLANNING PROGRAMME IN KENYA

This chapter evaluates the Family Planning Programme of Kenya focusing on its achievements and areas of possible improvements. It covers the fourth objective of the study. Specifically, it examines the place of socio-economic and cultural factors in the Family Planning Programme.

5.1 HISTORICAL DEVELOPMENT

The first census in Kenya was conducted in 1948 by the colonial government. The total population was 5.5 million and the annual growth rate was 2.5 %. Alarmed by these results, the colonial government encouraged private medical practitioners to provide voluntary family planning services. Subsequently, family planning associations were formed in Nairobi and Mombasa. These two associations combined forces in 1957 to form the Family Planning Association of Kenya (FPAK), which became the first association in tropical Africa to be affiliated to the International Planned Parenthood Federation (IPPF). The association aimed at initiating efforts to create awareness and provide modern contraceptive services.

Other population censuses were conducted in 1962 and 1969. The population increased from 8 million in 1962 to 11 million in 1969. The implications of the 1969 census led the government to draft a five - year family planning plan for the period between 1975-1979. The plan aimed at:

- Providing opportunities and facilities for encouraging the country's efforts to control its population growth.
- Reducing the rate of population growth while enhancing health and welfare of all Kenyans.
- Improving training and better deployment of manpower.
- Reconstructing and expanding rural facilities, network and systems.
- Providing a highly visible and well -supported institutional infrastructure for administering an expanded family planning, maternal and child health programme (Sozi, 1980).

A national programme was launched in 1967 with the developmental goal of improving the socio-economic conditions of the Kenyan families. Its broad demographic goal was to lower the rate of population growth to a balanced structure by the turn of the century (Khasiani 1988). These were to be accomplished through information, education, motivation and service delivery.

The effectiveness of a programme depends on its administrative capacity and the target population chosen. A viable population programme must also be consistent with existing socio-economic policies. At the time of its formation, Kenya's national Family Planning Programme lacked specified demographic targets and socio-economic objectives. It also lacked adequate budget and separate administrative structure to plan and operate it.

Kenya's Family Planning Programme became merely another part of the ministry of health's maternal and child health clinic rather than one of fertility control. The MCH/FP programmes were expected to improve the health and welfare of mothers and children and were not specifically designed to lower the birth rates. The assumption was that many women tended to have many children for fear of infant/child deaths. Higher survival of children was thought to be a motivation towards lowering fertility.

Although the government formulated and legitimized the policy, the programme relied heavily on donors who contributed seventy five percent of the budget. In the 1974 - 1978 development plan, the general aims of the Family Planning Programme were stated more explicitly and specific demographic targets outlined.

5.2 AIMS AND OBJECTIVES OF THE FAMILY PLANNING PROGRAMME

The specific aims and objectives were to:

- Promote the stability of marriage.
- Enhance the general appreciation of the importance of the family as a basic social unit.
- Offer guidance to men and women with respect to courtship, marriage, parenthood, family planning and childcare.
- Enhance the quality and happiness of family life in general.

- ❖ Disseminate knowledge and information about scientific contraception and spacing of children.
- ❖ Establish clinics for dispensing medical and clinical services with respect to contraception, sterility, impotence and fertility.
- ❖ Carry out, sponsor or finance research into knowledge and ideas concerning population growth, childcare, divorce, sociology of marriage and the legal, economic, moral and psychological benefits and problems of living in families.
- ❖ Cooperate with any other organization, person, authority or power to further any of the aims of the association.
- ❖ Enlist into the service of the association, on a paid or voluntary basis, men and women to work towards the achievement of the said objectives and to give the necessary training, advice and encouragement.
- ❖ Advice and consult with the government officials on all matters pertaining to family law and family life.
- ❖ Acquire such property by purchase, grant or gift and to accept such as may be necessary to carry out the objectives of the association. (Family planning Association of Kenya: Services and Provisions n.d. unknown author).

5.3 TARGETS MADE

The programme planned to reduce the annual rate of increase from an estimated 3.3 % in 1975 to 3.0 % in 1979 and to reduce it further to 2.0 % by the year 2000. This was not achieved as the population growth rate rose to 4.1 % in 1979. It was estimated that the population growth rate would be about 2.5 % by the year 2000. The 1998 World Population Data Sheet recorded a growth rate of 2.0 %. While this rate is far below the projected rate, it cannot be solely attributed to success of the Family Planning Programme. There is need to carry out research to determine other causes of these declines.

By 1978, there were clinics and family health field educators through out the country. Between 1979 and 1983, plans to further increase the number of service delivery points and family health field educators were made. While there was a high awareness and desire for family planning, there was a low user rate. In response to this, the government decided to use all possible outlets. Major private companies have been encouraged to use their health facilities and to provide family planning services.

the public sector (Kim et.al. 1998).

5.6 CURRENT STATUS OF THE FAMILY PLANNING PROGRAMME IN KENYA

To provide the clinical and motivational services as well as to disseminate family planning and population information, the ministry of health coordinates with voluntary church and other NGO's. The health component of clinical services involves providing treatment for women's infertility problems and children diseases. Family planning component includes offering contraceptives to those requesting them. The division of family health of the ministry of health provides services through a network of MCH/FP in government hospitals, health centers and clinics. It has the overall responsibility for national family planning services, management information system, statistics and logistics. It sponsors radio programmes, organizes training of health personnel and produces materials for such.

The Programme also has an inter-agency information, education and communication (IEC) component. This was established to inform a wide range of Kenyan audience regarding population and family planning activities. Various studies have pointed to the need for more intensified IEC programme to create an increase in demand for and the use of family planning to the level required for an impact on fertility (Khasiani, 1988). This study found out that although many women knew different methods of family planning, they lacked relevant information on the methods. This causes many side effects to the users. There is need to provide all the necessary information to users without the fear that such would discourage them.

Knowledge of all the existing methods is not necessary. What matters most is to have relevant information suited to ones health and family size desires. Since 1979, family planning has been offered to all those who need them irrespective of age and marital status. Demand created by this type of supply brings more demographic and health problems. It leads to a higher fertility due to non-marital fertility. Creating increased demand for some methods can bring about serious demographic consequences. Today, the battle is not only against unwanted fertility. Even more serious is a non-curable and highly infectious disease, AIDS. This may have serious repercussions on the age structure of the population, dependency ratio and increased

expenditure in taking care of terminally ill patients not to mention the orphans left behind by deceased parents.

Various government ministries and departments are involved in training programmes and IEC activities in support of population education and family planning. These include the ministry of culture and social services, ministry of agriculture, the Kenya Institute of Mass Communication, Kenya Institute of Education and the Institute of Administration (Muganzi and Takona 1994).

NGO's play a major role in providing family planning services through a variety of hospitals, clinics, mobile clinics, Community based distribution and private sector family planning programmes. The KDHS of 1989 reported that NGO sources provided almost one third of all family planning services in the country.

5.6.1 Shortcomings in the distribution of services

A study by Kim et. al. (1998) revealed that important issues were not tackled in family planning counseling sessions. Table 5.1 shows a summary of results obtained from the study.

Table 5.1 Questions asked in a family planning survey

Question	% of clients asked
Childbearing expectation	7
Reproductive intentions of continuing clients	17
Personal problems associated the use of method	9
Assurances on complains on side effects	69
Offered options to switch method	50
Dismissed concern as unimportant	14
Did little in helping clients assess their choice	

Source: Derived from Kim et.al. 1998

Questions on childbearing expectations were asked in only 7% of the sessions. Reproductive intentions of continuing clients were asked in 17 % of cases. This shows that the principle of

informed choice where clients are helped to choose methods that best suits their needs was not followed. The study also found out that providers seldom tailored their discussion of contraceptive methods to their client's reproductive intentions, personal circumstances or health risks. A woman's right to make the final decision as to what method to use was emphasized at the expense of assisting them in fully weighing alternatives and ascertaining that they understood completely the personal implications of their choices. This shows that clients did not make informed choices, as they did not get sufficient information and adequate advice. They did not usually understand how the information offered by providers, related to their own needs.

Questions about personal problems associated with use were asked in only 9 % of the sessions. Other health risks were rarely discussed. Providers most frequently emphasized information about how methods are used, focussing on one important benefit. They rarely discussed how a method works or possible side effects or warning signals that require attention. They were afraid that too much negative information would scare away clients. Denying clients the right to get correct information on such an important health issue is indeed a great injustice that family planning is doing to women. It is no wonder then that many respondents in this study (58 % in Nairobi and 72 % in Kericho) reported experiencing side effects as a result of using the different methods.

In sixty nine percent of sessions with continuing clients who had complains about side effects, providers re-assured the women that the problem was not dangerous. In fifty percent of these sessions, they offered them the options of switching and in fourteen percent they dismissed the clients concerns as unimportant and simply offered supplies without providing reassurance or the option of switching.

The study by Kim et. al. (1998) also revealed that in seventy eight percent of sessions, providers did little to help new clients assess their choice of method beyond screening for medical eligibility. In fifty percent of the sessions with new clients, providers accepted their decision without question or comment. They insisted that clients take responsibility. Providers did not counsel them on the relative advantages and disadvantages of the methods they chose.

There was also little discussion of the client's pre- existing knowledge and personal circumstances. Personal issues such as discomfort, husband's attitude and inconvenience are as important for ones satisfaction as technical issues like effectiveness and safety. More often than not, a woman's decision ended up not being based on an accurate understanding of the method. Most women chose one method often based on the attitudes and advice of their spouses or peers rather than information about the method itself. Husbands had a greater influence on methods chosen. Twenty eight percent of respondents opted for a method they thought their husbands would approve or which they could hide from their husbands.

In view of the fore going discussion, it is clear that clients did not get adequate and relevant information and education on family planning and their personal concerns were disregarded. The IEC campaign should focus on filling this gap by giving clients adequate and relevant information. Women in Kenya considered counseling on side effects and alternative methods to be key elements of good quality care. They were dissatisfied if providers refused to assist them with selecting a new method when they complained of disagreeable side effects. Most women visiting MCH/FP clinics received no family planning education and counseling (Kenya 1989c, Kim et.al. 1998).

The Family Planning Programme also has serious problems with equipment, supplies, training, supervision and IEC. These problems lower the quality of care and effectively prevent women from obtaining services. In Nairobi, working sterilizes were not available in 39 % of the 46 clinics studied by Kim (1998). There was a shortage of staff trained for IUD insertion. This could explain why, in this study, many women reported serious problems with the use of the coil.

5.7 THE NATIONAL COUNCIL FOR POPULATION AND DEVELOPMENT (NCPD)

This was set up in 1982 to coordinate all activities relating to family planning services and population information. It is also charged with the responsibility of setting population policy guidelines. The sessional paper number four of 1984 set up the population policy guidelines in

which the goals of population reduction and targets were set. The goals of the policy were to:

- Reduce infant and child mortality.
- Improve status of women.
- Encourage Kenyans to have small families.
- Motivate men to adopt and practice family planning.
- Educate and supply contraceptives.

The mandate of NCPD has been to spearhead and create an enabling environment in which population activities can expand and thrive in this country. It coordinates a number of NGO's and government ministries. It also works with the Population Studies Research Institute (PSRI) of the University of Nairobi, the Lake Basin Development Authority (LBDA), Nairobi City Council and the Family Planning Private Sector of Kenya (FPPS). At the district level, NCPD coordinates with the district population officers. These officers are charged with the role of coordinating and initiating population programmes at the district level as well as coordinating IEC and Community Based Distribution (CBD) activities. They are expected to develop capacity for data collection, collation and analysis as well as monitoring and evaluation of projects (NCPD, 1991). The programme strategy is to expand education and family planning services and decentralize the activities.

5.7.1 Problems facing NCPD

According to the NCPD programme strategy of 1991, the problems facing NCPD include:

- Lack of experienced, professionally creditable staff in research, management of information systems, evaluation and training.
- Bureaucratic, hierarchical and rigid organizational structure of the government's ministries. This delays decision-making and often frustrates the implementing agencies. It also lacks the ability to assist implementing agencies to demarcate their responsibility in order to reduce overlap and promote efficiency.
- Lack of the necessary technical assistance to monitor and evaluate the activities of implementing agencies.

- Lack of a legal mandate to authorize and call on other government departments to implement the programme.
- High staff turnover leading to lack of continuity.

To solve these problems, the NCPD strategy proposed that the council's training should be institutionalized to ensure quality, consistency and relevance to population and development. NCPD should also conduct research to evaluate the various NGO'S and government ministries involved in family planning. It should also exercise flexibility, innovation and ability to anticipate both felt and current need for family planning.

5.8 THE PLACE OF SOCIO-ECONOMIC AND CULTURAL FACTORS IN THE FAMILY PLANNING PROGRAMME

The success of any family planning programme depends on how well it fits into cultural, religious and economic conditions of the people in question. There are deeply rooted and persistent elements of culture that influence family planning. These should be properly understood to determine the policy directions to take. The programmes should be adapted to the cultural reality of each group and implemented with regard to local readiness and conditions. Family planning should help couples realize their fertility objectives based on these elements. Family planning can make use of already existing cultural practices and beliefs to limit fertility. Well known traditional methods such as breastfeeding and abstinence should be exploited.

Periodic abstinence, when used scientifically, can bring about a significant impact on fertility. Many women interviewed in this study recommended these traditional methods because they do not have side effects. Programmes to encourage breastfeeding should be designed through the media. These could emphasize on the role of breastfeeding not only for the health of the baby but also as a method of spacing. In rural areas, where many women work within the household, it can be very effective because they can practice continuous breastfeeding, which helps in postponing ovulation.

Family planning touches on a sensitive area of human sexuality. This can be exemplified by the attempts to introduce family life education in schools. This has been associated with introduction of family planning devices to school going children thus conflicting with peoples'

cultures. Traditionally, sex education was left to grand parents and other members of the extended family. Unfortunately, these institutions are disappearing. However, other institutions are coming up to replace them. It was noted in the study that women who had their daughters involved in youth activities such as sports clubs, theatre and church groups did not worry much about teenage pregnancies. Institutions such as these should be supported and encouraged to educate young people on morality and sexuality. Parents should also adapt to the changing world by taking up the responsibility to educate their children on morality. Family planning in Kenya focuses on improving accessibility, availability and quality of services at the expense of peoples' values. The programme is insensitive to women's social reality. It is important to consider that a woman who presents herself to a family planning clinic is not just a physical body that has to be protected against pregnancy, physical side effects and complications. She is a social entity who will go back home and live in a nuclear relationship or an extended family (African Alternatives, 1994). For many women, contraceptives go against their religious, cultural and moral beliefs. Users, especially in rural areas are looked down upon as people whose morals are questionable. These issues should not, be ignored by the Family Planning Programme designers.

Contraceptives, depending on the point in the menstrual cycle at which they are used can either, prevent or delay ovulation, prevent fertilization or the implantation of a fertilized egg in the wall of the uterus. Today, there are emergency contraceptives that prevent implantation of a fertilized egg. These contraceptives cause abortion. This raises a moral question regarding contraceptive use. Due to this, no American manufacturers have sought approval for its product as an emergency contraceptive (APAC, 1998).

It is also worth noting that creating a high demand for family planning services is not viable in the current state of the country's economy. The government is not able to provide even the basic health services as evidenced in the cost sharing in government health facilities. The issue of disproportionately high allocation of funds to population activities raises serious questions on how genuine donor support to population issues is. Some intellectuals view family planning activities as foreign means to perpetuate colonialism and imperialism. The World Bank report of 1990, for example, viewed population as its highest priority in Africa. In a continent faced by many social and economic problems, there is a greater need for more

resources to be directed towards these more pressing needs.

The ICPD of 1994 estimated that providing a reproductive health package for developing countries would cost 17 billion annually rising to 21.7 billion by the year 2015. About $^{2}/_{3}$ of these costs will have to come from domestic resources. Will the developing countries be able to meet this requirement? If so, will they provide them to the detriment of other basic health facilities? Research is crucial in helping governments to come up with effective, culturally sensitive and economically viable approaches to face family planning issues.

Kenya pursues a supply led strategy, where the government is given substantial support by bilateral and multilateral aid and funding agencies to develop its Family Planning Programme. The role of the World Bank in promoting and facilitating direct policies of contraceptive provision and delivery as part of its broader lending strategy to Kenya is quite evident in its successive reports.

The NCPD should start articulating the development end of its objectives by integrating population issues with development. It can borrow from the Chogoria mission hospital in eastern Kenya, which started off by uplifting the living standards of the people (Bauni, 1990). Institutionalization of family planning requires NCPD to be restructured so that it can be more responsive to the needs of the local people.

Poverty alleviation strategies especially for women should then be given priority to fertility reduction. Maternal and child health programmes should have the priority in resource allocation as opposed to provision of contraceptives. It is the higher expectation of childhood survival and high economic standards that lead to a rising demand for smaller families and not contraceptive supply. Central province, for example, has experienced substantial reductions in IMR and childhood mortality and a sustained reduction in fertility. Communities with high infant and child mortality, on the other hand, still have large families.

There is need to reconsider the "development is the best contraceptive" approach to the population problem. This was a concept developed during the 1974 world population conference in Bucharest. It attempts to pursue the problem of population growth through

better health and education services, more jobs, improving status of women and other indirect measures that deal with population primarily as a development issue (Gould, 1995).

There is a strong reason for arguing a development is the best contraceptive case at the regional scale in Kenya. Fertility trends in Kenya can be explained by the economic differentials. Nairobi is the richest province and has a lower fertility. Western and Nyanza are the poorest with limited commercial development. The increasing demographic divergence which parallels increasing economic divergence among the provinces suggest that provincial patterns and rates of fertility decline are related to structural conditions within each region (Gould, 1991). Kenya's population policies have favoured the contraception hypothesis over the economic change hypothesis. Demographic change cannot be achieved through family planning alone. Moreover, a reduction in population does not guarantee a higher level of development. Slower population growth is only an intermediate goal, which helps to buy time to accumulate resources and train manpower. Sufficient capital skills, managerial know how and technical improvements are more important measures in ameliorating the difficulties of rapid population growth (Agency for International development 1979, World Bank 1984)

Gould (1995) in explaining the fertility decline in Kenya observes that it is ideologically convenient to believe that there is causal and direct relationship between total fertility rate and contraceptive prevalence for it fits with the global pattern. This underpins the justification for the elaboration of the policies. The approach elaborates mainly one proximate determinant of fertility (contraception) as a justification of and means for ensuring the policy objective of fertility reduction.

There is need to know why contraception is being used more. Availability is not in itself sufficient to ensure increased and effective use. This study has shown that economic strain is the major force towards increased use of contraception. The over emphasis on contraception plays down other possible explanations of fertility decline. These might be set in terms of changes in other proximate determinants of fertility notably the increase in age at first birth and age at first marriage.

Another explanation is the increased length of breastfeeding or postpartum abstinence. It can

also be set in the changing socio-economic and behavioural variables that will affect the proximate variables including contraception. Kelly and Nobbe (1990) observe that the weak research base and data vacuum in Kenya has fueled the ideological justification of policy making. Reports from the KDHS show declines in fertility, which could be largely due to methodological deficiencies.

Gould (1995) noted in particular, that there has been a random selection of small clusters in selected provinces. There may be problems of sampling errors with small numbers for many variables. Priority was given to gathering data on fertility and bio-social proximate determinants. The surveys conducted by focussing their attention on these variables were designed to examine the validity of the policies established. They were not designed to shedding light on the dynamics of population change. The data collected were not appropriate to a complete understanding of dynamics of fertility. The surveys were able to identify an unmet demand for smaller families and a demand for contraceptives. The government and donors have used the limited results to justify further development of the supply led strategies.

Data on income and household structure also lack in such surveys. The limited range of data and the selectivity in the way they are used serve to affect the potential strength of the national survey approach. These weaknesses limit the potential usefulness of the surveys as a basis for policy formulation. They cannot identify the range of causes of demographic change.

Brass and Jolly (1993) carried out an extensive and sophisticated demographic analysis of population change in Kenya. They concluded that while they were able to provide further insight into the trends of population change, their analysis was unable to make the same claims for identifying the causes of the changes. Policies have been formulated more from ideological presumptions and preferences than from explicit dependence on systematic policy analysis. Increasing knowledge and use of contraception is the immediate means of securing fertility change. However, for longer sustainability, better health care and increasing female education and a more general concern for the demand side cannot be neglected.

This section has underscored the importance of consideration of socio-economic and cultural factors in a Family Planning Programme. There is need to see these factors not as inhibitors of

the success of family planning. They are indeed a strong force in making the implementation of family planning successful. They also have an added advantage of the improving the living standards of people.

The null hypothesis H_{04} states that the Family Planning Programme has not met its targets and objectives. This hypothesis can be accepted based on the evaluation done in this chapter. Although the demographic goals of the Family Planning Programme have largely been met, the development perspective has not. Moreover, the observed fertility decline over the years cannot solely be success of family planning programme.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

This chapter gives an overview of the research findings based on the objectives of the study. Some recommendations are given and finally, areas for further research outlined.

6.1 OVERVIEW OF RESEARCH FINDINGS

This study set out to examine the socio-economic and cultural factors that have a bearing on fertility. Among the demographic variables examined, the following were found to have a greater influence on fertility in both Nairobi and Kericho district: age, age at first marriage, age at first birth and infant/child mortality.

The socio-economic variables having high correlation with fertility in both study areas were: level of education, work done by children, ideal family size, desired family size, level of education, knowledge of modern methods of family planning and attitude towards them. There were a few variations in the work done by children and modern methods known. In Kericho, work done by children included: childcare, housework and farming. In Nairobi it was mainly homework and watching television. Whereas the pill and natural family planning were the most well known methods in Kericho, in Nairobi the injection and virginal methods were well known.

The cultural variables having high correlations with fertility in Kericho were: advice on childrearing, fostering, adopting, attitude towards women with many children and traditional methods of family planning. In Nairobi, religion, attitude towards women with many children and decisions on number of children were the important factors. In view of this summary, it can be concluded that, socio-economic and cultural factors do have a great influence on fertility in both Nairobi and Kericho.

Principle component analysis and stepwise regression were carried out to determine the variables that have the greatest explanatory value on fertility. The demographic variables were age and age at first marriage both Nairobi and Kericho. Age accounted for 12.3% of the variation in fertility in Kericho and 35.1% in Nairobi. Age at first marriage accounted for 6% and 7.8% in Kericho and Nairobi respectively.

Of the socio-economic variables, work done by children was the most important factor in Kericho accounting for 41.6% of the variation in fertility. In Nairobi knowledge or modern methods of family planning and education were the most important. They accounted for 52.6% and 25.8% of the variation respectively.

In the cultural variables, attitude towards childless women was the only important variable in Kericho accounting for 5% of the variation in fertility. In Nairobi decisions on family size and attitude towards family life education were the important variables explaining 12.9% and 7% of the variation respectively.

Descriptive analysis of the data collected revealed the following observations. Children were more valued in Kericho than in Nairobi. Over forty percent of the respondents in Kericho district reported that childlessness was a major cause of polygamy. High infant and child deaths were recorded among the Luhya and Luo communities in both Nairobi and Kericho. Child death was feared in these two groups and desired family sizes were higher. Son preference was high in all the five ethnic groups.

Economic hardship was found to be one of the major factors influencing women's decision to use modern contraceptives. When asked about their desired family size and childbearing decisions, many women said they were determined by the economic conditions. In spite of the high cost of bringing up children, desired family size was high among women in both the rural and urban area. This was especially so with women in high and medium income groups who had their children either studying or working abroad. With their children in far off countries, these women now wished they had more children.

Children of the middle and high-income groups in the urban area remained dependant on their parents longer than the ones of the rural and low-income urban areas. One woman in a middle class estate complained that she was still living with her thirty-year old son, a lawyer by profession, because he could not afford to rent his own house. This prolonged dependency of children partly explained the low fertility in these two groups of people.

Women in the middle and high-income areas in Nairobi reported getting family planning

services from private gynaecologists. They had close medical follow up hence experienced fewer side effects compared to women in rural and low-income urban areas. Modern methods of family planning are expensive in terms of managing side effects. This is particularly so with the poor women who do not have access to proper health services. More women in Kericho district reported having experienced many side effects with the use of modern methods of family planning. When asked to suggest recommendations on family planning in general, eighteen percent of urban and forty percent of rural women said they wanted to be educated on the different methods. It can therefore be concluded that many women did not receive adequate information of the methods they used.

Nurse tutors at Kenyatta National hospital, interviewed during this study, reported that family planning providers did not clearly inform women about the methods they were adopting. A study by Kim et. al. (1998) revealed that women visiting family planning clinics did not get the relevant information concerning the methods of their choice. As a result, they experienced many side effects and fears. These concerns are not unfounded as certain medical procedures applied in family planning have serious side effects and could actually lead to infertility (African Alternatives, 1994).

Breastfeeding and abstinence were reported as well-known traditional methods of family planning both in Nairobi and Kericho. Thirty seven percent of the respondents in Nairobi and fourteen percent in Kericho advocated for natural methods of family planning. "It is healthy, stress free and cheap. It only takes a couple two or three months to learn these natural methods of family planning," a woman in a middle-income estate reported. Natural family planning should therefore be promoted as an important way of involving men in family planning.

This study also set to evaluate the Family Planning Programme of Kenya. It was found that the programme has been supply oriented rather than demand driven. It has also not adequately met its developmental goal. The aim of a Family Planning Programme is to improve the quality of life hence the need to address the socio-economic factors. A Family Planning Programme should accommodate legitimate moral questions by having within its limits ways and means that cater for all categories of people by taking into consideration the culture and

beliefs of the people in question. The programme should promote the already existing cultural practices.

There is need to broaden the approach of family planning to include and promote other methods apart from the modern contraceptives. This will cater for people whose moral or intellectual convictions are contradicted by the prevailing contraceptive methods. At the bottom line of a population programme should be the improvement of the quality of life. Poverty alleviation strategies should therefore be properly addressed. A reduction in the rate of population growth and consequently, in the number of people does not guarantee an improvement in the quality of life. With more resources a country is capable of supporting an even larger population. Without the resources, even the few people will not be supported.

6.2 RECOMMENDATIONS

This study recommends that the socio-economic and cultural factors be taken into consideration in the design and implementation of the country's Family Planning Programme. Population is a developmental problem. Population programmes should therefore be designed to improve the quality of life through education and provision of health and other social services. Advocates of reproductive rights of women should focus more on increased investment in education and primary health care. Education given should focus on values that do not contradict cultures and beliefs. Primary health care should help bring down infant and maternal mortality.

Demographic factors such as age at first marriage and age at first birth were found to have a great impact on fertility. The population policy should focus on rising these ages through provision of quality education to women. Women with higher levels of education tend to have lower fertility as they spent more time in learning institutions hence delaying marriage and childbirth. Another way of ensuring that these ages are kept high is to have legislation on minimum age of marriage. This could go along way in dealing with the problem of adolescent fertility.

In line with the findings of Kim et. al. (1998) the study recommends that the health and reproductive concerns of women adopting family planning be taken into consideration by the

medical personnel in the distribution centres. They should take time to inform and educate women on the methods they are adopting including their possible side effects.

Many women interviewed in this study, expressed fears that use of contraceptives would lead to infertility especially if used by young girls. There is need for greater investigation on the role of reproductive tract infections in causing infertility. One type of the infection is associated with medical procedures such as abortion and IUD. Research is needed in the area of medical demography to ascertain complains raised by users concerning side effects encountered from the use of modern methods.

Natural methods found favour with a good proportion of women. More focused research on these methods is therefore required. These methods should be promoted as authentic and socially appropriate methods of dealing with family size issues. They are free of charge and they create greater social harmony as they help people practice acceptable social behaviour.

6.3 AVENUES FOR FURTHER RESEARCH

Since the late 1980's, a steady decline in fertility has been recorded. This cannot be attributed to success in family planning alone. There is a need to study other causes of this decline. In this study, it was found that non-marital fertility was on the increase. Research should be done to determine the extent of non-marital fertility in different regions and its impact on the total fertility and future marriages.

Many women interviewed in this study preferred traditional methods of family planning due to their safety. There is need to conduct research into the traditional methods of family planning as they are still popular among a reasonable proportion of the population. (8% of married women using contraception used traditional methods. Kenya Demographic and Health Survey of 1998).

6.4 CONCLUSION

This study concludes that demographic, socio-economic and cultural factors have an important impact on fertility, which have not been adequately addressed by researchers. Individual

interests in reproductive issues have not been given much importance. A lot of emphasis has been placed on supply of contraceptives without due regard to individual needs.

Information availed to users, especially in the public sector, is not adequate to enable them make informed choices. These are some important issues that policy makers could address in order to have a population policy that is in line with the needs of the people.

7.0 BIBLIOGRAPHY

African Alternatives (1993) Africa operations research and technical assistance December 1992 January 1993 No. 5-6

African alternatives (1994) Reproductive Tract Infections December 1994 No.7 - 8

African Population Advisory Committee (APAC) News (1998) Current Issues in Population and Reproductive Health Vol. 1 No. 1 February 1998.

Agency for International Development (1979) Family Planning Programme Effectiveness: Report of a workshop December 1979

Ahlburg D.A. (1994) Independent Inquiry Report into Population and Development A report to the government of the common wealth of Australia

Anzagi S.K. and Bernard (1977) Population Pressure in Rural Kenya Geo-forum Vol.8 Pergamon Press

Arudo O. T. (1993) The Influence of Christianity on Fertility Regulation in Migori Division of Migori District, Unpublished M.A. Thesis Kenyatta University Department of Geography.

Ascadi G.T., Ascadi G.J and Bulatao R.A. (1990) Population Growth and Reproduction in Sub - Saharan Africa: Technical analysis of Fertility and its consequences World Bank Washington DC

Ashford L.S. (1995) New Perspectives on Population: Lessons from Cairo in Population Bulletin Vol. 50 No.1 Population research bureau

Ashraf L. & Stan B. (1994) Husbands and wives communication about family planning and contraceptive use in Kenya in International Family Planning Perspectives Vol. 23 No. 1 March 1994

Asia, Pacific population policy East West center. Programme on Population January 1998 No. 44.

Axim G.W. (1992) Family Organization and fertility limitation in Nepal in Demography Volume 29 No.4 November 1992

Bauni E.K. (1990) The Changing Patterns of the Meru People of the Chogoria Region, Kenya Seminar on Anthropological Studies relevant to the sexual transmission of HIV Denmark

Bauni E.K. (1990) Fertility Decline and Family Planning in Chogoria, Eastern Kenya

Unpublished Ph.D. Thesis University of London

Birdsall N. (1985) Effects of Family Planning Programme on Fertility in Developing Countries in World Population Development Series No. 2 1985

Bogue D.J., Arriaga E. and Anderson D. (1993) Readings in Population Research Methodology Vol. 7 Contraception and Family Planning published for UNPF by Social development center Chicago

Bogue D.J. Normative and Psychic costs of Contraception in Readings in population Research Vol. 7 Contraception and family planning published for UNPF by Social development center Chicago

Bongaarts J. (1981) The Impact on Fertility on Traditional and Changing Child Spacing Practices in Child spacing in Tropical Africa Page H.J. and Lesthaeghe R. Ed. Academy Press

Bongaarts J. Proximate Determinants of exceptionally high fertility in Population and development Review Vol. 13 No. 1 1987

Bongaarts J., Odile F. and Lesthaeghe (1990) in Population Growth and Reproduction in Sub-Saharan Africa Ascadi and Ascadi Ed. World Bank

Brass, W and Jolly, C.L. (Eds) (1993) The Population dynamics of Kenya National Science Foundation, Washington D.C

Caldwell J.C., Orubuloye I.O. and Caldwell P. Fertility decline in Africa: A new type of transition in Population and Development Review Vol. 18 No. 2 1992

Cohen B. (1993) Fertility Levels, differentials and Trends in Demographic Change in Sub-Saharan Africa Foote A., Hill K and Linda M. ed. Panel National Academy Press Washington DC

Crook Nigel (1978) Social norms and Fertility Decline in Population and Development Hawthorn G. Ed. Fran Cass publishers Great Britain

Donnell O. S. (1994) Ancient wisdom in child upbringing in International News Bulletin Vol. III No.11/94 Number 10

Doo sun Kim (1992) Social Demographic Determinants of Fertility in Korea in Fertility Transition, Family Structure and Population Policy Goldschaider Ed. Brown University Studies in Population and Development, West view press

Easterlin R.A. and Crimmans E.M. (1985) The Fertility Revolution University of Chicago Press

Ejiugu (1972) The Kenya Programme Policy and Results in Population Growth and Economic

Development by Ominde S. Ed Heinemann Educational books

Etienne V. (1993) Fertility Transition, Conscious Choice and Numeracy in Demography Vol. 29 No. 4 1993

The family: The true foundation of society in Interpress Vol. III No. 12/94 No. 10 1994

Feedback ICOMP News letter on Management of population programmes Vol. 23 No. 4 1997

Ferguson A.G. (1992) Fertility and Contraceptive Adoption and Discontinuation in Rural Kenya in Studies in Family Planning Vol. 23 No. 4 July/August 1992

Frank L.M. and Susan H.M. (1980) Kenya's record population growth: A dilemma of Development in Population bulletin Vol. 35 No. 3 (1980)

Freedman R. (1987) The Contribution of Social Science Research on Population Policy and Family Planning Effectiveness in Studies in Family Planning Vol.18 No. 2 March/April 1987

Ford T.R. and De Jong ed. (1970) Social Demography Prentice Hall

Gaiti D.M. (1994) Farmer Response to Population Pressure on Land: A case study of Kikuyu Division, Kiambu, Kenya Unpublished Thesis, Kenyatta University Department of Geography

Goddard J. Kirby A. n.d. Concepts and Techniques in Modern Geography No. 7: An Introduction to Factor Analysis University of Newcastle

Gould W. T. S. (1995) Ideology and Data Analysis in African Population Policies: The case of Kenya in Applied Geography Vol. 15 No. 3

Gugulethu G. (1994) A Review of Family Planning in Sub-Saharan Africa African population paper number 2 African population and environment institute

Hammerscorgh C. n.d. Community Determinants of Demographic behaviour in Kenya Population Research Institute 1st report.

Health Transition Review: The cultural, social and behavioural determinants of health Vol.7 No.2

Hensler G.L. (1984) An Introduction to Statistical and Ecological Software in Statistics in the Environmental Sciences Gertz S. M and London M.D. (Editors) American society for testing and materials

Hobcraft J. and Cleland J. (1985) Reproductive Change in Developing Countries: Insights from World Fertility Survey Oxford University Press

Hyden G. (1990) Local Government and Economic Demographic Transition in Rural Africa in Rural Development and Population: Institutions and Policies by McNicoll and Mead Ed. Oxford University Press

Johnson R.J. (1980) Multi-variate Statistical Analysis Longman London

International Union for the Scientific Study of Population African Population Conference (1987) Dakar Senegal Union for African Population Studies Information Bulletin No. 1

International Union for the Scientific Study of Population The Population Policy in Sub-Saharan Africa: Drawing on International Experience Belgium 27th February - 2nd March 1987

Kamaara E. (1994) Some constraints to Family Planning Programmes in Kenyan Urban Centers in Journal of Eastern Africa Research Development Vol. 25

Keeves (1988) Educational Research Methodology and Measurement: An International Handbook Pergamon press.

Kelly. A.C. and Nobbe C.E. (1990) Kenya at the Demographic Turning Point? World Bank Discussion Paper 107, World Bank Washington D.C.

Kenya (1984) Sessional Paper No. 4 Ministry of planning and national development Government printer Nairobi

Kenya (1989a) Kenya Demographic and health survey National Council for Population and Development Ministry of Home affairs and National Heritage

Kenya (1989c) Kenya Situational Analysis Ministry of Planning and National Development

Kenya (1989b) National Development Plan 1989 - 1993 Office of the vice President and Ministry of Planning and National Development, Government printer Nairobi

Kenya (1993) Kenya Demographic and Health Survey NCPD & Central Bureau of Statistics Macro International

Kenya (1994) Kericho District Development Plan 1994 –96 Office of the vice president and Ministry of Planning and National Development, Government Printer Nairobi.

Kenya (1996) Kenya Population Census 1989 Analytical report Vol. IV Fertility and Nuptiality Central Bureau of Statistics

Kenya (1998) Kenya Demographic and Health Survey NCPD & Central Bureau of Statistics Macro International

Kenya (1998) Kericho District Development Plan 1997 - 2001 Office of the vice President and Ministry of Planning and National Development, Government Printer Nairobi

Khasiani A.S. Family Planning in Kenya: Current Impact and Future Prospects in Kenya Population and Development to the year 2000 AD Ominde S.H. (Ed) Heinemann Kenya

Kim Young Mi, Mucheke S. & Kol A. (1998) Informed choice and decision making in Family

Planning Consultancy in Kenya in International Family Planning Perspectives March 1998 Vol. 24 No. 1 Alan Gultmacher Institute

Kisovi L. M. (1984) The Impact of socioeconomic variables on the spatial and structural patterns of rural house holds in Ukambani Unpublished Thesis M.Sc. Thesis Kenyatta University Department of Geography

Kisovi L.M. (1989) Rural Settlement and Population Pressure in Kitui District Unpublished Ph.D. Thesis University of Manitoba

Krystall A. & Scheneller (1987): A guide to Population Activities in Kenya Ford foundation

Mabogunje A.L. (1981) Implications of Change in Child Spacing Practices in Tropical Africa in Child Spacing in Tropical Africa : Traditions and Change by Page H.J., Lesthaeghe R. Ed. Academic Press

Madurga J. R. (1975) Population verses Demography in Catholic Position Papers No. 31

Mati J.K. and Buigutt K.A. Ed. (1980) Population Growth and it's Relevance to Socioeconomic Development Kenya National Academy for advancement of Arts and Sciences

Mburu F.M. (1980) Population Policy and Programme in Kenya: Viability and Effectiveness in Population Growth and it's Relevance to Social Economic development, Mati J.K. and Buigutt K.A. Ed.

McNicoll G. and Mead Ed. (1990) Rural Development and Population : Institutions and Change Oxford University Press

McNicoll G. and Odile F. (1987) An Interpretation of Fertility and Population in Kenya in Population and Development Review Vol. 13 No. 2

Muganzi & Takona (1994) Fertility Decline and demand for family planning in Kenya in Demographic and Health Survey Analysis workshop for 6 African Countries Macro International

Murgor B.K. (1997) The Effects of Reproductive Knowledge and Behaviour among Pregnant and Nursing Adolescents in Eldoret Municipality Unpublished M.A Thesis Kenyatta University Department of Geography

Myrdal G. (1987) On Population Policy in the Underdeveloped World in Population and Development Review Vol. 13 1987 No. 3 September

Nachmias D. & Nachmias F. (1992) Research Methods in Social Sciences Edward Ardold publishers

National Council for Population and Development (1990) Programme Division

National Council for Population and Development (1991) Proposal to Restructure NCPD

National Council for Population and Development Programme Division n.d. Project Activities of Government Ministries and NGO'S

Ndirangu S.W. n.d. National IEC Strategy NCPD

Nie N. H. et. al. (1975) Statistical Package for Social Sciences 2nd Edition McGraw Hill book company.

Ogutu Z.A. (1992) Sustainable Development in sub-Saharan Africa : What are the alternatives in Journal of Eastern African Research and Development Vol. 23 (1993)

Oodie W. (1993) Populate or Perish in International News Bulletin Vol. III No. 41/93 Number 10

Oucho J.O. (1994) The effects of culture, religion and family formulation in Africa in Family Planning and Population Ed Hellevi & Helsinki October 1997

Pontifical Council for the family (1994) Ethical and Pastoral Dimensions of Population Trends in Instrumentum Laboris Pauline publications

Population Crisis in sub-Saharan Africa Who is responsible: An illustrative Analysis of Population Trends in Uganda in Eastern Africa in Social Science Research review Vol. XIII No. 2 June 1997 Published by OSSREA

Population Research Bureau (1998) World Population Data Sheet

Population Research Institute (1991): A Review and analysis of world wide population control activity May/June 1991 Vol.1 No. 3

Ross J.A. and Mauldrin W.P (1988) Berelson on Population Springer Verlag

Sadik N. (1991) Ed. Population Policies and Programmes: Lessons learned from two decades of experience UNFPA New York University Press

Shane B. (1997) Family Planning Saves lives 3rd edition Population Research bureau

Sen G., Germain A. and Chen C. (1994) Population Policies Reconsidered: Health, Empowerment and Rights Harvard Center for Population and Development Studies New York

Simmons G.B. and Simmons R. (1983) On the Institutional Analysis of Population Programmes in Readings in Population Research Methodology vol. 7

Sindiga (1981) European Perceptions as a Factor in Degrading Maasai Ecology Unpublished M.A Thesis

Sindiga (1982) Evolution of Land and Population Problems in Kajiado and Narok, Kenya with an Agenda for further research Paper presented at the department of Geography Seminar series

Sindiga (1988) Population Change among the Maasai of Kenya Proposal submitted to the OSSREA

Smith (1989) Integrating Theory and Research on Institutional Determinants of Fertility in Demography Vol. 26 No. 2 May 1987

Sozi K.M. (1980) Development of Effective Population Policies and Programmes in socioeconomic development in Population Growth and it's relevance to social economic development Mati and Buiggut Ed. National Academy for the Advancement of socio-sciences

Srivastara G.V. and Sharma S. C. Quantitative Techniques for Managerial Decision, Concepts, Illustrations and Problems 2nd Edition New age international publishers limited

Tilakarantne W.M. Economic Change, Social Differentiation and Fertility in Population and Development Hawthorn G. Ed. Fran Cass publishers

The Treasure on family values in International news bulletin Vol. II No. 43/92

UNFPA magazine Populi Vol. 24 No. 2 May/June 1997

Westoff F. C. & Rodriquez G. (1995) The Mass Media and family planning in Kenya in International Perspectives on Family planning Vol. 21 No. 1 March 1995

Wheeler D. Female education, Family Planning, Income and Population: A long run Econometric simulation model in The Effects of Family Planning Programmes in Fertility in the Developing World, World Bank staff working paper no.677, Population Development series No. 2.

Whelan R. (1992) Blessing or curse, 3rd World Population Programmes : Choices in child bearing : when does family planning become population control

Wonnacolt R.J. & Wonnacolt T.H. (1979) Econometrics 2nd Edition John Willey and Sons

World Bank (1986) Population Growth and Policies in Sub-Saharan Africa: A World Bank Policy Study Washington DC

World Bank (1980) World Development Report Washington DC

World Resources Institute (1994) World Resources: A guide to the global environment, Oxford University Press

APPENDIX 1

APPENDIX 1:QUESTIONNAIRE

AREA

Status Urban: High Medium Low (Tick as appropriate)

Rural

RESPONDENT'S PERSONAL DATA

1. How old are you?
2. What is your level of education?
   - No formal schooling
   - Primary level
   - Secondary level
   - College
   - University
3. What ethnic group do you belong to?
   - Kikuyu
   - Luo
   - Luhya
   - Kalenjin
   - Kisii
4. What is your occupation?
   - Agriculture
   - Education
   - Health
   - Business
   - Informal
   - Housewife
   - Others (specify)
5. What is your average income per month?
   - Less than 5000

5000 - 10,0000

10,000 - 20,000

20,000 - 50,000

50,000 - 100,000

100,000+

6. Which religion do you belong to?

Christian - Catholic

Christian - Protestant

Muslim

Others (specify)

7. Are you married?

Yes

No

8. (If married) At what age did you get married?

FERTILITY DATA

9. Do you have any children?

Yes

No

10. (If yes), How many sons and daughters do you have?

Sons

Daughters

11. At what age did you get your first child?

12. On average, how long do you breastfeed your children?

13. Who baby-sits your children?

House workers

Relatives

Older children

Yourself

14. Do you receive any advice on child rearing from older women in your community?

Yes

No

15. (If yes), What is the information all about?

16. Have you lost any children?

Yes

No

17. (If yes), How many?

18. Are some of your young children (below 15 years) staying away from you with relatives or friends?

Yes

No

19. (If yes) Why?

20. Are you staying with young children (below 15 years) belonging to your relatives or friends?

Yes

No

21. (If yes), Why?

22. Do your children do any of the following duties after school?

Childcare

Housework

Farming

Trading

Homework and studying

Watching TV/Video

Others (specify)

23. What is the ideal family size in this area?

24. How are childless women taken in your society?

Looked down upon

Respected

Unfortunate

Happy

Others (specify)

25. How are women with many children taken?

Respected

Fortunate

Unfortunate

Looked down upon

Others (specify)

26. Who decides the number of children you are going to have?

Yourself

Your husband

You and your husband

Relatives

27. If you were to advice a newly married couple, how many children would you recommend for them?

28. Give reasons for your answer in question 27.

Cost of living is very high.

Children are a blessing

Children support their parents

Others (specify)

29. Do you have an old age insurance policy?

Yes

No

30. (If not) Who will look after you in your old age?

Your children

Relatives

The community

The government

Others (specify)

31. Do women in your community inherit property from their parents?

Yes

No

FAMILY PLANNING INFORMATION

32. Do you know of any traditional methods of family planning?

Yes

No

33. (If yes), List the ones you know.

34. What do you think of those methods?

Very effective

Effective

Out dated

Not effective at all

Others (specify)

35. Give reasons for your answer in question 34.

36. Do you know of any modern methods of family planning?

Yes

No

37. (If yes), List the ones you know

38. What do you think of the modern methods?

Very effective

Effective

Have high failure rates

Have many side effects

Immoral

Others (specify)

39. Give reasons for your answer in question 38.

40. Estimate the distance to the nearest family planning clinic in kilometers.

41. Do many women in your area make use of family planning services offered in those clinics?

Yes

No

42. What recommendations would you make regarding family planning methods in general?

43. Have you heard of the family life education?

Yes

No

44. (If yes), What do you think of it?

Very good

Good

Very bad

Bad

Immoral

Others (specify)

45. Give reasons for your answer in question 44.

46. (If one has young daughters), Do you have any worries over your daughters' getting pregnant while they are still young?

Yes

No

47. (If yes), What do you think is the best way of preventing the problem?

Supplying them with contraceptives

Educating them on morals

Imposing legal measures

Others (specify)

NB. (Questions 48 - 50 were administered only in Nairobi).

48. What factors do you think contribute to the incidence of single mothers?

49. What are some of the major problems do you think single mothers face?

50. What do you propose as a solution to this problem?

APPENDIX 2

APPENDIX 2: CORRELATION BETWEEN FERTILITY AND DIFFERENT VARIABLES FOR KERICHO DISTRICT

Demographic variables	
Age	0.436
Marital status	-0.049
Age at first marriage	-0.314
Age at first birth	-0.174
Lost children through death	-0.149
Number lost	-0.105
Socio-economic variables	
Level of education	-0.184
Occupation	-0.056
Average income per month	0.093
Work done by children	
Work 1	0.276
Work 2	0.263
Work 3	0.177
Ideal family size	0.294
Desired family size	0.213
Reasons for desired family size	0.011
Old age insurance	0.114
Knowledge of modern methods	
Method 1	-0.148
Method 2	-0.092
Method 3	0.003
Method 4	0.142
Method 5	0.149
Attitude towards modern methods	-0.199

Reasons for the attitude	0.154
Distance to nearest family planning clinic	0.035
Number of people using methods	-0.15
Recommendations towards methods	0.075
Knowledge of family life education (FLE)	0.105
Attitude towards FLE	-0.012
Reasons for the attitude	0.01
Worries over teenage births	0.066
Solutions to premarital births	-0.094
Duration of breastfeeding	-0.121
Cultural variables	
Tribe	0.112
Religion	-0.028
Person babysitting	0.116
Advice on child rearing	0.181
Information given	0.188
Children fostered to relatives	-0.031
Reasons for fostering	-0.207
Children adopted from relatives	0.026
Reasons for adopting	-0.141
Attitude towards childless women	0.178
Attitude towards women with many children	0.061
Decisions on number of children	0.021
Care in old age	0.067
Women inheriting property	0.052
Knowledge of traditional methods	
Method 1	0.163
Method 2	0.188
Attitude towards traditional method	0.154
Reasons for attitude	0.121

APPENDIX 3

APPENDIX 3: CORRELATION BETWEEN FERTILITY AND DIFFERENT VARIABLES FOR THE CITY OF NAIROBI

Demographic Variables	Correlation
Age	0.624
Marital status	0.006
Age at first marriage	-0.226
Age at first birth	-0.241
Lost children	-0.163
Number lost	-0.162
Socio-economic variables	
Respondent's socio-economic status	-0.217
Level of education	-0.184
Occupation	-0.051
Average monthly income	0.009
Duration of breastfeeding	-0.083
Work done by children	
Work1	-0.313
Work2	-0.388
Work3	-0.632
Ideal family size	0.198
Reasons for desired family size	-0.087
Old age insurance	0.069
Knowledge of modern methods	
Method1	0.113
Method2	0.216
Method3	0.148

Distance to nearest family planning clinic	-0.03
Number of people using methods	0.123
Recommendations on family planning	0.037
Knowledge of family life education (FLE)	-0.116
Attitude towards FLE	0.068
Reasons for the attitude towards FLE	0.200
Worries over teenage pregnancies	0.171
Solutions towards these problem	0.127
Cultural variables	
Religion	0.220
Person doing baby sitting	-0.059
Advice on child rearing	0.117
Information given	-0.17
Children fostered to relatives	0.032
Reasons for fostering	0.169
Adoption of children from relatives	0.248
Reasons for adopting	0.068
Attitude towards childless women	0.111
Attitude towards women with many children	-0.171
Care in old age	0.108
Women inheriting property	0.142
Knowledge of traditional methods	
Method 1	-0.203
Method 2	-0.151
Method 3	0.177
Attitude towards traditional methods	-0.222
Reasons for the attitude	0.204
Attitude towards modern methods	0.066
Reasons for the attitude	-0.073
Solutions to premarital births	0.127
Tribe	-0.038
Decisions on number of children	0.350

APPENDIX 4

APPENDIX 4: FREQUENCIES AND PERCENTAGES OF VARIABLES IN NAIROBI AND KERICHO

VARIABLE	NAIROBI		KERICHO	
Age	Frequency (F)	%	Frequency (F)	%
15 – 19	1	1.0	0	-
20 - 24	5	5.1	18	17.5
25 - 29	22	22.2	20	19.4
30 - 34	13	13.1	27	26.2
35 - 39	17	17.2	18	17.5
40 - 44	15	15.2	8	7.8
45 - 49	26	26.3	12	11.7
Age at first marriage	F	%	F	%
15 - 19	15	15.2	47	45.6
20 - 24	57	57.6	35	34.0
25 - 29	19	19.2	8	7.8
30+	3	3.0	2	1.9
Missing	5		11	
Age at first birth	F	%	F	%
15 - 19	16	16.2	56	54.4
20 - 24	60	60.6	32	31.1
25 - 29	21	21.2	10	9.7
30+	2	2.0	3	2.9
Missing			2	
Level of education	F	%	F	%
0 - 4	1	5.0	25	24.3
5 - 8	4	21.1	44	42.7

8 - 12	21	51.5	25	24.3
12 - 14	51	8.1	2	1.9
14+	8	14.1	6	5.8
Missing	14		1	

Income	F	%	F	%
0 - 5000	23	23.2	64	62.1
5000 - 10000	12	12.1	17	16.5
10000 - 20000	18	18.2	9	8.7
20000 - 50000	11	11.1	4	3.9
50000 - 100000	8	8.1	-	-
100000+	14	14.1		
Declined to state	8	5.1	9	8.7

Marital Status	F	%	F	%
Married	82	82.8	82	79.6
Widowed	5	5.1	13	12.6
Divorced	5	5.1	2	1.9
Separated	2	2.0	2	1.9
Never married	5	5.1	4	3.9

Occupation	F	%	F	%
Agriculture	2	2.0	47	45.6
Education	17	17.2	10	9.7
Business	44	44.4	25	24.3
Health	3	3.0	4	3.9
Informal	16	16.2	13	12.6
House wife	13	13.1	0	-
Unemployed	1	1.0	4	3.9
Retired	2	2.6	0	-

Religion	F	%	F	%
Christian - Catholic	47	47.5	25	24.3
Christian - Protestant	51	51.5	78	75.7
Muslim	1	1.0	0	-

Socio-economic status	F	%	
High	25	25.3	N/A
Medium	42	42.4	
Low	32	32.3	

Tribe	F	%	F	%
Kikuyu	25	25.3	21	20.4
Luo	21	21.2	21	20.4
Luyha	19	19.2	20	19.4
Kisii	15	15.2	20	19.4
Kalenjin	19	19.2	21	20.4

Duration of breastfeeding	F	%	F	%
0 - 6 months	10	10.1	6	5.8
6 - 12 months	29	29.3	13	12.6
12 - 18 months	13	13.1	26	25.2
18 - 24 months	39	39.4	33	32.0
24+	8	8.1	21	20.4

Baby sitting	F	%	F	%
House workers	52	52.0	28	27.2
Relatives	11	11.0	13	12.6
Yourself	36	36.0	6	51.5
Older children	0	5.8	53	

Received advice on child rearing	F	%	F	%
Yes	54	54	58	56.3

No		45	45	43	40.8
Information given	F	%	F		%
Breast feeding	13	13.1	7		6.8
Nutrition	30	30.3	33		32.0
Health	11	11.1	19		18.4
Others	2	2.0	4		1.0
Lost children	F	%	F		%
Yes	22	22	30		29.1
No	77	77	71		68.9
Missing			2		
Number lost	F	%		F	%
1	14	14.1		7	6.8
2	7	7.1		22	21.4
3	1	1.0		7	6.8
4		-		1	1.0
Missing	77			65	
Children staying away from parents		F	%	F	%
Yes		10	10	16	15.5
No		89	89	83	80.6
Missing				4	
Reasons for staying away	F	%	F		%
Education	3	3.0	5		4.9
Economic/financial	3	3.0	8		7.8
Others	4	4.0	3		2.9
Missing	89		87		
Living with other peoples children		F	%	F	%

Yes			42	42.4	33	32.0
No			56	56.6	68	66.0
Missing			1		2	

Reasons for the answer	F	%	F	%
Education	18	18.2	7	6.8
Economic	5	5.1	10	9.7
Orphans	17	17.2	11	10.7
Others	2	2.0	5	4.9

Work done by children	F	%	F	%
Child care		1.0		11.7
House work		33.3		44.7
Farming		4.0		1.9
Trade		3.0		1.9
Home work		41.4		12.6

Ideal family size	F	%	F	%
1	2	2.0	1	1.0
2	4	4.0	8	7.8
3	34	34.3	41	39.8
4	29	29.3	23	22.3
5	17	17.2	6	5.8
6	11	11.1	10	9.7
7	1	1.0	7	6.8
Missing	1		7	

Attitude towards childless women	F	%	F	%
Looked down upon	81	81.8	67	65.6
Fortunate	9	9.1	6	5.8
Unfortunate	1	1.1	7	6.8

Happy	7	7.1	1	1.0
Taken like any other	1	1	21	20.5

Attitude towards women with many children	F	%	F	%
Respected	46	46.5	70	68.0
Fortunate	12	12.1	7	6.8
Unfortunate	14	13.1	14	13.6
Looked down upon	28	28.3	12	11.7

Decisions on Number of children	F	%	F	%
Yourself	19	19.2	22	21.4
Husband	9	9.1	15	14.6
Both of you	51	51.5	54	52.4
No decisions	2	18.2	12	11.7

Desired family size	F	%	F	%
1 or 2	21	21.2	7	6.8
2 or 3	22	22.2	78	75.7
3 or 4	29	29.3	9	8.7
5+	12	12.1	4	3.9
As many as possible	9	9.1	3	2.9
Depends on income	6	6.1	2	1.7

Reasons for the desired size	F	%	F	%
Education costs are high	15	15.2	18	17.5
Children are a blessing	25	25.3	7	6.8
Children support parents	2	2.0	-	-
Cost of living is high	51	51.5	63	61.2
Security in case some die	6	6.1	14	13.6

Have old age insurance	F	%	F	%
Yes	23	23.2	1	1.0

No	76	76.8	102	99
Care in old age	F	%	F	%
Children	49	49.5	57	55.3
Relatives	3	3.0	10	9.7
Church	1	1.0	2	1.9
Do not know	23	23.2	23	22.3
Your self	14	14.1	11	10.7
Homes for the aged	6	3.0	0	-
Women inheriting property	F	%	F	%
Yes	8	8.1	6	5.8
No	91	91.9	97	94.2
Knowledge of traditional methods of family planning	F	%	F	%
Yes	88	88.1	64	62.1
No	11	11.1	34	34.0
Methods known				
Breast feeding		32.3		4.9
Abstinence		43.4		43.7
Polygamy		9.1		4.9
Calendar		1.0		1.9
Herbs		4.0		5.8
Taboos		1.0		1.0

Attitudes towards traditional methods	F	%	F	%
Very effective	2	2.04	5	4.9
Effective	48	48.9	58	56.8
Out dated	38	38.7	30	29.4
Not effective	10	10.2	10	9.8

Reasons for the attitude	F	%	F	%
Encourages unfaithfulness	33	33.3	23	22.3
Fosters greater unity	3	3.0	5	4.9
Conceives even when using them	8	8.1	30	29.1
Hinders proper family life	55	55.6	44	43.1
Helps one space children	41	41.4	37	36.9

Knowledge of modern methods	F	%	F	%
Yes	98	99	102	99
No	1	1	1	1

Modern methods Known	F		F	%
Pill	90	90.9	88	85.4
Injection	3	3.0	10	9.7
Natural methods	2	2.0	4	3.9
Norplant	1	1.0		
Coil	2	2.0		
Vasectomy	1	1.0		

Attitude towards modern methods	F	%	F	%
Very good	2	2.0	5	4.9
Good	48	48.5	58	56.3
Not good	28	38.4	30	29.1
Immoral	10	10.1	10	9.7

Reasons for the attitude	F	%	F	%
Have many side effects	56	56.6	73	70.9
Against moral convictions	7	7.1	5	4.9
They are alright	6	6.1	9	8.7
Helps one to space	26	26.3	13	12.6
Have many inconveniences	3	1.0	1	1.0

Distance to the nearest family planning clinic	F	%	F	%
0 - 3 km	37	37.4	56	54.4
3 - 6 km	32	32.3	22	21.5
6+	11	11.1	23	22.3

Many women using modern methods	F	%	F	%
Yes	83	83.8	90	87.4
No	6	6.1	12	11.7
Missing	10	10.1		

Recommendations on family planning methods	F	%	F	%
Foster modern methods	19	19.2	21	20.4
Foster natural methods	37	37.4	14	13.6
Educate people more	18	18.2	41	39.8
Diversify methods	3	3.0	1	1.0
Do more research	8	8.1	9	8.7
Abolish them	4	2.0	3	1.9

Heard of family life education	F	%	F	%
Yes	77	77.8	61	59.2
No	22	22.2	42	40.8

Attitude towards the education	F	%	F	%
Very good	7	7.1	6	5.8
Good	52	52.5	65	63.1
Very bad	10	10.1	4	3.9
Bad	27	27.3	24	23.3
Damaging to morals	2	2.0	2	1.9

Reasons for the attitude	F	%	F	%
Promotes promiscuity	28	28.3	30	29.1
It is good for children to know	45	45.5	67	65.0

Parents have no time					
for their children	5	5.1	1	1.0	
It is the duty of parents	15	15.2	2	1.9	
The content should be made known	4	4.0	1	1.0	

Worries over daughters' pregnancies		F	%	F	%
Yes		53	53	81	78.6
No		43	43	21	20.4

Solution to the problem	F	%	F	%
Supply them with contraceptives	16	16.2	13	12.6
Educate them in morals	81	81.8	84	81.6
Apply legal measures	2	1.9	5	5.8

Reasons for single motherhood	F	%
Family quarrels	34	34.3
Death of husbands	2	2.0
Loose morals	21	21.2
Economic Independence	4	4.0
Lack of suitable partners	4	4.0
Poverty	9	9.1
Unfaithfulness	2	2
Ignorance	20	20.2

Problems faced by single mothers	F	%
Psychological	34	34.3
Discipline	7	7.1
Economic	45	45.5
Lack of security	10	10.1

Solutions	F	%
Encourage women to marry	15	15.2

Prevent teenage pregnancy	11	11.1
Counseling	30	30.3
Support them economically	17	17.2
Legal measures	4	4.0
Polygamy	1	1.0
No solution	18	18.2

DEO OMNIS GLORIA

(ALL GLORY TO GOD)