

FERTILITY DIFFERENTIALS

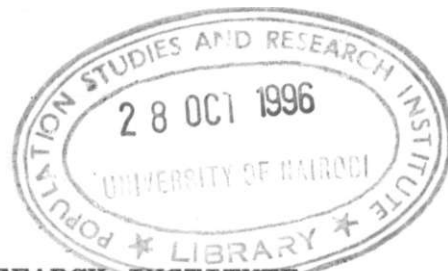
BY OCCUPATION TYPE

AMONG EVER MARRIED KENYAN WOMEN. *J;*

B Y

MIHESO, KHAKASA MARGUERITE

This project is submitted in partial fulfilment of the requirement for a degree of post graduate diploma in population studies of the **University of Nairobi.**



POPULATION STUDIES AND RESEARCH INSTITUTE

UNIVERSITY OF NAIROBI

1995

DECLARATION

This project is my own original work and to the best of my knowledge has not been submitted for a degree or diploma in any other university.

Signature ⁻ *jJ^tSL..*

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This project has been submitted for examination with our approval as the university supervisors.

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DEDICATION

This work is dedicated to my parents, Athanas and Agnes Miheso, my husband Mr J.P.O'Connor and my children Fiona and Brenda{i.

ACKNOWLEDGEMENT

I wish to register my deep appreciation to the Population Studies and Research Institute (PSRI), University of Nairobi, for offering me an opportunity to pursue the Post Graduate Diploma course.

I wish to thank the United Nations Fund for Population Activities, (UNFPA), my sponsors, for the provision of the scholarship that enabled me to undertake the course.

I also wish to register my appreciation for the cumulative efforts and willingness to assist of my lecturers at PSRI during my period in training.

I would like to sincerely thank my supervisors, Mr ^tieno Agwanda and Dr Murungaru Kimani of PSRI for their tireless guidance and patience that enabled me to pursue excellence in this study to its successfi^ completion .

I wish to thank Mr Lamba the senior technician who helped me to retrieve the required data which I used for the research.

I wish to thank my husband for the encouragement and understanding that he accorded me during this period. I also wish to thank my senior principal of Kenya Science Teachers College, Mr Joseph Kinyua for allowing me to attend this course.

ABSTRACT

This study was aimed at exploring variations in women's work patterns and the relationship between women's work and fertility using data from KDHS 1993. Four occupational groups were distinguished: Modern (Professional, Clerical); Transitional (Domestic Household Employee, Service); Mixed (Sales, Skilled and Unskilled); and Traditional (Agriculture). The majority of the women worked in traditional sector and the mixed sector.

The relationship between women's work and fertility concluded that women in the modern and transitional occupation bore fewer children on average than the women in the traditional occupation. The level of fertility in the transitional sector compared very well with fertility in the modern sector and the level of fertility in the mixed sector was as high as the fertility in the traditional sector.

The relationship between women's work and the intermediate variables (desired family size, contraceptive use, and breastfeeding) showed that modern methods of contraception were widely used by the women who were in modern sector than in any other sector. However breastfeeding was found to be popular among Kenyan women irrespective of type of occupation. Occupation was less often significant in explaining variations in family size desires and total children ever born. The main conclusion was that the effect on fertility can be explained by type of occupation notwithstanding level of education. Although the more incompatible jobs were found to be those that required longer periods of training like the modern sector, job types that had long working hours and where opportunity cost was most effective as is in the transition sector were found to have had a negative effect on fertility.

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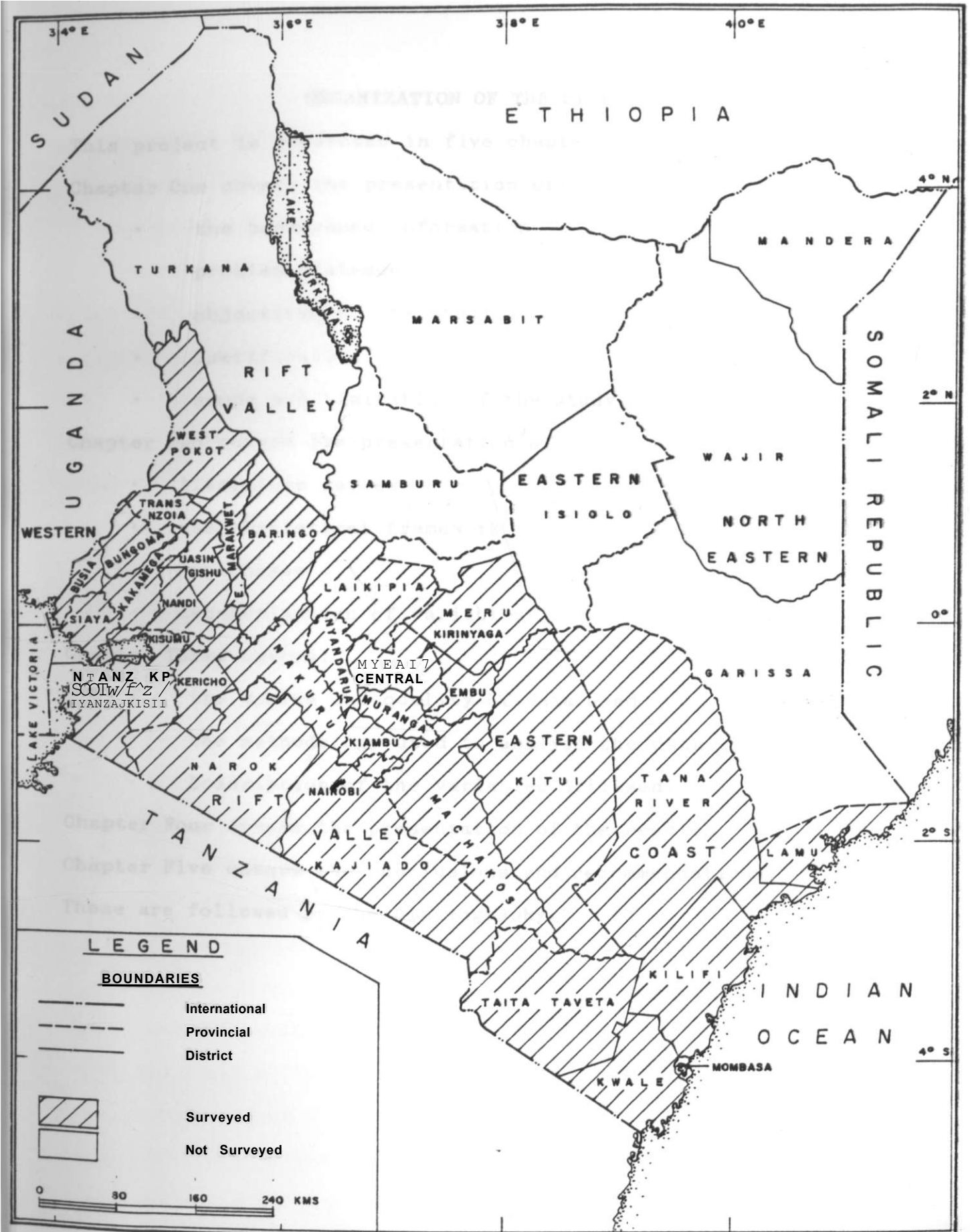
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Fig. 1 : AREAS COVERED BY KDHS. 1993



ORGANIZATION OF THE STUDY.

This project is presented in five chapters.

Chapter One covers the presentation of:

- the background information
- problem statement
- objectives of the study
- justification
- scope and limitation of the study

Chapter Two covers the presentation of:

- literature review
- the theoretical framework
- hypotheses
- categorization of variables

Chapter Three covers:

- the source and quality of data used
- the methodology used to analyze the data
- Description of the variables utilised.

Chapter Four covers the presentation of the results.

Chapter Five covers the conclusions and recommendations.

These are followed by the Bibliography.

CHAPTER ONE

INTRODUCTION AND STATEMENT OF PROBLEM

1.1 INTRODUCTION.

Background Information

The high birth rates being experienced in the less developed countries can fall to replacement level if the women of these countries acquire alternatives to home and motherhood routine and that likely alternative is documented as that of outside employment. This is so because the assumption embedded in this argument is that employment outside the home not only takes women's time but also gives them contacts with a wider world and the independence and satisfaction of earning an economic reward as individuals, apart from the family (Hoffman, 1963: 29-30). Women in Kenya in particular have recorded high entry into the labour force (KFS 1977-1978) and the impact of this participation on fertility and the relevance of work organization to the employment - fertility relationship will shed some light on occupation's compatibility with child care. The inter - occupational pattern of child bearing will develop the understanding of role incompatibility (Peek, 1975) as different occupations have different organization which influence child bearing differently. It is believed that the different types of employment expose women to different working environments, whose impact on fertility behaviour may differ. The degree of this influence is the aim of this study. Since the level of female education is a determinant of fertility behaviour, and also a prerequisite to career attainment, then the women in the study group will be expected to be effective family planning users as a result of the woman's

measure of education and autonomy (Mazur, 1985), (Kalule -Sabiti, 1984) established that proportions married decreases with level of education while use of contraception increases. Educated women and who are therefore more likely to be employed females promotes the wellbeing of children and can process information more effectively and would also enable them to use various social and community services more intensively. In addition employment appears to impart a degree of self confidence in a person to avail herself of whatever new facilities that may be on offer due to exposure at the place of work. Ridley, (1959) for instance argues that women who participate in activities outside home will be more likely to accept some method of birth control in order to limit their fertility.

The links between female employment and reproductive behaviour is varied, but fertility and work are associated in a number of ways. First, as noted by Perrucci, (1970) acquisition of paid employment delays the age of marriage and this is expected to reduce fertility. Secondly some jobs indirectly influence the use of family planning programmes and hence longer birth spacing (Stolte - Heiskamen, 1976, Weller, 1977). Thirdly, children interfere with working in that they require care and make demands on the mother's time. Thus, at any given time, women who have more children or younger children are less likely to be able to sustain a career than women who have fewer and older children. Finally working mothers would be expected to value education for their children more highly and so would be more likely to make a conscious trade-off between the quality and number of their children. Children are expensive and work is a source of income,

thus both fertility and work may be expected to be influenced by family economic pressure (Becker, 1960).

The working environments which have enlightened personnel will therefore encompass all these factors and positively influence the workers directly or indirectly.

However attitudes towards working mothers' social background, the need for extra income, cultural expectations and working woman status influence fertility behaviour of individuals' (Caldwell, 1968). These indirect factors determine the type of career chosen by the individual women (Weller, 1977).

In Kenya today there has been an increased enrolment in employment of females of different levels of education in varied fields in accordance with their skills without significant sex discrimination, (Central Bureau of Statistics, Ministry of Planning and National Development, 1989). This then implies an increase in the labour force market of women. This should have the effect of lowering fertility rates.

The response towards limiting family size and desired family size will be compared across occupations to ascertain the role played by specific work environment on fertility. Historically women have been concentrated in a limited number of occupations (Oppenheimer, 1973) that were stereotypically characterised as female jobs (Josenius and Shortlidge, 1975). The majority of the career women end up in the service sector, agricultural, clerical and domestic and household sector of the economy. Very few are to be found in the managerial, technical and professional fields which are likely to report smaller families (Clerkson et al, 1971, Shortlidge and Kohen, 1975). These female jobs are the kinds of

jobs that offer few or no fringe benefits, long working hours, less security. They are less likely to offer training or career development. They consequently have low opportunities for upward mobility. In addition these jobs offer inadequate social protection such as health insurance. These relegation of women to certain careers reflects cultural patterns and stereotypes which are difficult to change. There are few laws supporting measures in terms of hours of work and facilities for child care. Any differences in fertility patterns across careers should be due to exposure to factors arising from their career environments.

Therefore the study aims at determining existing differentials in fertility as a result of the occupational environment. The selected study group will consist of women in nine specified occupation categories extracted from KDHS 1993. These are

1. Professionals, Technical and Management
2. Clerical
3. Sales ^
4. Agricultural, Self-employed
5. Agricultural, Employee
6. Household and Domestic Workers
7. Services
8. Skilled Manual Employees
9. Unskilled Manual Employees

These nine groups will be discussed under four main occupational categories Modern (Professional, Clerical); Transitional (Domestic Household Employee, Service); Mixed (Sales, Skilled and Unskilled); Traditional (Agricultural Self Employed, and Agricultural Employees).

The members of the study group will be women between the ages of **12 years to 49 years**. Although the household composition affects **the employment** fertility relationships (Detray, 1973) this **assertion** will only be used to discuss some possible variations **in the** results.

1.2 STATEMENT OF THE PROBLEM

Studies carried out in Kenya indicate that fertility levels are still quite high but there are distinct variations with respect to level of education, place of residence, ethnic background and religion.

Few studies have been carried out to explain why these variations occur. (Kalule-Sabiti, 1984) established that the indices of proportions married reduces and contraceptive increases as level of education increases. This means that non-marriage and contraception are common among the educated women.

Studies have also shown a strong negative relationship between female employment and fertility in the industrialised nations which are predominantly urban (Collier and Langlois, 1962, Jaffee, 1969) but this assumption has failed to hold for the developing nations. In fact there is a tendency for a positive relationship between female employment and fertility instead (Weller, 1970). Studies to establish fertility differentials across different types of occupation as a control variable among working women have yet to be undertaken.

Women have been known to decide to engage in employment that is compatible with child rearing obligations (Jefee and Assum, 1960)»Stycos, 1965, Blumberge, 1976). Assumptions made on possible

negative relationship between female employment and fertility can occur in career type of jobs (Collier and Langlois, 1962, Weller, 1968). There is evidence that there is little difference in fertility among women who work in salaried employment and live in the rural areas and their counterparts who do not engage in salaried employment despite the fact that the working group has had secondary level of education. It is therefore true that a variety of work related factors can determine the extent and nature of women's role - incompatibility and the opportunity costs of children. The type, location and amount of work women perform may all have an effect on the employment - fertility relationship.

Those employed in the modern sector are more likely to be exposed to modern methods of fertility management and lower family size values. They are also less likely to have flexible work schedules and may have longer working days. They are also likely to have an urban residence and experience low mortality rates. All these factors contribute to low fertility rates. However there seems to be very little difficulty of combining many types of demanding work with bearing and raising large numbers of children among Kenyan women.

Child care practices and beliefs are major determinants of both low fertility practices and fertility. The existence of readily available child-care substitutes reduces the amount of time in this activity. These are in the form of siblings and low-cost domestic help available in many urban areas (Hass, 1972, Jaffe and Azumi, 1960, Kasarda, 1971). This makes women less pressured by time constraints to limit fertility (Peek, 1975). Norms and beliefs governing family life, particularly of importance are the

attitudes towards women as mothers and as workers. When motherhood **is** highly **valued** in relation to employment, women's aspirations **of** employment plummet, making the situation conducive to having **large families**. If working brings status and economic independence **to women**, they may avoid having large families. How then can given **professions** influence low fertility, what is it about these **professions** that makes fertility vary? If there is a significant **difference** in fertility in different working environment then the **factors that** influence low fertility attitudes in the given careers **could** be specifically addressed.

1.3 OBJECTIVES OF THE STUDY

General Objectives

To determine the impact of different occupational organisation on fertility behaviour of women and highlight the possible constraints and motivations that promote a negative employment-fertility relationship

Specific Objectives

- (i) To establish whether there exists a significant variation in fertility between different types of occupations.
- (ii) To determine the influence of frequency of contraceptive use in accordance with type of occupation
- (iii) To determine the significance of occupation on desired family size.
- (iv) To establish if age at first birth is influenced by type

of occupation.

- (v) To establish the degree of role incompatibility between type of occupation and children ever born.

1e4 JUSTIFICATION OF THE STUDY

Studies on the existence of maternal incompatibility which **posit that the** greater the conflicts between working and caring **for young** children, the more negative the relationship between **women's** work and fertility is of considerable importance to both **sociologists** and economic planners.

Although Kenya has recorded low fertility in the recent past there is still need for relevant studies which can help shed light on the factors that could help sustain this trend especially in understanding determinants of fertility in the developing world in general and Kenya in particular.

This study will determine the extent to which variation in the structure of socioeconomic opportunities explains the variation in the employment fertility relationship and will determine exceptions to the pattern of inverse relationship.

Typically, in the industrial nations and the industrial sectors of some developing nations, the amount a woman works is inversely related to the number of children she bears (Blake, 1965, Oppenheimer, 1970). In Kenya as in many third world nations, her work is often unrelated to her fertility or is positively related to it (Standing, 1978, Youssef, 1982). Exceptions to this pattern occur, however, which is one reason to study the occupation-fertility relationship further. Other reasons to study this relationship especially with regard to Kenya is the relative

paucity of information in this area and the potential impact that clearer understanding of the relationship may have for Kenyan policy makers and demographers.

There is a high level of infusion possibility such that since most of the women who should practise family planning do need not only access but evidence as regards to the advantages of family planning methods, it will be fertile ground to try and use the employed mother as an example that could promote family planning to the uninformed and to the sceptics. This can be done by making the working woman a good example to the community in which she lives. For this to be feasible the variables that influence a negative relationship between fertility and employment must be specifically addressed making this study to be of utmost relevance.

1.5 SCOPE AND LIMITATION

Scope ^

The study uses data from the Kenya Demographic and Health Survey, (KDHS) 1993, which covered all the provinces except North Eastern which constituted only 4 percent of the total population. The seventeen districts which were covered are as follow; Bungoma, Kakamega, Kericho, Kilifi, Kisii, Machakos, Meru, Murang'a, Nakuru, Nandi, Nyeri, Siaya, South Nyanza, Taita-Taveta, Uasin Gishu, Nairobi and Mombasa.

A total of 8,805 households were selected for the survey of which 7,950 were successfully interviewed. Of the 8,185 households that were found, 97 percent were interviewed. Within these households, 7,952 women were identified and 95 percent were

interviewed.

Limitation

The information used in this study though of national level did not cover all the districts. The area left out accounts for less than four percent of Kenya's population and so reduces the degree of reliability. The other limitation is that many pieces of information that are theoretically important in the analysis of the work - fertility relationship such as child - care management, number of hours worked, wages and work commitment were not collected.

In addition most variables refer to the woman's current work or most recent activity which means that for a woman who may have changed work recently after she completed her childbearing has her history measured in the wrong category. So variables on the duration of current work needed to be considered as part of the details in the work histories.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK**2.1 Literature Review**

This study is concerned with the relationship between women's outside employment and fertility in Kenya.

As has been known for sometime, the manner in which female employment and fertility are related varies across and within countries (Mason et al., 1971, Piepmeier and Adkins, 1973, Standing, 1978:ch.7).

Based on factors associated with the demographic transition in industrialised countries, population researchers focused their early studies in developing countries on investigating a presumed inverse relationship between female labour - force participation and fertility behaviour. A predominant sociological explanation for this inverse relationship is the role incompatibility, where employment and child rearing take place in separate locations and compete directly for women's limited resources of time and energy (Mason & Palan, 1981). A complementary explanation from the economic theories of fertility is that as a woman's potential wages increase, the higher the costs of raising children become because women forego more money when time is devoted to childbearing. The maternal role incompatibility hypothesis highlighted the critical interrelationship between women's productive and reproductive lives. These economic theories of fertility provide valuable ^sights and analytical tools for the study of the value of women's onomic contributions in home production and the opportunity costs of I women s time. The economic model of the rational household provides » f ramework in which to examine the trade-offs between

time spent in the labour force and other uses of women's time (DaVanco & Lee, 1983, Mueller, 1982).

The Women In Development (WID) guided empirical research has demonstrated that the relationship between women's work outside the home and fertility is much more complex than originally anticipated, and that a number of variables mediate the relationship, alter the hypotheses and modify the outcomes. Key intervening factors are the structure of economic opportunities for women and households as well as poor women's lack of access to family planning (Mason, 1987, Lloyd, 1991). This empirical research **has** implicitly underscored the importance of a poverty-oriented **focus** when studying women's productive and reproductive lives in developing countries.

In industrialised countries it is well established that women's employment is positively correlated with lower birth rates, especially when women in low income groups are excluded (Blake, 1965, Oppenheimer, 1981). In developing countries, however, the situation is ambiguous and often contradictory, in part because there is less conflict between women's roles as workers and mothers (Standing, 1978, Youssef, 1982). Research in Malaysia has shown that role incompatibility is often normatively rather than spatially or temporarily based, and that the opportunity structure available to households is an important mediating factor in the **work-fertility** relationship (Mason & Palan, 1981). The household's dependence on individual earnings versus joint ventures, on women's **versus** children's earnings, as well as the importance the household assigns to children's formal schooling, mediate and alter the **work-fertility** relationship. This study also yields contradictory

evidence in the form of a positive employment-fertility relationship among Indian wives in the rubber estates of Malaysia, who - uhpn additional income is needed as a result of a birth, A recent **review** of the world fertility survey (WFS) data, that includes information on women's work before and after marriage, points **out** that the variability in findings among countries and within **countries is** a function of the opportunity structure available to women within and without households. Few women are in the modern sector employment and for the majority of women in mixed, transitional and traditional occupations, the work - fertility relationship varies over the life cycle and with the type of occupation and earnings (**jjloyd**, 1991).

The explanations provided by both models -- maternal role incompatibility and the rising costs of children models are based on the assumptions that mothers always take care of children; that fathers economically support the children; and that parents live together over the life^cycle of the family. Research has shown instead that the social arrangements of families in developing countries are highly variable and often opposite to these assumptions. Parents often live separately and even when they live together, child fostering can occur (Llyod & Gage-Brandon ,1992, Llyod, 1993). Fathers' support of children is variable; the burden of child rearing outside marriage may be shared by siblings, family members, co-residential members, and/or hired help (Llyod, 1993, Buvinic & Gupta, 1994, Desai & Jain, 1992).

empirical findings, therefore highlight the importance of ft f o e u i , . ooth on the structure of opportunities for women and •ily and residential arrangements in explaining the work-

relationship. They also show that, under certain fertility ^{•111-v} ~~fertility~~ **circumstance**®, the cause-effect relationship hypothesised by the rly population studies can be reversed; that is, women may need to work to support their children rather than needing to stop work in order to have children (Anker et al, 1982). Unfortunately, the cross sectional surveys that have been used to gather information on population variables such as the WFS, are ill equipped to disentangle the direction of causation. A further contribution from a focus on WID is the utilization of longitudinal methods that can provide a narrative for events in women's lives and determine cause effect relationships.

Because more reliable and valid measures of women's work and wage rates are required, there is need for longitudinal studies to track causality, since there are so many intervening individual, family and community/institutional factors in the work-fertility relationship, some scholars have questioned the utility of pursuing further work in this area (Schultz 1988, Cleland et al, 1987). Continuing to invest in research in this area can yield valuable information about how they balance responsibilities in their lives.

According to Women World Survey Report of 1985, women tend to concentrate in a narrow range of fields and in jobs considered to be of lower responsibility and skill and therefore paid less, they are clustered in unskilled, dead-end jobs with low pay and little potential for training or advancement. In industry, they provide cheap assembly-line labour. In Kenya especially the service

ctor has absorbed the bulk of women's influx in the labour force, an 40 percent of women are just in five jobs; primary school teachers, where women fo_{rm} 50 percent, secretarial, in which they

20 percent and other clerical duties 46 percent. Women's occupational concentration is associated with unfavourable working conditions (ILO, Labour Force, 1950 - 2000) such as lower wages, lower status, longer hours, fewer or no fringe benefits and less security and are less likely to provide training or career development. These labour market segregation and inequality reflect cultural patterns and stereotypes. Conceptions of gender related roles are much more extreme and rigid in some societies than others. Kenya has 42 different ethnic groups that have varying perceptions of women's roles in society. Generally women in the society are identified with caring and supportive roles. They carry this over into the world of work, choosing jobs which can be combined with family responsibilities and accepting work which may be repetitive, dull and demanding because they have no other options. Among some international conventions on the rights of women are the 1953 "equal pay for equal value" to appraise jobs objectively and set rates of remuneration without regard to sex for work of equal value, "maternity protection" 1955 to provide maternity leave before and after confinement, with cash and medical benefits. "Equality in employment" to promote equality of opportunity and treatment in employment in order to eliminate any discrimination. The UN conventions on the eliminations of all forms of discrimination against women were "to have social services that permit parents to combine family obligations with work".

These resolutions have been implicated in the disparity of fertility level among employed women. It has been documented that the fertility level of these women is not different from the non

• ^ unmpn, (Jaffe and Asumi, 1960, Stycos, 1965, Bluraberge, working women. * 1976.)

It has therefore been assumed that women employed in white collar jobs may show a significant reduction in their fertility.

The following observations have been assumed in the study of the association between fertility and work as indicated in the empirical studies mentioned above and others in particular (Beckers, 1960).

- (i) **Children** interfere with working in that they require care and make demands on the mother's time. Thus, at any given time, women who have more children or younger children are less likely to be able to work than women **who** have fewer children,
- (ii) Fertility is subject to more or less rational control. If a woman wishes to work, she is likely to modify her fertility, both with regard to timing and the total number of cl^ldren. A woman who wishes to have children will probably have to resign herself to not working or to working less than she could in the absence of children.
- (iii) Children are expensive and work is a source of income. A woman who feels strong economic pressures is likely to wish to work and/or to restrict her fertility. Thus both fertility and work may be expected to be influenced by family economic pressures (Becker, 1960).
Related to this both employment and restricted fertility by wives may be means of upward social mobility.

Work is a "modern" or non familial activity, while child rearing is a "traditional" or familial activity. There are, presumably, women who are more familiarly oriented, independent of their current family status and others who are more toward extra familial activities (Ridley, 1959).

- (vi) For many women, one of the most substantial costs of having a child is the earnings she must give up when she drops out of the work force or reduces the number of hours that she works.

The studies in Indianapolis by Lois Pratt found work experience was negatively related to actual and desired family size and positively related to the effective use of contraception (Pratt and Whelpton, 1958). Conflict between work and children was considered primarily one of competition for the woman's time by Jean Care Ridley (1959). The emphasis of present day child rearing literature on the quality of the mother - child relationship mitigates against the mother seeking work even if she could afford time for both work and housework. The dilemma is how difficult it is to decide whether childlessness is due to a tendency for wives to work if they cannot bear children or to the deliberate avoidance of having children by wives who prefer to work. Nor likewise, is it possible to decide whether families are smaller because wives desire to be employed or whether they are employed because their families are smaller, (Ridley, 1959).

2.1. Women Employment and Fertility in the Developed World

In the industrialised nations, a consistent relationship has been found as a negative association between non familial female employment and fertility (Kupinsky, 1977). However, while such a relationship exists in the United States at some stage of the family life cycle for certain subgroups of women, there is no agreement as to the causal or the direction of causality; that is whether female work causes low fertility or whether low fertility causes women to enter labour force or whether they are mutually caused by some antecedent causal phenomena.

Using documented evidence from the United States, where labour force participation of females and their fertility is well established, the trend on the aggregate level indicates a consistent increase since the turn of the century. In 1900, over 20 percent of the total females aged 14 and above in the labour force were married (U^l. Bureau of the Census, 1958). By 1975 the participation rate for females aged 16 and above had reached 46 percent, but the percentage who were married with husbands present was almost 58 percent of the female labour force (U.S Bureau of the Census, 1976). There has been recorded dramatic increase of employment among women with at least one child under 3 years of P*ge. This group has more than doubled its participation rate in the labour force between 1960 and 1975. This dramatic increase as led to drastic changes in the United States where women initially had concentrated in a limited number of occupations PPenheimer, 1973) that were stereotypically characterised as °@ale jobs (Josenius and Shortlidge, 1975)

Women who were employed in stereotypically male occupations were more likely to report smaller expected and ideal family size (Clarkson et al, 1971, Shortlidge and Kohen, 1975). Those concentrated in predominantly female and low status occupations were found to be likely to have larger families because such occupations were thought to be compatible with child bearing. Ass (1974) found out that the service sector, with low status jobs, provided a conducive environment for working mothers, whereas white collar jobs required more training and maternity leave (Weller, 1968) was not granted and so the women found it costly to interrupt their jobs for the purpose of child bearing and rearing.

According to Dixon (1975); Hass(1972); and Kupinsky (1971), motivation for work was related to fertility. Those who work for non-financial reasons had lower fertility than those who work because of financial reasons. Presser (1971) points out that women who work for economic necessities are not motivated to control their fertility unless they are employed in attractive, well paying positions. Mason and Hodgen (1976) reported that women who define themselves as careerists had shorter first parity intervals in order to establish their work credentials and begin their careers as soon as possible after getting married, without being interrupted by a pregnancy. Women who work for economic reasons had a later first parity particularly if their husband's income was Most surveys find that women managers are only half as likely as male managers to be married and many more are divorced (Cooper survey, 1992). The same survey reported that women caring for

their career had difficulty in working long hours and needed to work locally (Cooper and Davidson, 1992). Personal accounts

by care^{ci} women (Whitehead, 1993) suggest that becoming a parent is a ^{ci} stage of women's professional development. For many t creates role conflict. These problems may be resolved by women leaving their careers even if it was not their intention before they **had** children (Coward, 1992). Other women resolve this issue by not having children, by working long hours that could not be combined with caring for a family (Ozga, 1993).

McLoughlin (1992) in her study of younger women in business reports that most of her interviewees had postponed having children until they were well established in their careers. In general they had only one child and earned enough to employ child carers. Perucci (1970) in his study of science and engineering graduates, found that careerists were more likely to be unmarried, childless and bear their first child later in work careers than those who did not define themselves as careerists.

During the demographic transition, general decline in fertility is partly explained by researchers as having been contributed by the integration of women in the employment sector away from home in the industrial nations (Blake 1965, oppenheimer 1970) making the relationship between women's employment and fertility the focus of considerable scholarly interest.

Stolte - Heiskamen (1976) in her study of fertility and women's employment outside home in western Europe found that fertility behaviour of women is likely to be affected depending ^{on} type of economic activity and place of work.

In France the percentage of economically active married women **with**

^{one} child under 17 years of age has increased from 38.8 percent in 1954 to 42.6% in 1968 and those with three or more

children, a rise from 9.8 percent to 12.8 percent in 1968 (Sullerot, 1972). In Great Britain, 34.5 percent of women with children worked in 1968. One fifth of these working mothers had at least one child under four years of age and almost half had at least one child between the ages of five and seven years (Halenston, 1973). Comparison of working and non working mothers showed that 48 percent of the non-working mothers had one child under five years of age as compared to 38.5 percent of the working mothers.

A study by Presvelon (1972) on young Belgian families showed that more than half of the wives continued to work after marriage, 60 percent of whom had two or more children and the responses showed that the second child is not a major reason for stopping work.

Using the 1985 national projections from the world survey on women 60 percent of the total women population are in the age group of 15 - 64 years of which labour force participation rate is only 46 percent. Of these 57 percent are in the developed world, while 42 percent are in the developing world.

In America participation rate is 50 percent, while in Europe the participation rate is 32 percent, Oceania 32 percent, Japan 40 percent, Middle East 25 percent, Africa 30 percent. The labour force participation has increased over the years, with the developed nations increasing from 52 percent in 1960 to 57 percent in 1980. Specifically America's participation rate increased from 41 percent in 1960 to 50 percent in 1980. Europe from 37 percent to 43 percent over the same period. Oceania 37 percent to 46 percent in 1980 (ILO, 1977).

The pattern of labour force participation in the developing

nations is not similar. The total female population has increased from 853 million in 1950 to 1,054 million in 1960 to 1,831 million in 1985 which constitutes about 49 percent of the total women population. Of this 910 million are in the reproductive age group of 15-49 years in 1985 compared to 275 million in the developed world. Yet only 42 percent of women 15 - 64 in labour constitute women's participation rate. In addition, 41 percent of this population are enrolled in second level of education. The total fertility rate per woman is 3.8 in the developing nations compared to TFR of 2.0 in the developed world. In sub-Saharan Africa the total fertility rate is 6.6, the highest recorded with secondary level education enrolment of 40 percent and female participation rate in the 15-64 years reduced from 58 percent in 1950 to 50 percent in 1985 (UNESCO, April 1984).

2.1.2 Female Employment and Fertility in the Developing Countries

From results of numerous empirical studies which have shown that labour force participation of women is the recommended means of promoting development and reducing fertility in developing countries, the World Population Plan of action formulated at Bucharest in 1974 stresses the need to eliminate discrimination against women in the spheres of education and employment and to provide for their full integration into the economic sector as a way to moderate fertility levels and achieve development goals.

At the International Conference on Population held in Mexico City in 1984

*» these recommendations were further strengthened in order to place women's active participation in a more central position

with respect to development and fertility decline, thus underscoring the fact that women's full integration can make a major contribution to further progress. The population policies in Kenya include strategies to improving the 'status of women' which often includes encouraging women's employment. Several empirical studies have been conducted which attempt to document both the direction and strength of the relationship between women's education, work and fertility. They contribute to the understanding of the determinants of fertility in the developing countries and shed light on the potential implications of women's increased labour force participation.

Despite some improvement, women remain segregated in a small number of predominantly female occupations (Beller, 1985, Jacobs, 1989). Possible explanations for continued occupational segregation of women include socialization during childhood, discrimination, cultural stereotypes, and the conscious choice for reasons of convenience (Reskinanj^Hartman, 1986).

There is considerable variations in the employment - fertility relationships within working women in Kenya and the speculation is that some traditionally female occupations offer relatively low penalties for labour force withdrawal and other female occupations reduce the costs of employment to mothers by facilitating combination of worker and mother roles. There is also evidence that further studies for the enhancement of career is H*

discouraged and there is the usual fear of losing jobs once training is considered. This then relegates the worker to routine duties and contributes positively to higher fertility desires.

Studies from some Arab countries have discussed the important variables influencing the relationship between labour force participation and fertility. Education, professional activity, and the degree of urbanization of working women have been reported as having a strong association with lower fertility. Working women have lower fertility than non working women only among the educated (Morcors, 1974) .

Educated professional women have also been reported as having a lower fertility pattern than non working women (Vallin, 1973). On the other hand, job satisfaction has been described as a separate variable exercising an independent influence over middle class couples low fertility rate than women who have migrated recently (Vallin, 1973). Weller in 1977 contends that "the relationship between female labour force participation and fertility is dependent upon the nature of the female participation as well as the milieu in which the participation occurs". He maintains that in addition to role conflict in terms of child rearing, role incompatibility would depend upon normative orientation of employers, husbands and wives towards employment of mothers, the extent to which the wife's working would influence marital relationship, flexibility of working hours, ease of re-entry into labour force, social status in terms of child bearing spacing. Anker in 1975 in his analysis of 69 developing countries found that adult literacy rates, secondary school enrolment rates and female participation rates were negatively related to fertility.

Anker and Knowles (1982) found that contraceptive use reduced and its use increased with education. Female labour force

urbanization, polygyny and separation were all related to fertility. Chahil (1977) in an analysis of women's work and fertility in India using evidence from the National Sample Survey 1962, found that the negative relationship between employment and fertility does not hold. He attributed this to the **fact** that the occupations available to Indian women are in agricultural and cottage industries which makes it possible to combine the roles of worker and mother. Barta et al (1985) studied **female** labour force participation and fertility in Hungary, using the data from the population census for the period 1949 to 1980. They found that in recent decades, the greatly increased economic activities of women has played an important role in the general reduction of fertility. They also found that the number of children of married women both at present and in the previous decades is negatively related to higher educational level.

According to a comparative analysis of WFS of 38 developing countries, it was found that women in modern occupations have the tendency to practise small family norm than their counterparts in the traditional sector.

2.1.3 Work, Women's Traditional Roles and Fertility in Africa

Caldwell (1968) found a positive relationship between a wife's occupational status and contraceptive use in Ghana. Where data available on female work force participation rates by age, it is possible to estimate the level of incompatibility between participation and child bearing by studying changes in participation levels as women go through the peak child bearing

. Where participation rates continued to rise, it was assumed that there is no great incompatibility especially where fertility levels are high (Ware, 1977).

There has been established a negative association between work force participation and fertility in Lusaka, Zambia. However this reduced fertility reflects educational and class differentials in fertility and work force participation rates. The more educated have lower fertility, whether they work or not, but are disproportionately to be found among the employed population (Ohadike and Tesfaghiorghis, 1975). According to Hellen, if there is any incompatibility between female labour force participation and high fertility levels, then Africa should have fertility levels that are lower than the rest of the developing world as tropical Africa has both high fertility levels and high participation rates.

The United Nations Demographic Handbook for Africa shows that there is no consistency in the relationship between fertility levels and economic activity (Coale, 1972). Upper Volta has a birth rate of 50 per thousand population an average complete family size of more than six children and 53 percent of the total female population of all age groups in the workforce. While Gabon has a birth rate of 27 per thousand population an average completed family size of 3 children and 44 percent of women in the workforce. Women status in Tropical Africa cannot be judged by the criteria appropriate to the developed world. In Traditional Africa women are the bread winners through farming. This kind of work is more demanding than the modern economic activities of teaching and secretarial. The issue of incompatibility is put to test as traditional methods of child rearing are still in force and

by sitting is still very cheap. The more children a woman has .in to seven, the more likely she is to be working (Okedeji say fit i, 1976). The major determinant of contraceptive use is the level of education. In his study Okedeji found that 6 percent **of the** illiterate and 57 percent of the secondary education level **practise** contraception. The usage rate was 11 percent among the **housewives** and petty traders but at 67 percent among the professional workers.

Anker and Knowles (1982) found that the child care burden does not significantly affect female labour force participation in Kenya. Henin and Mwobobia (1982) in a cross regional study of fertility in Kenya found a negative correlation between female employment and total fertility rate. This influence was seen to be due to urbanization and contraception. In 1985 Ikamari found that wives's employment status was positively related to contraceptive use. It ^as found that Kenyan working women have a higher motivation to use contraception than the non working women.

2.1.4 Factors Associated With Work Status Of Women

There are some factors which can be used to explain differentials in not only labour force participation but the type °f work that a woman does notwithstanding her educational t*ainment and hence her fertility management. These are not xhaustive and include among others the cultural factors, economic factors> religion, child care burden and household responsibilities.

Female Employment ,Cultural Factors and Fertility

Cultural factors help form important elements in the "costs" and "benefits" attached to work and so must be taken into consideration when studying female behaviour in the choice of occupation in the labour force world. For example in some communities there is a stigma attached to woman working, especially away from home and in other sub-groups certain types of work especially heavy manual labour are not acceptable for women. These attitudes are projected in the schools towards subjects that can lead to a "masculine career", and women will be found in non-scientific fields and this explains why women are to be found mostly in "feminine" occupations. In some communities such as Muslims, women are frequently restricted from working altogether.

In Kenya there does not appear to be any stigma attached to women working, but even then marriage being a universal practice in the country, eligible men tend to prefer certain careers for their wives and if a woman expects to fulfil the role of working mother, the career she chooses is very important.

One important cultural influence on fertility is the conflict that exists between the age of entry into marriage and occupation.

The age of entry into marriage conflicts with the age of entry into the labour force simply because the time a woman is ready

her career is also the time culture expects her to enter into marriage. This age aspect for the educated women is upper most in their minds such that pursuing greater job ranking is not a Priority to the majority who are still governed by their cultural attitudes, The job opportunities available to women are only taken

^vantage of after fulfilling the basic need of having a family, ^be number of children expected per custom have to be achieved before an^ rational decision about the number of children can become an issue. It is for this reason that women will want to choose certain careers so as to fulfil certain societal obligations and at the same time be referred to as a working woman. It is therefore the exposure brought about by the type of job that can positively influence the fertility behaviour of a career woman.

Female Work Status, Religion and Fertility

The position against the employment of married women in general is supported by the church and by the legal system. The Catholic Church has taken a strong line against working wives with Pope Pius XII commenting that " It is a corruption of women's nature and motherly dignity and disruption to the whole family. By working outside the home the woman will relapse into her former servitude and as in pagan times she will become the instrument of man". Legal institutions in some Latin American countries grant Judicial authorities the right to prohibit a married woman from working if her husband objects to it (Forget, Nelly, 1962). Resentment against working women is so intense in the Middle East involves the criticism of working women as being promiscuous. It¹⁸ for these biases that a woman works hard to fulfil both expectations of the society that fertility does not become an¹⁸ issue, as controlling it would reduce her status and bring^{of} conflicts with her religion.

feata 1 **Employment, Socio-Economic Status and Fertility**

The existing correlation between work and fertility can be **explained** by the fact that many women who wish to work for the **attainment** of a good socio-economic standing will inevitably **control** their fertility. But as some studies have shown most women **work to** supplement the family income and as a result she is not **ambitious** and would prefer to do the type of work which will **combine** well with child rearing. The other feasible explanation is **the** fact that women who have many children are motivated more **to join** labour force than women with fewer children because having **a** large family strains the families economics. Some couples in **certain** specific occupations would rather have more children in anticipation of extra hands, particularly in the agricultural and sales sector. In polygamous homes where the economic status of the man is usually above average, competition for the available resources would make e^en the working woman have many children. The need for income is the main driving force (Anker R, 1978) for female workers and therefore the larger the family the more the need for income. " Where there are more children there is wealth" **has been a** traditional driving motive for sustained high fertility and occupation is therefore a secondary factor in household decisions.

ork, Child-Care Burden and Household Responsibilities

°f all the possible determinants of female labour activity, relationship between work and family size is probably the most

It seems from first glance that family size should be negatively related to female labour force participation. It is assumed that women with small children must either find someone to look after the children or not work but in the case of less developed countries this assumption has been criticised because first the opportunity cost of child care is said to be quite low. For many families there are other household members who can and do help take care of children. These also include siblings and members of the extended family. Where there is no family member to assist there is always a possibility of hiring someone cheaply or freely to assist. Thus the effect of child care burden is not felt on the working mother (Caldwell, 1968). There are other household burdens besides children and at present there has been an increase of female headed families where the man has to work away from home and in the case of polygynous unions, the share given to women is always about equal regardless of the number of children one has and as a result working mothers wishing to have extrabenefits for their children would rather have fewer children especially among the educated women. The reverse is true for the illiterate wives who compete for affection by producing many siblings.

When examining "the dynamics of demography change in a Nigeria village", Matt (1978) found that unlike employment in more developed environments there introduces no conflict between employment and child rearing as a woman can readily combine both in the rural milieu which does not require their functional Oration. Women walk to the market with babies strapped to their backs and burdens on their heads and both hands free. So with children

tie^d on their backs women hoe their plots, weave clothes and baskets, a^d sell their wares.

2 i 5 Relationship Between Work Status and Fertility

Women's Work and Children Ever Born.

The number of children ever born has been found to be less for women who work in modern sectors, but varies with the type of occupational organization and level of education. Most women who work are motivated by the large number of children ever born rather than working to reduce number of children ever born, (Peek, 1975)

2.1.6 Women's Work and Intermediate Behavioural Variables

The relationship between women's work and fertility is influenced by intermediate variables. The ones discussed below are: contraceptive use, breast feeding, and age at marriage. This is because differences in fertility are achieved through differences in the levels of these intermediate factors. Desired family size is also discussed here as an intervening variable.

Women's Work and Desired Family Size

Differences in desired family size between occupational groups are most pronounced in Africa where occupational differences are very small. In Africa and in particular in sub-Saharan Africa, differences reach roughly 0.5 child with women in modern occupation desiring 0.5 child less than women who did not work

women in traditional occupations desiring 0.5 child more. In African countries (Mauritania and Senegal) these differences approach one child. The pattern of these preference differentials is consistent with expectations and suggests that fertility differentials in Africa will become more apparent as contraceptive use become more widespread.

Work and Age at Marriage

Timing of work may be related to fertility in a variety of ways. One is by delaying marriage among women who work before they marry. The relatively better financial situations of never married women who work compared with non working women may contribute to the working women's ability and desire to extend single life.

WFS comparative analysis (1985) found that women who worked before marriage, married later than women who never worked before marriage. Women who worked in the modern occupation married about three years later than women who did not work before marriage.

Among women who were employed before marriage, age at marriage differs between occupations. In 23 of 30 countries, women with experience working in a modern occupation before marriage have the highest mean age at marriage. The lowest mean age at marriage appears among women in traditional occupations although in a number of cases women in traditional occupations married earliest. It appears that work of any type before marriage is associated with a later age at marriage. The implication for fertility is that because later ages at marriage are associated with lower fertility, work before marriage may contribute directly to lower fertility

of marriage, Cho and Retherford (1975) from a study conducted among the working Malaysian women observed that the age at which most women marry was then high enough to make further increases in marriage and the declines in fertility traditionally associated with them unlikely due to exposure of work options.

Women's Occupation and Contraceptive Use

Women in modern occupations generally had the highest contraceptive use compared to women in traditional occupations according to WFS for some 20 developing countries. The percentage of women who use contraceptive was on average 22 percent points less than the percentage of women in modern occupations. The WFS (1985) also found that size of the differences between women in different occupations and the effect of occupation is statistically significant in only 12 countries. On average the women in modern occupations is only 7 percent points higher than the level of use among women in traditional occupations. This level is 9 percent Points in Latin America and the Caribbean, while only 8 percent Points in Africa and 4 percent points in Asia and Oceania. Studies done by the population of the United Nations (U.N. 1979A, 1981) on contraceptive use indicated that a wife's employment status has consistently positive relationship with contraceptive use. However these studies point out that the relationship between the two variables are weak. A study done in Cali city in western Colombia among a sample of 655 married women in the poor and working class community indicated that women who were in employment were more likely to use contraception than their unemployed

counterparts. It was found that 62.7 percent of the employed women were ever users while 51.7 percent of the employed women were ever users (Mason and Palan, 1981).

It appears from a number of studies utilising WFS data that differential contraceptive use by occupation is largely a reflection of the correlation of other socio economic factors with occupation implying that the work - fertility relationship is largely due to the effect of fertility on work, with women with larger families being less likely to work in occupations that are incompatible with child rearing. While education is strongly related to use of contraception, current work status may be more strongly related to the effectiveness of use, with working women adopting more effective methods, using them more effectively and possibly seeking abortion more frequently than non working women. These pattern could be related to development. Work experience and fertility patterns develop after marriage and chance factors influencing early fertility can affect the course of a woman's working life in ways that cannot be measured by DHS data.

Women's Occupation and Breastfeeding

Breast feeding is another intermediate variable which is known to have a negative effect on fertility (Bongaarts) by increasing the duration of post-partum amenorrhoea. Women who work in jobs associated with lower fertility are expected to be less likely breast feed or to do so for shorter periods as a result of constraints imposed by such employment on the ability and desire to breast feed. Women in agricultural sector and sales tend to

breastfeed for longer durations, but the comparative effect of breastfeeding among the different types of occupations on fertility is not significant.

2.1-7 Level and Pattern of Women's Work

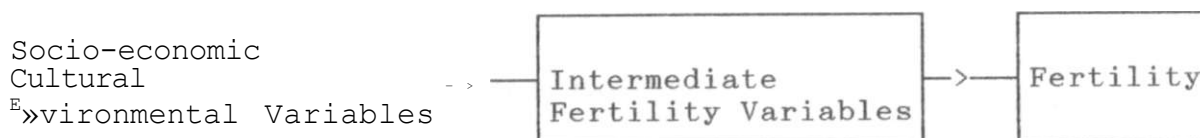
The type of work women do, how they are remunerated, where they work and what they do when they are working may all have implications for fertility. A number of the studies in which women's work has been included as a determinant of fertility have shown that after other variables such as age, marital duration and socio-economic characteristics are controlled, the relationship of work to fertility decreases in magnitude or disappears. At least one reason that this might occur is that work is often correlated with other factors known to be related to fertility. For example if working women are more likely to be young, urban and well educated (characteristics often associated with low fertility) than non-working women, working women will generally have fewer children than non-working women. Once age, place of residence and education is controlled, however the strength of the statistical relationship between work and fertility decreases. This study will provide an indication of the level of economic activity among women with particular characteristics. The effort towards family management as a result of specific job characteristics especially family planning effort is a strong yardstick in the work-fertility relationship (Cho and Retherford, 1975).

2.2 THEORETICAL FRAMEWORK FOR THE STUDY AND HYPOTHESES TO BE TESTED.

2.1 Conceptual Framework

The conceptual model underlying this analysis is concerned with the relationship between women's work and fertility. In other words how total supply of time devoted to work outside home over a post married life span is related to the total number of children ever born. This framework will show how occupation of wives which is dependent on the socio-economic, cultural and education background of individuals influence fertility through the intermediate variables. Fertility is influenced by three levels of independent variables, the proximate or intermediate variables, which in turn are influenced by household and their immediate environment and finally there is a set of environmental variables that influence this household decisions (Magadi M., 1994 Quantitative Analysis of Kenyan Fertility). The Davis and Blake (1956) model which provide a taxonomy of mutually exclusive intermediate variables which mediate between fertility and explanatory variables will be used. Specifically the Davis and Blake's Framework adapted by Simon and Farooq, 1995.

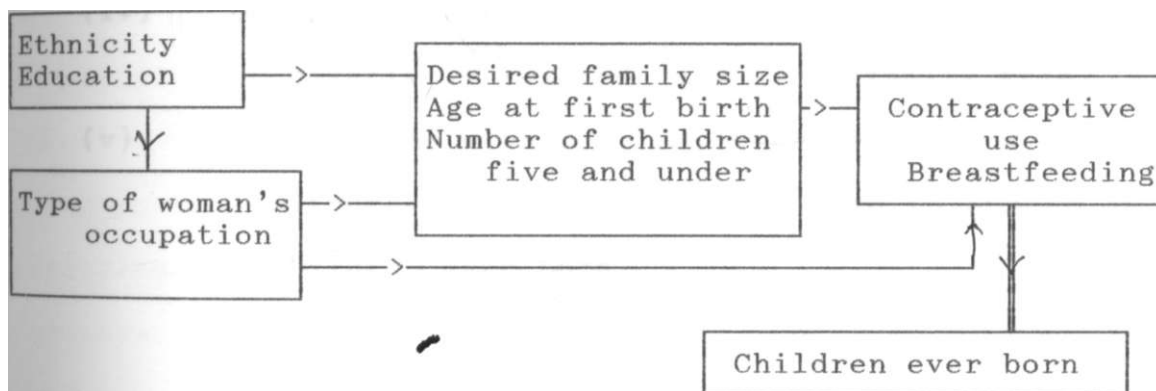
A simple view of this framework is summarised below .



The economic framework whose basis is on the works of Becker (1960) and Mincer (1963) in which children are looked upon as

Consumer durable will be used in this argument such that a woman's choice of career is determined by weighting of the value of child rearing and the compatibility of the chosen career. It has been argued that the greater the opportunity costs, the greater are the chances a woman will not only enter the labour market but will work in the less compatible fields will therefore use contraception more effectively and will have relatively low fertility (Weller, 1978, Cain, 1971, Ben Porath, 1973)

2.2.2 Operational framework



2.2.2 Operational Hypotheses

The predominant explanation for variation in the relationship between female employment and fertility is the maternal role Compatibility hypothesis (Jaffe and Azumi, 1960, Stycos and Heljp -

1967). This hypothesis which posits that inverse relationships between women's work and fertility occur only when

the roles of mother and worker conflict, a situation in which women are forced to make trade off between their long term participation in a given type of employment and the number of children they bear is the one that is tested against the data in this study.

More specifically the following assumptions will be made

- (i) Occupations which have a strong role incompatibility will record relatively higher use of contraceptives.
- (ii) Occupation which has strong role-incompatibility will record shorter periods of breastfeeding.
- (iii) Occupation with strong role - incompatibility will record late age at first birth.
- (iv) Occupation with strong role - incompatibility is negatively related to desired family size.
- (v) Occupations with high opportunity cost of labour withdrawal is negatively related to number of children ever born.

2-3

VARIABLES USED IN THE STUDY AND THEIR CATEGORIES.

This analysis is limited to the estimation of the relationship of the type of work experience each woman has had since her marriage (her occupation) to her fertility cumulated up to the date of the interview, or the children ever born. In this section the variables utilised in the study are discussed. These variables are grouped under five broad categories;

(A) Dependent variable

The dependent variable used in the analysis is children ever born. This variable was categorised into four categories; women with no child or only one child, women with two or three children, women with four or five Children and women with six or more children. ^

(B) Occupation (main independent variable);

The categorisation of Occupation was based on the United Nation definition for this variable which has four category coding scheme (UN 1981a) chosen on the similarities of the type of work a woman does and the conditions under which she does it. These four categories were;

- The modern category which included professionals or clerical workers
- The transitional category included domestic and service workers

The mixed category included Sales, skilled and unskilled workers

The traditional category included agricultural employees or self employed

(C) Socio - economic and cultural factors.

The two variables considered under the socio economic and **cultural** factors are education and ethnicity

(i) Education .

Education was categorised into three categories; no education, primary education and secondary + (secondary and post secondary education)

(ii) Ethnicity;

Ethnicity was categorised into five major tribal categories in accordance with numbers and similarities in their cultural practises . These are; Luo, Kikuyu, Luhya, Mijikenda and others (any other tribe not discussed above).

(D) Demographic and Intervening variables.

The variables discussed in this category are;

(i) Desired family size.

The desired family size was categorised into the following three categories depicting the degree of change in attitude towards the traditional large family size; women who desire at most two children (0 - 2) , women who desire three or four children (3 to 4) and women who prefer large family of at least five

children.

(ii) Number of children five and under.

The number of children below five years gives an indication of the need for spacing as a result of work demands or otherwise, in this study the variable was categorised into three categories; women with no child aged five and under, women with one child, women with two children and women with three or more children aged five and below.

(iii) Age at first birth.

Women are fecund at a very early age but birth may be delayed if children are not considered a priority especially in circumstances where alternatives exist such as work or education. This variable has been categorised as follows; if age at first birth is below fifteen years, if age at first birth is between 15 years and 19 years, if first birth occurs between ages of 20 and 24 years, and if age at first birth occurs at the age of twenty five years and over.

(E) Proximate determinants.

Two proximate determinants which were included in the analysis are contraceptive use and breastfeeding duration.

(i) Contraceptive use

The differences in fertility in different occupations are at least partially a result of differential contraceptive use, continuity and choice of type of contraception. The following three categories of this variable were used; never used, traditional

(traditional and folkloric) and modern methods.

(ii) Breastfeeding .

Breast feeding is most effective depending on the intensity and **duration** of breastfeeding . The degree of intensity and length has **a** negative effect on fertility through its positive effect on **the** duration of postpartum amenorrhoea. This variable has been **categorised** as follows; duration of 0 - 12 months, 12 - 24 months, **duration** of 25 months and above.

The percentage distributions for each of the variables and the number of cases on which they are based for each of the variables are arranged in table 3.1.

CHAPTER THREE

3.0 SOURCES OF DATA, METHODS OF ANALYSIS AND DESCRIPTION OF VARIABLES.

3.1 SOURCES OF DATA AND ITS QUALITY

Sources of data

The study will use secondary data from the Kenya Demographic and Health Survey (KDHS) 1993. The KDHS was a national survey conducted by the National Council for Population and National Development (NCPD) and the Central Bureau of Statistics (CBS). It is a national coverage, with the exclusion of North Eastern province and four other northern districts; Marsabit, Isiolo, Samburu and Turkana which accounts for only four percent of the Kenyan population. It was designed to produce completed interview with 7,540 women aged between 15-49 years old, and with a sample of 2,336 husbands of these women. It considered mean number of children ever born to women aged 15-49 years old, according to their background including occupation by type and more specially family planning knowledge and attitudes towards family planning by the husbands.

Quality of data

The KDHS (1993) utilised four questionnaires: A household questionnaire, a man's questionnaire, a woman's questionnaire and a services availability questionnaire. The contents of these questionnaires were based on the DHS Model B Questionnaire which is designed for use in countries with low use of contraceptives.

- household questionnaire was used to list all the usual

residents and visitors of selected households. The woman's questionnaire, which is of relevance to this study, was used to collect information from women aged 15-49 years. These women were asked questions on the following topics:

Background characteristics, reproductive history, knowledge and use of family planning methods, fertility preferences and respondents' work, among other questions which makes the information valuable and results dependable. From these the following variables, which were included in the questionnaire, will be used in this study: type of respondents' occupation, total children ever born, ever use of any method of contraception, number of children five and under, age of respondent at first birth, ideal number of children.

A systematic sample of 8,864 households were selected from which all women age 15-49 were interviewed to give approximately 8,000 eligible women and 2,500 eligible men. Of these 7,540 women and 2,336 men were successfully interviewed. Very few problems were encountered and the response rate was 98 percent.

Since the survey was of such high quality and of national coverage, the study will use it for the necessary findings expected to draw reliable conclusions for the laid out objectives.

³-2 METHODS OF DATA ANALYSIS

Methods of fertility analysis are numerous depending on the factors under consideration. In this study we are concerned with a comparative effect of role incompatibility of mother and worker across specific occupations on the children ever born. Because

of absence of detailed work histories this analysis is limited to estimation of the relationship of the type of work experience each woman had since marriage (her occupation) to her fertility cumulated up to the date of interview or the number of children ever born.

The independent variable used will be the type of employment as given in the KDHS (1993) data at the time of the survey, from which four major groups are distinguished in accordance with the United Nations coding scheme (United Nations, 1981a). These categories are intended to combine occupations based on the type of work a woman does and the conditions under which she does it and these categories are; Modern, Transitional, Mixed and Traditional. The modern occupational group includes women who were coded as Professional or Clerical workers by the KDHS. These women are employed by someone other than a member of the family and work away from home. The Transitional group (Domestic Household Employees and Service Jtorkers in KDHS) work away from home for a wage but use traditional skills requiring little education such as cleaning and washing of clothes. Women in the Mixed group (KDHS codes for Sales, Skilled and Unskilled Workers) may work at home or away. They are often self-employed and perform jobs that require some level of training or skill (such as growing crops and making items for sale). The Traditional group is comprised of women who work in agriculture. These women are often employed by a family member, have little education and live in the rural areas.

The relationship between women's work and behavioural variables (Contraceptive Use, Ideal Number of Children, Age at Birth, Number of Children Five and Under) will be discussed,

with the actual dependent variable used as Children Ever Born.

The techniques to be used in the analysis are cross tabulations, percentages and chi square. Since it is a comparative **study** the use of percentages which indicates the value with respect to the whole sample gives a vivid ranking and together with the cross tabulation, the existing relationship which exists between the demographic variables, fertility variables and employment in the study can be determined.

The significance of the relationship between the independent variable and the respective dependent variable will be examined

2

by the chi square technique. The Chi-square (χ^2) shows if any two variables are dependent or independent at a given level of significance. However it does not give the strength of the relationship. In the Chi - square (χ^2), the null hypothesis (H_0) states that there is no association between the variables. If we reject the null hypothesis then the alternative hypothesis (H_1) which states that there is an association between the variables is accepted. The above mentioned techniques will therefore give concrete results on which conclusions can be drawn without bias.

Other techniques such as regression analysis could be applied to cross check the results further especially in determining the strength of

the relationships but additional information may be required. But for the present purpose the listed techniques are Efficient.

The frequencies and totals for these variables and their categories as has been used in the analysis are shown in table 3.1 below.

TABLE 3.1: PERCENTAGES OF THE CATEGORIES OF THE VARIABLES USED
IN THE STUDY.

VARIABLES /CATEGORY	PERCENTAGE	TOTAL (N)
! DEPENDENT VARIABLE		
Children ever born		7540
0 or 1 child	40.6	
2 or 3 children	20.4	
4 or 5 children	16.1	
6 or more children	22.9	
2 SOCIO - ECONOMIC AND CULTURAL VARIABLES		
(a) Occupation		
Modern	10.5	
Transitional	7-4	
Mixed	37.0	
Traditional	45.1	3715
<i>(missing cases 3937)</i>		
(b) Education		
No education	17.2	
Primary education	59.0	
Secondary education	23.8	7540
(C) Ethnicity		
Luo	11.7	
Kikuyu	18.9	
Luhya	14.5	
Mijikenda	6.6	
Others	48.2	7952

VARIABLES /CATEGORY	PERCENTAGE	TOTAL (N)
3 INTERVENING VARIABLES		
Desired family size		
0 _ 2 children	23.0	
3 or 4 Children	53.3	
5 or more	23.7	7536
(b) Number of children five and under		
No child	31.2	
One child	29.0	
Two children	26.4	
Three or more	13.4	7536
(c) Age at first birth		
< 15 yrs	7.4	
15 - 19 yrs	60.3	
20 - 24 yrs	27.4	
>= 25 yrs	4.9	7536
4 PROXIMATE VARIABLES ^		
(a) Contraceptive use		
Never used	55.2	
Traditional method	11.0	
Modern method	33.8	7540
(b) Breast feeding duration		
0 - 12 months	23.1	
13 - 24 months	26.4	
125 + months	50.5	
		7952

Description of the variables in the table.

Children ever born is the dependent variable in this study as shown in the framework is directly influenced by the proximate variables which are in turn influenced by the intervening variables. The intervening variables are influenced by the demographic and social factors. In addition these factors can also directly influence the proximate determinant factors.

As shown in the table, children ever born indicate that a majority of the women have small family sizes of three or less. Sixty one percent of the women interviewed have at most three children and only 22.9 percent of the women had more than six children.

Education has been documented to defer age of entry into marriage and also allows for easy dissemination of family planning information. Level of education also imparts freedom of thought so that the educated women are expected to think more rationally particularly on matters that affect family. The table indicates that 17.2 percent of the women had no education while those with primary education were 59 percent. Women with secondary and above level of education were 23.8 percent.

Different groups of people have different expectations on their women folk. As noted in the previous section five categories of ethnic groups were used in this study. Due to the different cultural practises, these groups are expected to have different fertility aspirations. According to the categorisation, Luos constituted 11.7 percent, Luhyas 14.5 percent of the sample and ikuyus were the majority with 18.9 percent of the sample. The

smallest category of the Mijikenda consisted of 6.6 percent of sample. The other wider category which consisted 48.2 percent of the sample were grouped in the category of 'others'.

Occupation refers to those women in the survey who were **involved** in salaried employment whether it was self or other wise. Of the 7952 respondents in the survey, only 3715 or 46.7 percent were engaged in some form of gainful employment outside the home. **The** rest, a total of 3937 or 49.3 percent, did not respond to **this** question.

As shown in table 3.1, the majority of the women were employed in the traditional sector which comprises 45.1 percent. It is a sector that directly relates to their traditional roles and are more likely to combine motherhood and work in this sector better than in another sector. In the modern sector there were only 10.5 percent, while 37 percent were employed in the mixed sector, only 7.4 percent of the women in the sample were employed in the transitional sector. -

The desired family size helps to measure the change in attitudes towards the family size or the potential demand for children and hence gives an indication of the potential use of contraceptives.

The number of children that a woman may consider ideal is influenced by several factors. The large family size is a traditional expectation and any difference in this attitude may be explained by among other factors occupation outside the home.

The table indicates that a majority of the women (53.3 percent) preferred to have three or four children. Which suggests that a substantial proportion of the women still desire moderately large families. Women who desired small family were 23.0 percent.

The other intervening variable which measures the relationship between work and fertility is the number of children under five.

A mother with at least three children (excluding twins or triplets) in this group is not practising family planning and has no reason to do so.

The results summarised in the table 3.1 show that 31.1 percent of the women had not given birth in the last five years, while 29 percent had only one child aged five or below. Only 13.4 percent of the women are shown to have had three or more children aged five and under.

The year of first birth is determined by the need to start a family and many women who work before their first child tend to delay this birth depending on the type of occupation. It is also argued that women who have no need to delay their first birth usually have their first child early. The table indicates that 7.4 percent of the women had a child before the age of fifteen.

Also from the table more women (60.3 percent) had their first child between the ages of fifteen and nineteen, while 27.4 percent had their first child within the ages of twenty and twenty-four, only slightly less than 5 percent of the women started child bearing after 25 years . The table shows slightly over 55 percent

the women interviewed do not use any form of contraception, other researches carried out show that 95 percent of women know about family planning (KDHS 1989). The high rate of non practise could be due to mistrust of the methods and misconceptions. However 33.8 percent of the women used modern method which represents 75.5 percent of the women who practise family planning and which further suggests preference for modern

methods. Eleven percent of the women used traditional methods.

Breastfeeding is another intermediate variable which is known to have a negative effect on fertility through its positive effect on duration of the post partum amenorrhoea. The intensity of breastfeeding and duration are usually affected externally through type of work and location of work place or the presence of alternatives to breast milk.

Breastfeeding can only be practised most effectively and for longer periods of time in situations where mother and child are together most of the time. The table shows that 23.1 percent of **the** women breastfed for up to one year. While on the other hand a substantial proportion of the women (50.5 percent) are shown to have breastfed for over 25 months which seems to suggest that **the** practise of breastfeeding is still popular among the Kenyan women.

CHAPTER 4

4.0 FERTILITY, WORK STATUS AND THEIR ASSOCIATION WITH OTHER
VARIABLES

4.1 INTRODUCTION

This research was aimed at analysing the association between fertility, type of work and their association with other variables. The analysis was undertaken using percentages and cross tabulations with the Chi - square test to show whether these were significant. If the Chi - square score was greater than 0.05 then the conclusion of no significance was be made. On the other hand if the score will be less than or equal to 0.05 then the conclusion of existing significance will be drawn. The results of the analysis is presented in this chapter, in accordance with the definitions of the variables utilised as presented in chapter three.

<•2 ASSOCIATION BETWEEN FERTILITY AND WORK STATUS.

From the literature review it was stated that there existed positive relationship between fertility and work status among women in the developing Nations. This argument was Justified by the speculation that women in the developing countries ^{ttt}nd to work to supplement family income. From the given categories however 40.6 percent of the women in the study had at most one ^{cl}*ild , 16.1 percent had at most five children while 22 percent at least six children . These percentages tend to conflict ^{e*}pected relationship of having the majority of the working ^{Won-} " "With large families. In addition to these findings, we still

have 45.1 percent of the women in the traditional sector of occupation, an occupation that was characterised with high fertility in the literature review. There are only 10 percent of women in the modern sector, the sector that is characterised with small family norm. The analysis to determine if different occupations had any effect on fertility is presented in table 4.1

TABLE 4.1: PERCENTAGE DISTRIBUTION OF RESPONDENTS PRESENT
OCCUPATION BY THE TOTAL CHILDREN EVER BORN

CEB/OCP	MODERN	TRANSITIONAL	MIXED	"TRADITIONAL	TOTAL
0-1	31.1	64.6	27.1	23	1056 28.5*
2-3	30.3	16.8	25.6	21.7	877 23.7*
4-5	22.2	11.3	19.8	22.2	761 20.5%
6+	16.4	7.3	27.5	33.1	1011 27.3%
TOTAL	389	274	1376	1666	3705

Chi- square value 171.19949 DF 9 Significance .0000

As shown in this table it is clear that there is a significant relationship between the number of children ever born and occupation. For example the proportion of women with 0-1 child is 31.2 percent among the modern sector compared with 64.6 percent among women classified as being in the transitional sector. The Proportion for women in the mixed and traditional sector were 33.1 Percent and 27.5 percent respectively. These findings do not conform to the expected results as women in the modern sector were expected to register a higher proportion than the transition sector because of the length of training that is required in the

respective sectors.

However the traditional sector has a proportion of 33.1 percent of the women with more than six children, the highest proportion as was expected as compared to 16.4 percent among women in the modern sector. The proportion for women in the transitional sector had the least proportion of 7.3 percent . This proportion is much lower than the modern sector which also does not conform to the expected results of having the least proportion of large family among the modern sector.

The hypothesis of incompatibility is strongly presented here and confirmed by the Chi - square test for significance as 0.000. Since $P < 0.05$,the null hypothesis that fertility is negatively related type of occupation is confirmed.

4.3 ASSOCIATION BETWEEN WORK STATUS AND SOCIO - ECONOMIC AND CULTURAL VARIABLES

4.3.1 LEVEL OF EDUCATION BY RESPONDENTS OCCUPATION.

It has been suggested from the literature review that there is a positive association between education and type of employment. It is therefore expected that women with at least secondary education will be concentrated in the modern sector, while those with primary or no education will be the majority in the traditional and mixed sectors.

The result to test this hypothesis is summarised in table 4.2 below.

TABLE 4.2 : PERCENTAGE DISTRIBUTION OF THE LEVEL OF EDUCATION BY TYPE OF OCCUPATION.

OCUP/EDUC	NO EDUCATION	PRIMARY	SECONDARY	TOTAL
MODERN	1.0 *	3.2	34.7	389 10.5X
TRANSITIONAL	4.8	8.4	6.8	274 7.4X
MIXED	37.4	38.2	34.5	1376 37.1X
TRADITIONAL	56.7	50.2	24.0	1666 45.0X
TOTAL	681 18.4%	2115 57.1X	909 24.5X	3705 100X

Chi square value df 6 significance 0.0000

For example among the women in the modern sector 34.7 percent had secondary education compared to only 1 percent with no education and 3.2 percent for those with primary education. Similarly in the traditional sector the proportion with no

education was 56.7 percent compared to only 24 percent for those with secondary and above education and 50.2 percent with primary education. The mixed sector had 34.5 percent of the women with secondary and above education and 37.4 percent with no education. The majority of women in this sector were of primary education comprising 38.2 percent. This sector shows an almost equal entry regardless of education background. However in the transitional sector , the proportion of women with primary education of 8.4 percent is much higher than the proportion of women with secondary and above education which is 6.8 percent. Women with no education are least represented here with a proportion of only 4.8 percent. The table therefore indicates that of the 10 percent of the women in the study that are in the modern sector, 81 percent of these are of at least secondary education.

The Chi - square value is .0000 which shows a strong positive relationship between education and the type of occupation of the respondent. The χ^2 -square value confirms the theoretical expectation that education influences the type of occupation.

4.3.2 ETHNICITY BY OCCUPATION

Different ethnic groups have had different exposures to factors that influence occupation. The ethnic groups are also classified in accordance with cultural activities that are expected to influence choice of career. For example the Kikuyu women who form a proportion of 18.9 percent are expected to have lesser cultural influence in their choice of career due to their historical earlier exposure to different occupations , while the

Luo women who still have very strong cultural beliefs are expected to be greatly influenced in their choice of occupation. The other factor that is expected to influence choice of career is the proximity of the tribal groups to a major city and hence exposure to available opportunities. For example the choice in career for the Kikuyu and Mijikenda women is expected to be influenced by their proximity to Nairobi and Mombasa respectively while the Luo and Luhya women will be influenced by their predominantly rural residence in their choice of occupation. The results of this analysis is represented in table 4.3 below.

TABLE 4.3: PERCENTAGE DISTRIBUTION OF ETHNICITY BY OCCUPATION TYPE

OCP/ETHN	LUO	KIKUYU	LUHYA	MJKENDA	OTHERS	TOTAL
MODERN	7.8	13.4	10.9	10.3	9.8	389
TRANSITIONAL	5.7	7.9	9.3	12.4	6.5	274
MIXED	40	33.3	44.5	66.5	31.5	1376
TRADITIONAL	46.5	45.4	35.3	10.8	52.2	1666
TOTAL	615 16.6%	824 22.2%	569 15.4%	194 5.2%	1503 40.6%	3705 100%

Chi - square value 17.12530 Df 12 significance 0.00883

The table shows that 13.4 percent of the Kikuyu women are in the modern sector while only 7.9 percent are in the transitional sector. The percentage of Luhya who are in the modern sector is 10.9 , while only 9.3 are in the transitional sector, The same trend of having more women in the modern sector than the transitional sector is also found among the Luo women with a Proportion of 7.8 percent and 5.7 percent respectively. However

the percentage of Mijikenda women in the modern sector of 10.3 is lower than the proportion in the transition sector which is 12.4 percent. The Mijikenda group as was expected are concentrated in the mixed sector with a proportion of 66.5 percent as compared to the proportion of 10.8 percent of these women in the traditional sector. The majority of the Luhya women are also to be found in the mixed sector with a proportion of 44.5 percent with 35.3 percent of these women in the traditional sector. The Kikuyu women and the Luo women have their highest proportions in the traditional sector of 45.4 and 46.5 percent respectively as compared to their respective proportions of 33.3 percent and 40 percent in the mixed sector. The group classified as others follows the same trend as the Luos and the kikuyus as they have their highest proportion in the traditional sector of 52.2 percent and their lowest proportion of 6.5 percent in the transitional sector. These results indicate that certain tribes tend to prefer certain types of occupation. The chi-square test score of 0.008 confirms these results as $p < 0.05$ and hence the acceptance of the hypothesis that ethnicity influences occupational choices among Kenyan women.

4.4 ASSOCIATION BETWEEN WORK AND THE INTERVENING VARIABLES

4.4.1 BIRTHS IN THE LAST FIVE YEARS BY WOMAN'S TYPE OF OCCUPATION

Births in the last five years is an indication of the need to avoid pregnancies by means of contraceptive use due to expected opportunity cost for the mother. A total of more than two births suggests the compatibility of the specific work and motherhood and no impact of opportunity cost. A small family norm

js expected to be more significant among women who are in the modern sector and less significant among women in the traditional sector. This is so because modern types of occupation do not provide conducive environment for child rearing as compared to traditional sector where the mother combines both duties quite effectively. The results of this analysis is shown in table 4.4 below.

Table 4.4: PERCENTAGE DISTRIBUTION OF BIRTHS IN THE LAST FIVE YEARS BY THE WOMAN'S TYPE OF OCCUPATION

BTHS/OCF	MODERN	TRANSITIONAL	MIXED	TRADITIONAL	TOTAL
0	48.3	64.2	40.2	38.2	1553
1	31.6	22.3	31.7	29.5	1112
2+	20.1	13.5	28.1	32.3	1040
TOTAL	389	274	1376	1666	3705

Chi - square value 181.403 DF 6 significance 0.0000.

From the data summarised in table 4.4 all the specified occupations have a high incidence of no children with the transitional category having 64.2 percent of the women with non-recorded birth followed by the modern sector with 48.3 percent. All categories show relative reduction in the number of births beyond one child except for the traditional sector which shows an increase of 2.8 percent in the number of births after one. It has 32.3 percent of its women with two or more children compared to 29.5 percent of the women with one child. The mixed sector also shows a comparatively higher percentage of 28.1 percent of the women with at least two births in the last five years. The transitional sector has the least percentage of its women (13.5 percent) with at least 2 children, followed by the modern sector

which has a percentage of 20.1 percent of the women with at least two children.

The chi - square test shows a significance of 0.000 which confirms that since $P < 0.005$ there is a strong relationship between the type of work a woman does and the spacing of her children.

4.4.2 AGE OF RESPONDENT AT FIRST BIRTH BY HER OCCUPATION

It has been established from the literature review that women who work before getting married tend to postpone their first birth until they are well established in their careers. It was also argued that some professionals prefer to have their families early before they embark in their careers without being disturbed by child rearing.

Therefore the occupations which have late first birth will represent those which have strong negative relation between work and motherhood. The age of respondent at first birth is therefore expected to be lower for occupations that do not require long years of training such as traditional sector. However it is expected that the age at first birth will be quite high for the modern sector where long years of training are required. Most of the women marry between the age of 15 years and 19 years from our categorisation of this variable (60.3 percent) and only 4.9 Percent of these women have their first birth after 25 years. Most

these late group of women are expected to be in the modern sector. The analysis of this variable is summarised in table 4.5 below.

TABLE 4.5: PERCENTAGE DISTRIBUTION OF THE RESPONDENTS AGE AT FIRST BIRTH BY THE TYPE OF OCCUPATION.

OCP/YRS	<15 YRS	15 - 19	20 - 24	25 + YRS	TOTAL
MODERN	2.7	5.4	20.0	29.6	328
TRANSITIONAL	5.3	5.0	5.1	2.4	153
MIXED	33.8	40.2	33.5	36.6	1175
TRADITIONAL	58.2	49.4	41.4	31.4	1461
TOTAL	225	1872	851	169	3117

Chi - square value 161.62011 df 9 Significance 0.0000

The data as summarised in the table suggest that the modern sector had the lowest proportion of 2.7 percent of the women who had their first birth before the age of 15 years. This same category of workers had relatively high proportion of 29.6 percent of the women with their first birth after the age of 25 years as was expected. Meanwhile the traditional sector had the highest proportion of women (58.2 percent) who had their first birth before the age of fifteen compared to 31.4 percent of the women with late first births. The table also suggest a high proportion of 33.4 percent of the women who had their first births before the age of 15 years as those from the mixed sector while only 5.3 percent are from the transitional sector. The transitional sector which does not require long years of training as is true for the modern sector compares very well with the modern sector, a factor that can only result from the type of occupation. It is also evident that the transition sector had a very low proportion of the women with late first births (2.4 percent). The age range that was the modal class for first births (15 - 19 years) had a proportion

of 49.4 percent from the traditional sector, 40.2 percent from the mixed sector as compared to only 5.4 percent and 5.0 percent from the modern and transitional sector respectively. While education may account for the results that are related to modern sector, occupation may account for the pattern within the transitional sector. The mixed sector and the transitional sector's patterns may also be due to the little or no education of the women in these job groups. The table therefore confirms the expectation that the traditional sector have fewer late first births compared to early first births while the modern sector have fewer early first births and more late first births.

The Chi square test indicates a significance of 0.000 such $p < 0.005$ confirming the hypothesis that occupation directly influences age at first birth or vice versa since first birth may also influence the type of occupation through curtailing schooling opportunities .

4.4.3 DESIRED FAMILY SIZE BY RESPONDENTS OCCUPATION

*

Desired family size is a variable that explains the rationality caused by both awareness of the benefits of a small family norm or the awareness of the opportunity costs of children.

Although children are still valued by the population, the type of occupation is expected to influence the attitude towards desired family size. The sectors where children are considered an asset ^{ft}s in the traditional and mixed sector , the desire for a large family is expected, while the women in the modern sector who do not r-egard the number of children in the same way are expected to desire a smaller family. Table 4.6 below shows the analysis ^{of} this variable.

Table 4.6 : PERCENTAGE DISTRIBUTION OF DESIRED FAMILY SIZE
BY THE WOMAN'S OCCUPATION.

NOC/OCP	MODERN	TRANSITIONAL	MIXED	TRADITIONAL	TOTAL
0 - 2	39.8	32.5	23.6	16.7	845
3 - 4	46.1	53.6	53.8	55	1981
5+	14.1	13.9	22.6	28.3	876
TOTAL	389	274	1374	1665	3702

Chi - square value 105.79724 DF 6 Significance 0.0000

From the given data three to four children is the norm for the majority of these working women across the occupations. In the modern sector 46.1 percent of the women and 55 percent of the women in the agricultural sector desire at most four children. The women who desire more than five children in the traditional sector is 28.3 percent, and 22.6 percent in the mixed sector confirming the documented need for extra hands for the type of job that is being performed. In the sectors where child labour is not required, for example in the modern sector, only 14.1 percent of the women preferred at least five children. The same sector had the highest rating for two children as the ideal number at 39.8 percent compared to 16.7 percent of the women in the traditional sector.

The data in the table suggests that women in the transitional and modern sectors desire fewer children than women in the traditional and mixed sectors.

The chi - square test confirms the relationship between ideal number of children and occupation at the level of significance of 0.000. With $P < 0.005$, the hypothesis of negative relationship between the ideal number of children and working environment is confirmed.

4.4.4 NUMBER OF CHILDREN AGED FIVE YEARS AND UNDER.

The number of children under five helps to identify spacing awareness in the last five years. Spacing of children can only occur in those categories of jobs where having small children may interfere with working conditions. It is expected that the modern sector will have fewer children under five while the traditional sector and the mixed sector should have more than two children aged five years and under. Table 4.7 below show the analysis for this variable.

Table 4.7 : THE PERCENTAGE DISTRIBUTION OF THE NUMBER OF CHILDREN AGED FIVE YEARS AND UNDER BY THE TYPES OF OCCUPATION

NO/OCP	MODERN	TRANSITIONAL	MIXED	TRADITIONAL	TOTAL
0-1	68.9	66.6	60	58.5	2245
2	23.1	24.4	26.3	27.7	982
3 +	8.0	9.1	13.7	13.8	475
TOTAL	389	274	1376	1666	3702

Chi - square df 6 * Significance 0.0000

From the table, over half of the women in all the categories have at least one child aged five or under. The lower fertility among the modern and transitional categories is well reflected in the data. The modern sector had 68.9 percent of the women with at most one child whereas in the transitional sector there were 66.6 percent. On the other hand only 8 percent and 9-1 percent of the modern sector and transitional sector had 5 or more children compared with 13.7 percent and 13.8 percent among the mixed and traditional sectors respectively.

The Chi square test shows a very high significance between the number of children aged five years and under and the

type of employment a woman has. Since $p < 0.005$ the hypothesis is confirmed.

4.5 ASSOCIATION BETWEEN WORK STATUS AND THE PROXIMATE DETERMINANTS

4.5.1 EVER USE OF ANY CONTRACEPTIVE METHOD AND RESPONDENTS OCCUPATION

Contraceptive use is practised in accordance with the needs of the couple. However external forces beyond the couples decision such as type of employment is documented to play a significant role in this decision. Certain types of jobs expectation may encourage use of contraceptives or the expected background of the workers may play a role in the use of contraceptives. Due to the nature of the working environment in the modern sector, it is expected that women in this sector will be better users of contraception than their counterparts in the traditional sector. Therefore more women in the traditional sector will have had no access to contraception. The association between use of contraception with the type of employment is represented in table 4.8 below. _

TABLE 4.8 : PERCENTAGE DISTRIBUTION OF EVER USE OF ANY CONTRACEPTIVE METHOD BY THE RESPONDENTS OCCUPATION

USE/OCP	MODERN	TRANSITIONAL	MIXED	TRADITIONAL	TOTAL
NU	22.9	55.5	43.8	50.2	1679
FK & TR	11.1	9.1	12.1	12.6	446
MODERN	66.0	35.4	44.1	37.2	1580
TOTAL	389	274	1376	1666	3705

Chi - square value 113.90174 df 6 Significance .0000

The data from the table suggests that 77.1 percent of the women in the modern sector use some form of contraception while

only 22.9 percent never used any form of contraception. On the other hand, less than 50 percent of the women in the traditional sector used some form of contraception while 50.2 percent never used any form of contraception. The transitional sector had the highest percentage of women who never used any contraceptive (55.5 percent) . The mixed sector had 43.8 percent of the women who never used contraceptive. Of the women who use contraceptives, 66 percent of the women in the modern sector used modern methods compared to 37.2 percent from the traditional sector. The transitional sector had the least users of modern contraception methods (35.4 percent). From previous tables the transitional sector compared very well with the modern sector pattern . The deviation from this trend may likely be due to the nature of the job that usually encourages abstention. The implication that the employment where easy access to contraceptives is likely and where production rather reproduction is encouraged would have higher use of contraception is confirmed by the chi - square test value of 0.000 making this association highly significant.

4.5.2 ASSOCIATION BETWEEN BREASTFEEDING AND OCCUPATION

Breastfeeding is most effective when accessibility to the child by the mother is not restricted by the type of occupation. It is expected therefore that, women who are employed in jobs that are not flexible will have shorter feeding durations . Meanwhile women who work in the traditional or mixed sector will be expected to have longer breastfeeding periods. This analysis is shown in the table 4.9 below.

TABLE 4.9 : PERCENTAGE DISTRIBUTION OF BREASTFEEDING BY THE RESPONDENTS' OCCUPATION

BFD/OCP	MODERN	TRANSITIONAL	MIXED	TRADITIONAL	TOTAL 1
0 - 1 2	21.1	15.3	23.7	24.1	857 23.1%
13 -24	23.9	14.2	30.1	27.7	983 26.4%
25 + MONTHS	55.0	70.4	46.2	48.0	1875 50.5%
TOTAL	389	274	1376	1666	3705 100%

Chi - square value 58.47124 df 6 Significance 0.0000

The data from the table shows that 21.1 percent of the women in the modern sector breastfeed for one year compared to 55 percent who breastfeed for more than two years. Contrary to our expectations less than 50 percent of the women in the traditional and mixed sector breastfed beyond 24 months. On the other hand the highest percentage of women who breastfed after 24 months were among the transitional sector with a proportion of 70.4 percent and only 15.3 percent of these women breastfed for at most one year. The traditional and mixed sectors' short duration could be explained by the expected frequent pregnancies that may interfere with breastfeeding. This assumption is supported by chi - square significance of 0.0000, indicating that type of work has a significant influence on the duration of breastfeeding.

4.6 SUMMARY

The association between fertility, work status and the variables as has been shown in the foregoing discussions show

that socio-economic and culture plays a significant role in the type of work a woman does. Ethnicity and availability of jobs in the respective settings were shown to influence choice of occupation. It was also shown that education plays a significant role in the type of work a woman does. Women with at least secondary education get jobs in the modern sector more readily than their counterparts with primary or no education. The effect of occupation on fertility was shown to be quite significant with women in the more time demanding jobs such as transitional and modern sector having lower fertility than women in the more flexible jobs represented by the mixed and traditional sector. The age at marriage and type of occupation confirmed that occupation influences the age at first birth. It was found that women in the modern sector had late first births while women in the traditional sector had early first births. Although desired family size was predominantly small for all women in these categories the analysis indicated that most women preferred to have between three to four children. Women in the more time demanding jobs such as modern sector and transitional sector preferred a small family norm. The analysis also showed that women in the modern sector used contraceptives more than in the other sectors. Women in the traditional sector had higher cases of non use of contraception so the type of employment influences the need for family planning.

This study has established the significant role that occupation plays in fertility behavioural patterns of working women.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

The objective of this study was to examine the relationship between fertility and work status among women in Kenya. The data used were obtained from the 1993 KDHS. The chi square tests was used to test several hypotheses. The study results as predicted revealed a negative relationship between certain types of work and fertility. As predicted by the number of hypotheses proposed in the demographic literature, the analysis revealed that women who work in the modern sector tend to have lower fertility than women who work in the traditional sector. The study revealed an existing differential in fertility between modern and traditional and between the modern and mixed sector. The fertility among the transitional sector was significantly lower than in the traditional and mixed sector. However there wasn't a big difference in the fertility between the transition and modern sectors and also between the mixed and traditional sectors. These findings show that notwithstanding the influence of education, the type of job a woman performs and the setting in which she performs it may have some impact on the extent to which work affects child bearing. Further evidence of this is shown by the fact that the relationship between occupation and fertility is strongest where women's status is relatively high as measured by educational attainment, age of marriage, and where strong family planning may operate. It was evident that women in the modern sector had late first births and had higher levels of education than the traditional sector.

levels of contraceptive use appear to be higher among women in the modern sector occupations than among women in the mixed sector

and traditional sector. However these differentials are small and statistically insignificant. The use of contraceptive by occupations suggest strongly that the effect of achieved fertility on subsequent work plays an important role in the measured relationship. That is the number of children a woman has and when she has them determines in part whether she works, when she works and the type of work she does.

The findings of the study as summarised above suggest that working roles of women in Kenya conflicts with child bearing and that this conflict as expected is much higher for women who are working in the modern sector.

5.2 RECOMMENDATIONS

The relationship between work and fertility is clearly a complex one. A proper investigation of this relationship would require more detailed analysis than was undertaken in this study. However a number of recommendations can be drawn from the analysis undertaken in this study.

The persistent positive relationship between fertility and work is explained by the fact that women choose the type of jobs that are compatible with child rearing. The factors that make this compatibility poor in these sectors may need to be addressed if a change in fertility is to be attained. Although education offers greater opportunity for women and tends to delay age of entry into union, women of the same educational background tend to choose service jobs that are compatible with child bearing, which indicates a strong influence of culture in the choice of type of work. Attitudes towards this types of work should be addressed to influence women to work in any type of job especially those that are less compatible with child rearing. "The desire for a male child is st[^]ll supreme in the woman's life as it is in the African eye. He is an asset" (Ocholla - Ayayo, 1988). For this reason desired family size is usually frustrated in the hope of getting a male child irrespective of women's type of job, education or status. »

The type of work a woman does may not so much make her change her fertility behaviour but the type of fertility behaviour may determine her work type.

In this study, the analysis has been limited to frequencies and cross tabulations. It is recommended that the data be subjected to more detailed analysis such as regression so as to bring out the strengths of the relationships more clearly.

Thus further research is recommended in the following areas.

- (i) There is need for collection of data on employment record of the women with respect to fertility. This will streamline identifying the fertility behaviour with the respective occupation despite expected mobility within the work structure. The relationship between fertility and work will be more reliable,
- (ii) There is need for data on why women choose the type of occupations they do, despite the available opportunities. This would help determine whether it is culture or just the need for a flexible occupation during child rearing.
- (iii) Further statistical tests are required to test the strength of the relationships in order to help researchers reach more concrete results. Regression analysis would help determine the direction and strength of the relationship.

Recommendations for Policy Makers

Efforts have been made by researchers to identify areas of concern that could assist in determining factors that influence fertility so as to address areas that could effectively assist in reducing fertility among the Kenyan women to replacement level and to sustain a downward trend. Due to the findings in this study that different job opportunities have different effects on fertility the following recommendations are considered to be in order.

- (i) Occupations that have high job opportunity cost despite level of education have a significant effect on children ever born. For that reason the policy makers should encourage productivity and continuity of service through incentives that would reduce the priority of children over work by the working women in every sector of employment. Remuneration and mobility should be in accordance with percentage of continuity rather than years of service.
- (ii) The modern sector reflects low fertility and entry into such occupation sector requires longer years of training, hence later years of entry into marital union. The policy makers need to come out with clear programmes that will discourage discontinuation of girls from the school program so as to have as many girls finishing their education programmes as those that enrol. The young women should be the target for aggressive campaign for spacing

and internalising the small family norm at the beginning of their reproductive lives. This would be of great value,

(iii) Contraceptive use should be made accessible to all those who need it at whatever age. Married and working women should have a mandatory requirement for a specified period that they qualify for maternity leave after the first birth. This will encourage the use of effective contraceptive use. Policies that encourage breastfeeding and discouraging the use of alternatives should be enforced so that a woman who for medical reasons cannot breastfeed should have alternatives prescribed by the doctor and hence reducing the easy availability of alternatives that eventually leave the woman susceptible to pregnancy too soon. Breastfeeding can be encouraged by a policy to the employers to avail facilities within the working place where a mother can access the child with ease with little work disruption.

(iv) Women should be educated to be more responsible for their offsprings and to get those children that they can afford to care for with little dependence on the father of the child. This will help them manage their fertility responsibly,

(v) Women desire small families so the reasons that seem to encourage large families are

usually beyond their control. Empowerment policies for the women folk that will enhance independence economically would help solve this problem of empowerment by women through numbers of children. In the long run the whole family will benefit from a strong independent and responsible woman,

(vi) It was found that women tend to be concentrated in certain types of jobs and these occupations such as agriculture and sales have a comparatively higher fertility and so measures to discourage this trend should be addressed towards these occupations and flexibility within these sectors should be minimised and opportunity costs maximised here. Policies that would create possible high income that require longer hours of work at maximum benefit would go a long way to help women take rational decisions regarding aspects that would work to the contrary such as getting too many children too soon. There is need to review age at marriage and legislation to enforce such a policy should be put in place particularly for the women in the traditional sector of occupation.

(vii) Women's social status should be improved to enable them to participate at all levels in the socio - economic development activities of the country.

- (viii) Existing programmes to reduce fertility need to be strengthened and improved to achieve their desired objectives. Attention should be directed where maximum achievement is possible such as tying economic benefit to children ever born. This could be in terms of incentives and limitations within occupation policies.

BIBLIOGRAPHY

Anker and Knowles J.C. (1983), *Population Growth, Employment and Economic Demographic Interactions in Kenya*, BACHUE KENYA

Arensberg, Conrad M. and Solon T. Kimball(1976), *Family and community in Ireland*

Audrey Chapman Smock, (1981), *Women's Economic Roles: Papers on the Kenyan Economy*, Ed by Tonny Killick, Pp 219 - 226

Bean, Frank D. and Charles H. Wood, (1974), *Ethnic Variations in the Relationship Between Income and Fertility*. Demography 11 (November), 629 - 639.

Bongaarts, John, (1978), *A Framework for Analysing the Proximate Determinants of Fertility*. Population and Development Review 4(1): 105 - 132.

Cain, Glen G., (1966[^]), *Married Women in the Labour Force. An Economic Analysis*, University of Chicago.

Caldwell John C. et al, (1975), *Population Growth and Socio - Economic Change in West Africa*. The Population Council, New York.

Central Bureau of Statistics, (1978), *Women in Kenya*, (prepared by Audrey C. Smock), Ministry of Finance and Planning, 1978.

Chahil Renu, (1977), *Work and Status of Women in India; Fertility of Working Women*. A Synthesis of International Research.

Cochrane, Susan H. , (1983), *Effects of Education and Urbanization on Fertility*

Collver and Langlois, (1963), *The Female Labour Force in Metropolitan Areas. An International Comparison in Economic Development and Cultural Changes. Volume 10.*

Constantina Safilios-Rothchild, (1977), *The Relationship Between Women's Work and Fertility. Some Methodological and Theoretical Issues.*

Davis, Kingsley and Judith Blake, (1956), *Social Structure and Fertility: an Analytical Framework. Economic Development and Cultural Change (4): 211-235.*

Fawcett, J.T., (1972), *The Satisfaction and Costs of Children.*

Farooq Ghazi and George B. Simmons, (1977), *Fertility in Developing Countries. An Economic Perspective on Research and Policy Issues.*

Hellen Ware, (1977), *Women's Work and Fertility in Africa. A synthesis of International Research.*

Juan C. Elizaga, (1974), *The Participation of Women in the Labour Force of Latin America, Fertility and Other Factors. International Labour Review Volume 109 No. 5-6 may - June 1974.*

Kenya Demographic and Health Survey, 1989, NCPD KENYA

Kenya Demographic and Health Survey, 1993, NCPD KENYA

LAMS Working Paper Number 10, *The Impact of Female Schooling on Fertility and Contraceptive Use.* (Prepared by Martha Ainsworth, Kathleen Beegle, Andrew Nyamete)

Leibowitz, Arleen, (1976), *Education and the Allocation of the Women's Time.* Pp. 171-197 in F. Thomas Juster (ed), *Education, Income and Human Behaviour*

McCann, Margaret F. and others, (1981), *Breastfeeding, Fertility and Family Planning.* Population report series J, No.24. Baltimore, Maryland: Population Information Program of the Johns Hopkins University.

McNicoll, Geoffrey, (1982), *Institutional Determinants of Fertility Change. Determinants of Fertility Trends: Theories Re - examined.* proceedings of the International Union for the Scientific Study of Population seminar rfeld at Bad Homburg, Federal Republic of Germany 1980.

Murungaru Kimani, (1982), *Fertility and Family Planning in Kenya.*

IZVs, feu -

Ocholla-Ayayo, (1991), *An Analysis of Policy, Ethnic and Customary Rules of Conduct for Regulating Fertility Levels in Kenya.* **The Spirit Of a Nation**

Odede Dorcus Williams, *Female Educational Attainment Labour Force Participation and Fertility in Kenya.* Post graduate diploma project, P.S.R.I. , University of Nairobi.

Oroagwa J.M., (1985), *The Influence of Socio - Economic and Demographic Factors on Fertility Levels in Nairobi*. Thesis P.S.R.I., University of Nairobi.

Oppenheimer, V.K., (1982), *Work and The Family*.

Population Reports, Series M, No. 5 May- June 1981, *Fertility and Contraception*

Population Reports, Series M, no. 7 November 1984, *Status of Women*.

Suda E.A., (1991), *Fertility and Status of Women*. Post graduate diploma project, P.S.R.I., University of Nairobi.

Sweet, James A, (1973), *Women in Labour Force*.

United Nations, 1985, *Women's Employment and Fertility*.

UN Population Studies, (1985), Department of International Economics and Social Affairs. *A Comparative Analysis of World Fertility Survey*

Veronica Stolte - Heiskaneu, (1977), *Fertility and Women's Employment Outside the Hhome in Western Europe*.

WamalwaW.M, (1990), Proximate Determinants of Fertility in Kenya. Thesis, P.S.R.I. , University of Nairobi.

WellerR. H., (1973), *Female Labour Force Participation, Fertility and Population Policy.* Paper Contributed to the **1973** General Conference of the International Union for Scientific Study of Population.