UNIVERSITY OF NAIROBI

DETERMINANTS OF NUPTIALITY PATTERNS IN KENYA.

BY

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DECLARATION

This thesis is my original work and has not been presented before in any other University for the award of a degree.

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This thesis has been submitted for examination with my approval as University supervisor.

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DEDICATION

To Kebebush Hunde of Mcgill Universitv in Canada, with many grateful thoughts and love.

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ABSTRACT

The focus of this study is to establish the patterns of nuptiality and to examine the factors which determine the patterns. The analysis is conducted at various levels, first at national level in which the general trend in the patterns of nuptiality is discussed: Second at provincial and district level to examine the regional patterns of nuptiality.

Studies have shown that fertility can be reduced by reducing the proportion married and by raising age at marriage. The interest in conducting this research arises from this relevance attached to nuptiality. The study places more emphasis to female nuptiality patterns.

The main objective in this study is to examine the major determinants of current nuptiality patterns in Kenya by using the two latest census data, i.e. 1979 and 1989. In examining the determining factors we used only 1989 census data and the variables measured were level of education, place of residence, sex ratio and employment.

The analysis in this study is based on Hajnal's SMAM technique, Agarwala's, synthetic cohort, which is based on a 10 year marriage experience, Sadiq's hypothetical cohort which is based on a hypothetical data obtained from two censuses. Regression analysis is applied to estimate the determinant variables.

The findings shown that age at marriage is increasing in all the districts of Kenya. The study has also found that there is no significant change in the incidence of marriage where more than 95 percent of the female population is married at the age of 50. The study clearly demonstrated the role of female second eduction in raising age at marriage. We can assert that postponing marriage among the educated population is on the rise. Urbanization is the other important factor considered to a affect nuptiality. Policy measures should involve to further encourage Kenyan women to go to school and increase the prospects of there participation in the modern economic activity.

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CHAPTER 1

General Introduction

1.1 INTRODUCTION

The study of nuptiality encompasses a wide range of subjects which are considered as important determinants of levels and trends of fertility in a given society. According to the multilingual demographic dictionary, nuptiality is defined as the study which deals with the frequency of marriage (including other conjugal unions) and with the characteristics of persons united in marriage. It is also indicated that nuptiality deals with dissolution of such unions. The present study does not examine factors associated with the later, instead it addresses the current nuptiality trends in Kenya by focusing on the determinants of the patterns of age at marriage and incidence per se.

Despite the fact that lowering nuptiality is seen as one of the important policy intervention that could initiate regulation in population growth on a significant scale, the study of nuptiality trend in sub-saharan Africa has not been given the attention it deserves. Relative neglect of nuptiality until recently may also be a result of the initial concern of African nations on population policy to focus on the introduction of family planning. Because of this, population policy in most of the developing countries, was mainly concerned with the family planning programs directed almost entirely to married couples with a view to reducing marital fertility (Freedman, 1979).

Studies have shown that fertility can be reduced either by reducing marital

fertility or by reducing proportion married or both. Nevertheless, various findings in developing countries apparently indicate that the reduction of fertility through the use of contraception is not an easy task. It is this fact which drew the attention of demographers towards reducing the proportion married and raising the age at marriage, through social intervention.

Research undertaken by various demographers provides relevant information on aspects of defining patterns of nuptiality among countries with different levels of development. It is also argued that within each nation there arise variation in the marriage pattern according to region, urban-rural residence, religion and socio-economic status (Carter and Glick, 1976).

Kenya is one of the few African countries which have made remarkable efforts to implement a population policy that could bring about a suitable growth in its population. As a matter of fact, basic and far reaching social and economic changes have occurred in Kenya since it achieved independence in 1963. The fruit of the long standing commitment, in the desire to regulate population seems to exhibit an encouraging result where the trend in fertility decline is already marked. Besides, recent findings from (1989) and (1993) KDHS surveys indicate that changes have been observed in nuptiality both in the age at which people marry and proportion never married. While the various demographic reports indicate that the recent decline in fertility, among the developing nations, is attributed to the wide spread of modern means and usage of fertility control, the same sources have also shown the significant contribution of the change in the patterns of nuptiality.

Though the findings from the above mentioned Kenyan surveys indicate that marriage has continued to be universal in the country, the increase in age at marriage and proportion single at early ages of adulthood is shown to be rising slowly but steadily. Freedman (1979) argues that increasing evidence show that in most of the developing countries with declining birth rates, a decline in nuptiality has been an important - sometimes the major determinants of that decline.

The other interesting fact in the aspect of nuptiality is that age at marriage varies markedly among female population than to male in all countries. A pace of change is much slower in the nuptiality of men. Discussing nuptiality of men in Kenya, Agunda (1989) stated that mean age at marriage in Kenya's provinces doesn't differ significantly. Hence, in this study more emphasis is placed on to female nuptiality trends.

Therefore, the interest in conducting the current research arises from this relevance attached to nuptiality of female population; ie. the role it plays in population growth. The aim is to identify the major determinants of nuptiality patterns, and in particular, the determinants of age at marriage and incidence among the female population, and then to give precise recommendations on the issue of their manipulability in making deliberate policy measures.

In examining the trends of age at marriage for Kenyan women in three consecutive censuses, Agunda (1989) has come with the following results: in 1962 age at first marriage had been 17.6, in 1969 it increased to 18.6 and in

1979 further increase was recorded at 19.8. Demographically this is explained as nuptiality transition from early to late marriage.

The recent studies also indicate that important socio-economic differentials in the mean marriage age appear to have emerged. This will lead us to assume that delayed marriage could occur in various social or economic classes differently. Hence, the present research attempts to establish the presence of these trends and makes further analysis to explain the factors which have initiated this trend.

The socio-economic variables likely to be associated with marriage patterns include education, labour force participation, income and place of residence. As regard to demographic factors, sex ratio among marriageable ages together with migration trends take a significant influence on nuptiality pattern. The role of legislation and traditional values also require due attention.

This study aims at estimating mean age at marriage using Hajnal's (1953) singulate mean age at marriage (SMAM); a synthetic cohort method as applied by Sadiq (1965) and Agarwala (1962); With regard to analysis, the incidence of marriage is measured as a compliment of the proportion single at age 50 whereby below 5 percent of never married at this age shows high incidence of marriage, 5-10 percent intermediate and 10 percent never married is considered as low incidence of marriage (Bogue 1969). Furthermore, in regard to age it is argued that for the developed nations the proportion single in the age group 15-19 reflects early marriage incidence, those in 25-29 late marriage as most marriages tend to

occur in the 20-24 age groups. While in the less developed countries the incidence is classified in such a way that less than 18 years early marriage, between 18 and 20 late marriage and 20 and above very late marriage.

In order to look at the range of patterns in the timing and quantity of nuptiality the method used by Dixon (1971) will be used. According to her the timing of nuptiality is indicated by the proportion of men and women aged 20-24 who have never married, and the quantity by the proportion aged 40-44 who have never married. Dixon further argued that the age group 40-44 was chosen as one which, at least for women, marks the end of their reproductive period. First marriage occurring beyond this age, rare in any case, are of little impact demographically, concludes Dixon.

The 1979 and 1989 censuses are the basic sources of this research. The results obtained from these two censuses is going to be compared with one another as well as with other findings which have been done prior to 1979 or after 1989.

For the further examination of determinants of the change that is occurring in nuptiality, correlation and regression analysis are applied. Regression analysis helps inferences to be made about how changes in one or more independent variables are related to changes in the dependent variables.

The degree of influence of the selected independent variables against mean age at marriage shall be done with the application of regression analysis.

1.2 Problem Statement

It is well established that today's Kenya represents one of the few countries in sub-saharan Africa with a long history of population activities which has been directed towards the improvement of life. There has been a marked effort since independence in population research on fertility, mortality and migration through which further understanding in the field has also been achieved.

Findings in the area of fertility show that the country has recently entered the stage of fertility decline which is attributed mainly to the increase in the prevalence of contraceptive use (KDHS, 1993). Nevertheless, the reports have indicated that nuptiality is on transition as well. As a matter of fact, there is a considerable body of evidence and knowledge to suggest that nuptiality reductions produce a retarding effect on fertility, especially under the conditions prevailing in the currently developing countries (Duza and Baldwin,1977). Generally speaking high nuptiality (increasing age at marriage and decreasing the proportions married at different ages) is said to have a negative impact on fertility. On the basis of British data relating to female age at marriage and fertility, Busfield (1972) as cited by Duza and Baldwin (1977) stated that even in economically advanced western nations "those who marry before the age of 20 still have, on average one child more than those who marry aged 25-29". Furthermore, Davis(1963) points to the crucial importance of marital postponement as part of a multiphasic response

towards lowering fertility in a number of countries. Nevertheless, this study is not about a possible interplay of fertility and nuptiality, instead attempt is made to evaluate the extent of change in nuptiality patterns on the basis of recent census reports and second to make an explanation of the interaction between such changes and other socio-economic, demographic and cultural factors.

In considering the incidence of nuptiality in Kenya for the years 1962, 1969, and 1979, Agunda (1989) noted the rising tendency in the postponement of marriage among the female population. For instance, in 1962 about 68% of women in the age group 15-24 years were still single. But by 1969 within a period of seven years, this proportion had risen to 82% and by 1979 the proportion single in the same age group had reached 95%.

The comparison made between the two latest KDHS (1989 and 1993) clearly show that the proportion married in the early ages is on the decline. For example, the proportion never married in the age group 15-19 rose from 80 percent in 1989 to 84 percent in 1993, while the proportion in the age group 20-24 rose from 32 percent in 1989 to 36 percent in 1993. It is also indicated that above age 25 there was no substantial change.

Agunda (1989), in his study dealt with the levels, trends, patterns and determinants of nuptiality in the country using the three consecutive censuses since independence. A more recent study on aspects of Kenyan nuptiality was done by Newton (1993). It focused on the effects of socio- cultural and socio-

economic variables on marital foundation and dissolution using the 1989 KDHS data. Other studies and findings made by researchers and concerned government offices have also suggested that significant changes have been taking place in patterns of ages at marriage and incidence. Yet very little is known about the condition in different societies or among different subgroups that lead some population to delay marriage longer than the others, and some to contribute much higher proportion than the others of single persons. Hence, the central question discussed in this research are: how much does age at first marriage and incidence vary from one group to the other? What groups of population tend to marry when they are young and what groups when are much older? Does the place where people live or educational background make a difference in age at marriage? What kinds of major shifts in the marriage market are likely to occur in a traditional society moving towards modernization?

This study is on the determinants of nuptiality patterns in Kenya. Here the patterns of nuptiality will be discussed against variables assumed to be responsible for the emergence of these patterns. The mean age at marriage is considered as the central dependent factor affected by the various socio-economic, demographic and cultural variables.

1.3 Objectives

The general objective of this study is to examine the major determinants of current nuptiality patterns in Kenya.

Specific objectives

1. To investigate the patterns of age at marriage among the different economic groups of people in the country.
2. To evaluate the association between education level and age at marriage.
3. To evaluate the role played by occupation status in influencing age at marriage and marital status.
4. To analyze the effect of place of residence (urban / rural) on age at marriage and marital status.
5. To analyze the effects of sex ratio in the marriage market.
6. To examine the effect of migration on marriage in different regions.

1.4 Significance of the Study

Findings from various studies and analytical reports of census data indicate that Kenya has been moving towards fertility decline. This change is said to be necessitated by the over all transfer of the nation to modernisation. The rapid increase of urban centres, the expansion of schools to areas far from provincial capitals, development in the industrial sector (including informal sector) coupled with increase in women participation, modernisation in the cash crop farming, improvement in communication technology for easy movement and information exchange have all produced an attitudinal change in the nation at large.

Observations done in the country's nuptiality trend indicate that it follows this social transformation. Comparison of data since 1962 census reveal that a significant increase in age at marriage and incidence has occurred. Thus, Kenyan

nuptiality patterns appear to be in a transitional phase moving towards a more modern pattern characterised by later marriage and more people remaining single in the early marriageable ages.

Kenya's population policies, which are part of the development strategy, have been directed at lowering fertility and therefore population growth in the country. Early marriage leads to child-bearing at very young ages. Lower age at marriage, apart from its effect on population growth, leads to greater risks of morbidity and mortality for both the mother in her early adulthood and the child. In an attempt to avoid the negative effects associated with early marriage, much effort have been put in the introduction of family planning programmes with encouraging results. Nevertheless, it is also essential to focus on the far reaching benefits where nuptiality reductions could bring, not only in its retarding effect on population growth, though a primary concern, but also in the improvement of maternal health.

It is thus, in light of the growing nuptiality decline and the corresponding interest in slowing population growth that it becomes useful to deal with further examination of factors responsible for this decline. In identifying the determinant factors policy makers will be able to propose ways through which age at marriage could be influenced. In this case there is a strong belief that the study of nuptiality determinants will provide not only insight into the process of fertility reduction but also useful information for policy development in the areas of those factors found to be the basis for change.

1.5 Scope and Limitation

The present research focuses on the study of nuptiality patterns in the country as well as the factors which have given impetus to the emergence of these patterns. Accordingly, it examines how nuptiality timing (age at marriage) and incidence (proportion married) have been influenced among female population by different background variables in their reproductive life. The study employs three models for the purpose of estimation: regression analysis, Hajnal's SMAM and synthetic hypothetical cohort method.

The three methods are applied to estimate nuptiality patterns at national level on the basis of 1979 and 1989 census data. In using hypothetical cohort technique we shall be able to analyze the trend that had been prevailing during the ten years time between the two censuses. The research also involves analyzing nuptiality at district level using only 1989 census data and make comparison with the findings of other district level studies based on 1979 census.

To examine the determinants of nuptiality patterns multiple regression analysis is carried out by considering mean age at marriage as a dependent variable to be regressed against the selected socio-economic, demographic variables. The value of mean age at marriage in the proceeding of regression analysis is obtained from the Hajnal's SMAM method as it is considered the best representative of nuptiality trends during the decade.

Chapter one dwells on the discussion of the concept of nuptiality and its possible association with social changes. Accordingly, the selected background variables are discussed in the context of the objective reality prevailing in Kenya. The significance of the study and its objectives are pointed out. In the second chapter the relevant conceptual problems are discussed and a comprehensive literature review is provided. In the third chapter sources of data and its nature are specified. The appropriate measurement techniques and their limitations are also given here.

The fourth up to the sixth chapters constitute the main analytical part of the thesis. Chapter four focuses on the analysis of nuptiality patterns on national level using 1979 and 1989 censuses. Comparative analysis is employed to ascertain the pace of nuptiality trends during the decade.

The fifth chapter attempts to explore the patterns of nuptiality on the basis of the resent census information, using 1989 census data. Here, mean age at marriage and the incidence are examined on the provincial and district level as well as among the various groups of people with different backgrounds. The sixth chapter is the part where regression analysis is done in order to show the significant variables under which nuptiality patterns are influenced.

In this study secondary data is used. The use of secondary data has its own limitations in terms of accuracy which the author has no control over. Thus, the results should be interpreted with this in mind.

CHAPTER TWO.

Literature Review and Conceptual Framework

2.1 LITERATURE REVIEW

Scholars engaged in the study of nuptiality patterns describe the involvement of various processes which have influence the timing and the incidence of marriage. According to Bloom and Reddy (1984), knowledge of marriage patterns is useful for academic researchers and public policy makers who are interested in projecting rates of fertility, population growth, labour force participation, and the short term prospects of development.

With regard to the advancement in the study of nuptiality much credit is given to Hajnal for his enlightened approach in elaborating the history and range of variation in the timing and quantity or prevalence of nuptiality. Hajnal basically presents two general trends in the patterns of marriage: a 'traditional' or 'non-European' pattern of early and universal marriage that has characterised most of the developing world and a 'European' pattern of late marriage and high proportions who never marry (as cited by Dixon 1975). Coale (1971) also argued that the European pattern of marriage has been such that occurs late relative to most human experience, a pattern in which the proportion remaining permanently single is high.

Focusing on the analysis of nuptiality patterns, Bogue (1969) in his part introduced a technique by which we are able to examine marriage timing and incidence. Hence, in studying marriage patterns according to age, we need to make

use of two basic concepts: proportion ever marrying and age at marriage. He argued that a certain percentage of the population never marries but completes the life cycle still in the status of being single. This proportion may vary with significant degree from population to population and may change over time within the same population.

On the other hand, in regard to the patterns of age at first marriage, one can infer by noting the proportions married at each age or age group of the young adult and adult ages. Bogue asserted that ages at which the greatest rush to get married takes place may vary substantially from one nation to another or from one sub-group of a population to another within a nation. Therefore, within each nation there may arise a variation in the marriage pattern on the basis of region, urban-rural residence, ethnic origin, religion and socio-economic status. This, of course, is clearly noticed in the various studies which have been done in Kenya where districts are found to differ in the age at which marriage began, the rate at which marriage increases and the ultimate proportion ever married.

Having discussed this, Bogue further indicated the possibility of classifying the nation of the world into four nuptiality categories where median age of females at first marriage less than 18 years is considered as child marriage, 18 or 19 years as early marriage, 20 or 21 years as marriage at maturity and 22 years and over as late marriage. Of course, the world has under gone a great deal of change in every aspect of social dimension which could affect the patterns of nuptiality, as we shall see later on, since the above observation has been stated in the early 1950s.

The other way of viewing the population of a nation is to note whether the proportion ever marrying in their late reproductive ages is high, intermediate or low. It has been shown that a proportion never married among the female population in the age group 40-44 is an important index in reflecting the level of nuptiality incidence in a society. Accordingly, it is argued that celibacy at this age with a rate of 0-4 per cent is considered as low incidence, 5-9 per cent as intermediate and 10-23 as high (Dixon 1971, Bogue 1969).

Though it is argued that each nation of the world may have its own unique pattern of age at marriage and prevalence of celibacy, there is a general consensus among the scholars that early marriage tends to be accompanied by low levels and late marriage by a high prevalence of bachelorhood and spinsterhood.

For instance in areas with the prevalence of extended family the decisions pertaining to the formation of marriages are usually the responsibility of the family (UN, 1988). This study done by the UN further states that the selection of marriage partner by the family in itself could be influenced by economic interest or from a need of alliance with other kin groups. Early and universal marriage is sustained by the characteristic of agrarian economy (Uche 1994); it is interesting to note that childhood marriage is primarily a rural district phenomenon which is strongly associated with a lower rate of school attendance, lower social status and a lower rate of labour force participation for females (Bloom and Reddy, 1984).

In broadening this view McDonald (1981) argues that marriage systems, including norms about age at marriage, develop in each culture in relation to the function that marriage fulfils in the society. The major functions of marriage are classified in to economic, social and personal which are observed to exist in human society, and do not have similar manifestation in different social groups. It is asserted that the function of marriage changes resulting from technological advances such as urbanization, education, and population changes including in age structure. The author further explained that the transformation of society to a new mode of life is accompanied by the diffusion of new ideas and values where the rate of diffusion itself depends upon the level of development of the channels for diffusion such as education.

Consequently, social change education and modernization is said to have a tremendous impact in the transformation of society, from family modes of production to work outside the family, making children independent and rely on their own income to set up a household. This economic independence of children can bring about a change in the patterns of marriage in that partners will be free to select their mates in marriage instead of being determined by the arrangements of parents which is believed to result in early marriage. The role played by education in delaying marriage is a constituent factor in this transformation. The longer the time spent in school, the later the entry into marriage market and hence the older the age at entry into the first marital union (Hajnal, et al. 1954 as cited by UN 1988). It is further indicated that if the purpose of education is the development of career opportunities, time spent in school may be compounded

with more time spent in the labour market, which will lead to further increases in marriage ages.

In discussing the conceptual problems arising in nuptiality due consideration is said to be given to other essentially related issues such as availability of mates which is a function of sex ratio, if there is a shortage of unmarried women of appropriate age, timing of marriage for men will be delayed and permanent celibacy will increase. Accordingly, shortage of men will have the same effects on women and this over and under supply of men or women in the marriage market brings about a situation which is referred to as marriage squeeze.

Feasibility of marriage and the desirability of marriage are the other two aspects in the process of nuptiality which characterises a pattern, (Dixon, 1970) as cited by Duza and Baldwin (1977). In regard to the second condition capability in the required amount of money to start a new home equipped with all essentials as well as dowry cost need serious consideration. The tradition and amount of payment, in order to finalise the marriage process, differs from one society to the other.

However, this practise may be non existent in modern societies. Nevertheless, to be able to start family life through marriage requires an amount of expenditure. The other and third condition refers to desirability of marriage. This aspect is well defined by the response of overall reward of marriage in the life of individuals as well as by the nature of social and institutional alternatives to marriage.

The desirability of marriage is generally very high in traditional societies. In describing socio-economic differentials in marriage patterns of Indonesia, Palmore and Masri (1987) stated that muslim women, women with less education, women who did not work before marriage, rural women all marry substantially younger. This desire arises from both strict social norms and benefits of large family size in production activity. Nevertheless, in many countries of the developing world, changes are underway in the more urbanised, more educated population subgroups (UN, 1988).

In the modern social setting a variety of alternatives to marriages are created. And as it is mentioned earlier one of the foremost alternatives to early marriage is education. The other alternative to marriage is employment. Labour force participation in the modern sector of the economy might delay marriage for women and even reduce its later incidence. However, the various determinants may exert their influence differently in differing social or cultural situations, and some maybe more relevant to women than to men (UN,1988).

The task of childbearing and rearing activity which is concomitant to marriage life could be considered as a burden to women in their out of home economic participation. Hence this could motivate them to postpone, reject or even terminate marriage. Smith (1976) as cited by Duza and Baldwin (1977) postulates that future marriage behaviour in Asia should reflect the path of the key modernization process: urbanisation, educational development and expansion of non-agricultural employment. All these processes, he concludes are highly likely

encourage continued marriage delay in the coming decade.

The United Nations (1988) research analysis indicated that individuals with good prospects in achieving a good standard of living contemplates marriage at early age. This assumption seems to neglect the position which accepts that better economic condition is positively associated with age at marriage. Nevertheless, the same report later states that because of cultural differences in the role and structure of marriage and the family, the relationship between economic condition and the timing as well as prevalence of marriage in the developing world is expected to be somewhat different from those observed in the developed countries.

On the other hand, Davis (1963) argued that nuptiality delay is one of the demographic responses to increase in economic opportunities rather than to poverty. Chamratrithirong (1980) in his study of nuptiality patterns in Thailand emphasised the fact that although increased income may facilitate early marriage, in the course of economic growth the "price" of marriage, which also increases with new opportunities, probably tends to outweigh the effect of increased income. These are reflected in rising aspiration for owning a residence and for higher educational and occupational achievement before marriage. This approach will lead to hypothesis that modernised population sub-groups and individuals (urban dwellers, educated, middle income classes etc.) are likely to delay marriage more and marry less often than individuals with traditional surroundings.

Xenos and Gultiano (1992) standing in favour of this position asserted that social change has opened to women adult roles outside the family, and this has created categories of women for whom late marriage is an acceptable or even a desirable option. Even in the traditional system of rural society changes related to pressures on agricultural land and resources and their transmission across generation have produced a depressing effect on early marriage. Since early marriers are people who desire larger family size their aim could be to maintain the families economic basis or the need may arise from having boys for agricultural labour. However, this desire may diminish as population pressure is mounting.

According to a UN report (1988) for men age at entry into first marriage appears to be very similar in various regions of the world.Both the developed and the developing world are characterised by rather similar average of about 25 years and median SMAM of 25-26 years. As regards women, the differences in SMAM are much more pronounced between the main world regions. The lowest median which is 19 years is found in Africa and the highest 23.2 years in the developed countries.

The same report indicated that marriage prevalence is quite high in Africa among men and universal among women: proportions of ever married at age 50 often reach 97-99 per cent. At the sub-regional levels the highest proportions of ever married women are found in middle, northern and western Africa with proportions ever-married of 98-99 per cent. The lowest levels are reported in southern Africa with 92.2 per cent.

An investigation of nuptiality trends, based on Kenyan censuses survey data may provide insight into the change in marriage behaviour over the last three decades. The 1989 KDHS stated that the proportion of women who marry before age 15 has declined from 25 per cent of currently aged 40-44 to only 4 per cent of women 15-19; as this report described 75 per cent of women currently aged 40-44 married before the age of 20, compared to only 52 per cent of aged 20-24. This is infact a clear indication that age at first marriage has been rising in Kenya.

Nyarang'o (1985), using the data from 1969 and 1979 censuses concluded that in Kenya marriage timing for females has been increasing over the past seventeen years. She also asserted that incidence of marriage is very high for both sexes. Agunda (1989) in his study of the levels , trends, patterns and differentials of Kenya's nuptiality argues that nuptiality timing, particularly those for females, exhibit a definite increasing trend. He further ststed that women who have attained higher status in terms of higher education, gainful employment are likely to be economically stable and can afford to marry late.

In his attempt to find out the effects of socio - cultural and socio - economic variables on nuptiality in Kenya, Newton (1993) reflected that women with primary and secondary level of education enter in to marriage life later than with no education. Other variables such as urbanization and work status are found to have positive effect on the proportion of women never married. However, his research was based on KDHS 1989 and unable to show regional variations as well as the major problems of nuptility transition. His study was more about the applicabilty

of various technics in the study of nuptiality.

These past studies on nuptiality reveal that although age at marriage is generally early and universal in Kenya, the age at which women enter into union does vary widely among the regions, and socio-economic groups. Because Kenya encompasses numerous societies which are undergoing social change at a varying pace, there is great variety of entry process.

Indicating certain incidentes existing in some parts of Kenya, the East African Standard of September 17, 1996, stated that in western part of the country unknown number of young girls, some hardly 10 are each week withdrawn from school and forced into marriage by their parents. A report of such nature needs to be verified by a proper academic research.

On the basis of such various findings in the study of nuptiality pattern, this research will make an attempt to formulate and to hypothesise a framework of possible factors of marriage postponement in Kenya. What kind of major shifts in the marriage market are likely to occur during transition to modernisation. What factors determine the increase in age at marriage and compel the society to generate marriage reduction? These are very important issues in the process of establishing the trend as well as in explaining the findings. The demographic technique, which are useful to estimate nuptiality patterns have been developed by different scholars and the appropriate methods are selected for this study.

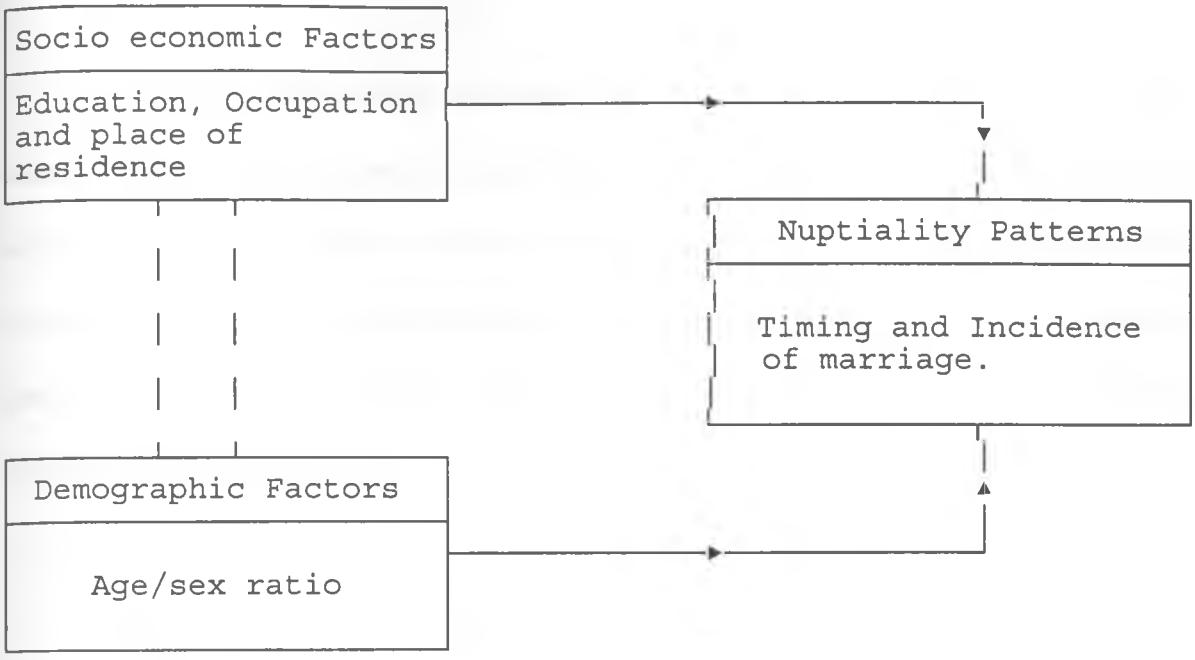
2.2 Conceptual frame work

Marriage as a social institution has been a major foundation of society and the family through out the ages. In trying to account for the range of values in the patterns of nuptiality we should look at three variables intervening between the social structure and marriage patterns. According to Dixon (1971), these variables refer to the availability of mates, the feasibility of marriage, and the desirability of marriage. Studies have shown that the formation of marriage being governed under this environment, its manifestation differs among nations and social groups in a nation on the basis of socio-economic, demographic, and socio-cultural factors. Therefore, nuptiality patterns are found to be different from one society to the other on the basis of level of socio- economic development in general, and the availability of mates, the feasibility and desirability of marriage in particular. The availability of mates is significantly delimited by sex ratio in marriage market (including pertinent age groups and segments of the social structure); feasibility of marriage, conditioned by financial constraints and considerations (dowry, housing problem, expenditure on family formations...); and the desirability of marriage which is defined largely in terms of the benefits gained from marriage by both sides, which means therefore marriage occurs if, and only if, each marriage partner gains from it and both increase their utility relative to remaining single. In traditional societies where arrangement of marriage is decided by the family or parents this desire arises from both economic benefit in having large family and the need to make alliance with other tribes for future cooperation in economic building.

Therefore, economy as a function of marriage is considered to be a means to the involved party as an economic security, or it may be needed for the amalgamation of wealth between the spouses or their family. Socially, it can be a means of establishing or strengthening community alliance or serve to continue and expand family lineage, reinforce social prestige and provide a means of socially approved sexual activity; and last but not least, personally, it can be a source of affection and love, serve as an initiation into full, adult membership of the society. Accordingly, the following general hypothesises are proposed:

1. Nuptiality patterns are positively influenced by socio economic factors.
2. Nuptiality patterns are negatively aaffected by the selected demographic factor.

Conceptual and Operational Framework.



The frame work is adopted and modified from Newton (1993).

According to the above frame work it is assumed that nuptiality patterns are affected by the selected socio - economic and demographic variables. The direction of influence is clearly indicated by the arrows. The interaction among the independent variables is also shown here. For instance, the level of urbanization or gainful employment opportunities has an impact on the mobilisation of population of selected ages and sex.

2.3 Operational hypothesis

On the basis of recent findings (KDHS,1989;KFS,1979...) it is ascertained that transition in nuptiality has been occurring in kenya. Nevertheless, the change can not occur in a similar fashion all over the nation. Therefore, it is assumed that

there are intermediate factors which have caused this change to happen in a certain way under certain circumstances.

There are areas where the mean age at marriage is found to be not only below the national average but also remain low permanently. This variation could be attributed to the different levels of development. Thus it was assumed that marriage timing and incidence are influenced by the level of education, type of place of residence, occupation, and sex ratio. In light of all these, the following hypothesises are proposed.

1. Age at marriage is positively affected by level of education.
2. Marriage timing is positively influenced by urbanization.
3. Marriage timing is positively influenced by labor force participation.
4. Sex ratio negatively affectes marriage timing and incidence.

CHAPTER THREE

Methodology.

3.1 Sources of data

With the absence of nation wide exercise in vital registration and a coverage limitation of surveys it is widely believed that in developing countries like Kenya census data forms the most valuable source of information. Explaining the significance of census information and appropriateness of the techniques, Nyarang'o (1985) stated that the methodological advancement has not only aimed at refining nuptiality estimates but also at compensating for the absence or deficiency in marriage statistics as is the case for most statistically less developed countries, where census remain the only available source of data for nuptiality studies in developing countries.

In the present study, the marital information combined with the other intermediate variables from the 1979 and 1989 censuses will be used. These information need to be cross tabulated and classified by age, sex, educational levels, type of place of residence, regions, and occupation. Both the 1979 and 1989 censuses were collected on the basis of defacto approach and this will easily enable us to make comparability of estimates.

3.2 Quality of Data

In studying nuptiality trends, demographers have employed various techniques appropriate to available data. In the developed industrial countries where vital registration has been practising, computational procedures are done

regularly and effectively. In regard to the developing world the main obstacle to a direct estimation arises from the deficiency in the reliability of data. There is usually no official registration of marriage, or at least it is not compulsory and available to everybody to cover the entire nation. Therefore, Census data are the only sources which have nation wide coverage and may provide essential information.

Nevertheless, census data in the developing world are not free from certain errors such as age and marital status misreporting. Bondestam (1973) stated that simple farmers, whose struggle is focused on survival, are asked questions which they have never dreamt of. Age is, for example, a trivial concept for an European, but has no meaning for a large part of the African population where a majority have never been to a health clinic, or seen a school from inside and do not know it's government. Therefore, digital preferences in age reporting and misstatements of date of marriage due to memory lapses are some of the common errors in nuptiality reporting. So it is necessary to examine the nature and magnitude of errors affecting the 1979 and 1989 census data before discussing the trends of nuptiality in different social organisations. In this study the magnitude of error in age/sex reporting of the two censuses will be examined by the application of the United Nations Age/Sex Accuracy Index. This index serves as a useful measure where it reveals the order of magnitude of error and the general accuracy of age reporting by sex in the censuses. The computation utilizes data in 5 year age groups from age 0 to 75.

To obtain the age ratio score for a particular sex, the absolute value of the percentage by which the number in each age group differs from the average of the numbers in the next higher and in the next lower age group is determined and the average of these percentages is the age ratio score.

The age ratio is computed using the formulae below:

$$\text{Age ratio} = \frac{5\ P\ x}{1/2\ (5Px\text{-}5\ +\ 5Px + 5)}$$

where p = population in age group x

The sex ratio for each age group is determined by the first differences calculated and the average of these irrespective of sign, gives what is called sex ratio.

$$\text{Sex ratio} = \frac{\text{(male population)}}{\text{female population}}\ 100$$

A combination of these, called the joint score is defined as three times the sex ratio score plus the sum of the male and female age ratio score, and the scale for the index ranges:

Data	Index
Accurate	<20
Inaccurate	20-40
Highly inaccurate	>40

The index has been calculated at national level. The following table shows the details of data evaluation on the basis of 1989 census data.

Table-1 UN Age/Sex Accuracy Index for 1989 census

Age group	male age	deviation	female age	deviation	sex ratio	difference
0-4					101.19	0.13
5-9	102.11	2.11	102.26	2.26	101.06	0.18
10-14	102.96	2.96	101.55	1.55	101.24	3.14
15-19	98.43	1.57	96.11	3.89	98.10	10.32
20-24	90.75	9.25	98.96	1.04	87.78	4.57
25-29	106.22	6.22	106.64	6.64	92.35	9.06
30-34	93.89	6.11	88.21	11.79	101.41	0.75
35-39	96.87	3.13	97.45	2.55	100.66	0.35
40-44	99.16	0.84	96.96	3.04	101.01	5.19
45-49	93.11	6.89	97.02	2.98	95.82	2.22
50-54	102.54	2.54	101.41	1.41	98.04	0.78
55-59	92.66	7.34	88.69	11.31	98.82	9.19
60-64	102.83	2.83	112.63	12.63	89.63	7.56
65-69	97.39	2.61	90.29	9.71	97.19	6.24
70-74	92.04	7.96	102.80	2.80	90.95	20.00
75-79					110.13	
		62.36		73.6		79.68

Source: Computed from 1989 census data.

some of mean deviation male's = 4.45

some of mean deviation female's = 5.26

some of mean age to age differences in reported sex ratio = 5.31

Therefore, $3(5.31) + 4.45 + 5.26 = 25.64$

The mean deviation of the age ratio for males and females are 4.45 and 5.26 respectively, and the mean age to age differences in the sex ratio is 5.31. On the basis of this index the mean of the differences from age to age in reported sex ratio, without regard to sign, is taken as a measure of the accuracy of the observed sex ratios, on the assumption that these age to age changes should approximate zero.

According to Shryock and Siegel (1976) this UN index appears to be a useful measure for making approximate distinction between countries with respect to the accuracy of reporting age by sex in censuses. Here we may have a look at the past three censuses conducted in Kenya with respect to the results obtained by applying the UN index.

Table 2 UN Age/Sex index for the last three censuses

Year	Joint score
1969	33.12*
1979	24.70
1989	25.64

*source: Nyarango (1985); Computed from 1979 and 1989 censuses.

From the values in the table, one can say that there is improvement in the general index for the country. Basically, the result shows that data are inaccurate as values between 20-40 indicate inaccuracy. However, we can also observe that both in 1979 and 1989 the level of inaccuracy is very low as the results are approximating twenty.

This level of inaccuracy is, some how, not unexpected when we consider all the short comings that hamper a smooth proceeding of census taking in a

developing country like Kenya. In describing the fact that census is the most valuable source of marriage data in Kenya, Nyarango (1985) asserted that in this country, as in other developing world, marriage registration is relatively incomplete where not all areas of the country are covered. Moreover, sample surveys are often restricted to sample size, selection bias and non-response errors where generalisation from such data information is apparently ineffective.

So much so, both the 1979 and 1989 population and housing censuses were collected on a de facto basis and this is an essential condition for the purpose of comparison between the two results. In both cases consistency was observed in the classification of marital status as recommended by the UN. According to a report from CBS (Central Bureau of Statistics), the 1989 census was the most comprehensive and ambitious work to be under taken in the history of census taking in Kenya. In this study the estimation of variation of nuptiality among social groups and regions is employed mainly on the basis of the latest information obtained from 1989 census data. The different techniques of estimations which are selected for this study have been developed on a number of assumptions in order to maximize the chances of accuracy.

For this reason, the present study employs the techniques which have been developed to estimate nuptiality indirectly on the basis of census data. These are Hajnal's (1953) singulate mean age at marriage (SMAM); Agarwala's (1962) and Sadiq's (1965) synthetic cohort approach; the nuptiality table and other statistical techniques.

3.3 Methods for Nuptiality Estimation

There has been a growing interest in the study of nuptiality not only for its impact on population growth but also in its own right as an important demographic factor which affects the marital life cycles of people in a given society. The present study employs the techniques which have been introduced, refined and tested by different scholars in various parts of the world (both in the developed and developing). The techniques which I outlined and briefly discussed below are indirect measures of estimating age at marriage and direct estimation of nuptiality timing and incidence.

Age at marriage and proportion single are the two basic phenomenon which characterise the nuptiality behaviour of a society. As we have seen earlier, both the factors normally change over time contributing to change in marriage patterns.

In order to have a clear and complete picture about the age patterns of marriage we should know not only the average age at marriage but also the tempo of marriage as well as the age span of first marriage. Knowledge of these parameters is necessary to specify the nuptiality process and to make an in depth analysis of the age patterns of marriage. Analysis of these components is, therefore, essential for studying nuptiality patterns.

It is generally suggested that age pattern of marriage could be defined in terms of the age at which marriage begins, the rate at which it progresses and the proportion ultimately ever married. The percentage or proportion distribution of

marriage by age of brides or grooms is often used for descriptive and comparative purposes. By comparing distribution for different regions in the country, or as in the case of the past chapter, national level at different years we are able to observe the patterns and the trends of nuptiality prevailing in Kenya.

3.4 Hajnal's (1953) singulate mean age at marriage (SMAM)

Hajnal (1953) has devised a procedure by which from data on proportion single by age groups, one could compute what is termed as Singulate Mean Age at Marriage. This technique measures the timing of nuptiality by utilizing proportion single in a given population on the basis of a census. This method is sensitive to biases in age reporting and in classification of marital status. As it uses only the experience of one census, it is also vulnerable where marriage patterns have been changing in the recent past.

Hajnal's technique proceeds with pre-impositions of various requirements and assumptions, among which the determination of upper and lower age limit, stability of marriage patterns in recent past, and the negligibility of mortality in the selected age groups are the important ones. The method gives a general overview of marriage timing. Its simplicity lies in the fact that it can be readily calculated from census information.

This technique, therefore, is used to examine the trend of nuptiality in Kenya during the last two consecutive censuses, first at national and then on provincial level. The district level analysis is done on the basis of information obtained from

the 1989 census only.

The required data in the computation of SMAM is the population aged from 10 or 15 to 55 by 5 year age groups and by sex for each census. Apart from this, we need to have the population single, married and not stated marital status for 10 or 15 to 55 years age group and sex.

In this study it is the age group 15-19 which is considered as the earliest age group within which marriage occurs. The main reason for this is that the 1989 census report volume 4 which contains the information on nuptiality and which is the main source of information in this study does not include marital status below the age 15. This is maybe because the rate of marriage at that level is very low and negligible. This, infact, is supported by Nyarango's (1985) work who using 1979 census results asserted that comparison of the SMAM values using different age groups as the earliest within which marriage occurs (10-14, 12-14, 15-19), shows that the differences are negligible (for example 0.1 years between 10-14 and 15-19). Moreover, as the values of SMAM steadily rises (as we shall see in the coming chapters) in the past three decades, it is positive to assume that considering the age group 10-14 as the earliest age at which marriage starts is negligible.

On the basis of the above explanation, Hajnal's SMAM is obtained in accordance to the following computational procedure:

Step 1.. The proportion single for 5 year age group and sex from age 15-54

U = Sx/Px ; where Sx - proportion single in age group x

Px - total population in the same age group.

Step 2.. Find the person years lived in the single state. In case of this study the lower age limit is 15. Therefore, 15 + 5, ie. sum of all proportions single upto age 50, multiplied by the length of the age groups, which is 5.

Step 3.. Calculate the proportion who ever marry.

This is obtained by 1.00 - S(50), ie. proportion never marry at age 50. The later is given as the average of the proportion single in age group 45-49 and 50-54.

Step 4.. Find the number of person years lived single. This is obtained by multiplying proportions remaining single at age 50 by 50 (years lived).

Step 5.. Calculate SMAM, which is given by the formula

$$SMAM = \frac{X + 5 \sum S_i - 50\ [S_{50}\ ]}{1 - S_{50}}$$

3.5 Synthetic Hypothetical cohort method

This method requires the construction of hypothetical cohorts. Hajnal's original method in the computation of SMAM assumes that marriage patterns have been stable in the recent past. This assumption might not hold true to all societies, including Kenya where significant changes have been observed in the past three decades since independence. Therefore, in a situation where the marriage patterns tend to change, SMAM can not be reliably estimated directly from the observed data. Then, proportions single for a hypothetical cohort exposed to marriage between two censuses has to be used, in our case 1979-1989. This technique was introduced and further improved by Agarwala (1962) in India, and Sadiq (1965) in Pakistan.

Agarwala's synthetic cohort is based on a 10 year marriage experience by taking the ratio of proportions single between two censuses ; where as Sadiq considers a 5 year synthetic cohort by considering hypothetical cohort for the mid intercensal period. The values of proportion single in the later case are merely the average of those in the two censuses. For instance, the 1979 and 1989 Kenya censuses data could be used to construct a hypothetical cohort of 1984. Thus, it is possible to use this 1984 hypothetic and 1989 observed data to compute a 5 year synthetic cohort and through which we are able to analyze the intercensal trends. The advantage of these techniques can be seen in its consideration of marriage experiences of a cohort as it passes through life.

First let us see the construction of a 5 year hypothetic cohort as was applied by Sadiq in 1965 .

Table 3 Five year Synthetic Cohort Formula:

Age grp.	No.(i)	Proportion single t1 (5 years apart) t2	Proportion single for hypothetic or synthetic cohort
15-19	1	S11 S12	S1 = S12
20-24	2	S21 S22	S2 = S1 (S22 / S11)
25-29	3	S31 S32	S3 = S2 (S32 / S21)
30-34	4	S41 S42	S4 = S3 (S42 / S31)
35-39	5	S51 S52	S5 = S4 (S52 / S41)
40-44	6	S61 S62	S6 = S5 (S62 / S51)
45-49	7	S71 S72	S7 = S6 (S72 / S61)
50-54	8	S81 S82	S8 = S7 (S82 / S71)

In general Si = Si-1 (Si2 / Si-1,1)

For i = 2,3,4 ... and S1 = S12

Applying the same method we can construct a synthetic cohort when two censuses are ten years apart as applied by Agarwala in India.

Table 4 Ten year synthetic cohort formula

Age gro.	No. (i)	Proportion single t1 (10 years apart) t2	Proportion single for hypothetical or synthetic cohort
15-19	1	S11↘ S12	S1 = S12
20-24	2	S21 S22	S2 = S22
25-29	3	S31 S32	S3 = S2 (S32 / S11)
30-34	4	S41 S42	S4 = S3 (S42 / S21)
35-39	5	S51 S52	S5 = S4 (S52 / S31)
40-44	6	S61 S62	S6 = S5 (S62 / S41)
45-49	7	S71 S72	S7 = S6 (S72 / S51)
50-54	8	S81 S82	S8 = S7 (S82 / S61)

In general Si = Si-1 (Si2 / Si-1,1)

for i = 2,3,4... and S1 = S12; S2 = S22.

3.6 Statistical techniques

The demographic and socio-economic variables which are selected for this study will be cross tabulated against the marital status as age at marriage of the population. Further more, correlation and regression analysis are used in order to examine wether or not a relationship exists between the above mentioned variables and the dependent variable.

According to correlation it is asserted that the degree of relationship between two variables is defined on the basis of their values which lies between -1 and +1. Therefore, two variables may have a positive, a negative or they may be uncorrelated. Two variables are said to be positively correlated if they tend to change in the same direction, that is if they tend to increase or decrease together, whereas negative correlation indicates a situation of change in an opposite

direction, that is when one increases the other decreases. Zero or no correlation implies an uncorrelated relationship where the two variables tend to change with no connection to one another. In this study we use Pearson product moment coefficient.

The information which represent the value of the selected variables are summarised by employing nominal scales such as proportions, percentages and ratio. Infact, the method of SMAM is basically computed when we are able to obtain the proportions of persons single at different levels of marriageable ages. Timing and incidence of marriage are also measured on the basis of proportion single in a certain age group. Expressing the data in terms of proportion enables us to make a direct comparison. The proportion of single population in age group x in a defined area is given by the number of single persons in age x of the area divided by the total number of population in the same age group and area.

Percentage can be obtained from proportion simply multiplying by 100. In this case we are standardizing for size by calculating the number of individuals who would be in a given category if the total number of cases were 100. In this study percentage is used to classify the values of independent variables in the proceeding of regression analysis. Ratio is applied to find instances in which we examine the number of men to women in marriageable age groups of a definite area so that it indicates the situation of marriage market. The ratio of one number x to another number y is defined as x divided by y. Sex ratios are conventionally given in terms of the number of males per 100 females. For instance, a sex ratio of 85 would

mean fewer males than females (or low sex ratio) whereas a sex ratio of 115 would indicate a preponderance of males.

The most important statistical technique which will be employed in this study is regression analysis. Regression analysis helps in drawing inferences about how changes in one or more independent variables are related to changes in the dependent variable. Two types of regression techniques are selected for computation. First simple regression analysis which deals with two variables one being dependent and the other independent. The second one is multiple regression analysis which deals with more than one independent variables against the dependent variable.

In the present study the dependent variable is mean age at marriage as obtained by Hajnal's technique; where as the independent variables include level of education, type of place of residence, region of residence, occupation and sex ratio of marriageable ages. By regressing the dependent variables against the independent variables, we may ascertain the nature of the relationship between the variables, identify the variables which have strong influence, and determine the strength of associations.

In case of simple regression analysis the equation is presented as:

$y = a + bx$, where

y = is the dependent variable

a = is the constant, ie. the value of y when $x = 0$

b = is the regression coefficient or the value that y varies on the average with a change of one unit of x.

x = is the independent variable.

An extension of simple regression involves more than one independent variable and the equation takes the following format:

$$y = a + bx1 + bx2 + bx3 \ldots bx\,k\,.$$

CHAPTER FOUR

Patterns of Nuptiality - National Level.

4.1 Timing and Incidence of Nuptiality

The study of marriage patterns forms a primary stage in the investigation of nuptiality in any society. In this chapter attempt shall be made to reveal the patterns of nuptiality during the decade between 1979 and 1989. The description of nuptiality patterns in any society is basically founded on two principles, that is the timing and incidence of nuptiality.It is on these fundamental principles that one could be able to explain marriage differentials interms of the age at which marriage begins, the rate at which it increases, and the proportion ultimately married.

As it was discussed earlier the timing of nuptiality is indicated by the proportions of men and women aged 20-24 who have never married. This age group is selected as an index because in most countries of the world the rush to marriage relationship, mainly for women, is high at this stage.
Here this approach is adopted for the very reason that the result obtained could be easily compared with other countries, so that the position the country holds could be evaluated. The same reason applies in the analysis of nuptiality differential among regions and districts.

For further understanding of the quantity of earlier marriage we shall also look at the rate of marriage at the earlier age group, ie. 15-19. As is shown below the proportion of marriage in ages 15-19 has been dwindling to a significant level

where the index could no more serve as a measurement of nuptiality level in Kenya.

With regard to the incidence of nuptiality the proportion never married in ages 40-44 is widely used as an index of measurement. Apparently first marriage occurring beyond this age, particularly for women, are believed to have little impact demographically. So that the quantity of never married women at this age is an important indication of nuptiality incidence in a society.

According to Bogue (1969), in order to examine the incidence of marriage it is also important to consider the trend at age 50 where the quantity found at this age in female population could show the trends of life time spinsterhood. According to Bogue if the ever marrying women population at age 50 exceeds 95 per cent this indicates a level of high incidence, 90-95 per cent intermediate and less than 90 per cent low incident. The ever marrying at age 50 is obtained from the average ever married between ages 45-49 and 50-54.

The application of Bogue's methodology using the 1979 and 1989 census for Kenya gives the following results:

Female proportion single at age 50, 1979

$$= \frac{(45\text{-}49) + (50\text{-}54)}{2} \text{ which is}$$

$$= \frac{0.0222 + 0.0213}{2}$$

= 0.02175, which means, therefore, 97.8 percent were married.

In 1989 the figure shows 0.0394 proportion single implying 96.1 percent married.

Table 5 Proportion single by age and sex, Kenya 1979 and 1989

Age group	1979		1989	
	male	female	male	female
15-19	0.9758	0.7122	0.9789	0.8119
20-24	0.7218	0.2449	0.7910	0.3529
25-29	0.3217	0.0926	0.3830	0.1579
30-34	0.1308	0.0489	0.1439	0.0900
35-39	0.0852	0.0336	0.0860	0.0629
40-44	0.0579	0.0285	0.0689	0.0509
45-49	0.0524	0.0222	0.0610	0.0410
50-54	0.0213		0.0378	

Source: Computed from 1979 and 1989 censuses.

As it is shown in the above table, in Kenya during the 1979, census 97.8 per cent of female population were already married at age 50. This figure was lowered insignificantly by the year 1989 to 96.1 showing that in both cases the incidence of marriage, from this perspective, remained high.

This condition takes a different course when we evaluate the patterns of marriage using the approach applied by Dixon (1971) in her study of nuptiality among 57 countries. Though this approach is not original to her, she used the technique in such a way that one can easily find the prevailing trend in the area of study under concern. The method states that nuptiality timing is measured by evaluating the quantity of marriage in age group 20-24 where it never married at this level is between 2-29 per cent the condition is considered as low; 30-49 per cent medium and 50-78 per cent as high. In this regard just by looking at the age group and the corresponding percentage we can tell the category of any society as far as the position of its nuptiality timing is concerned.

On the other hand, the observation of incidence is said to be based on the quantity of marriage in the age group 40-44. In this regard an incidence between 0-4 per cent is considered to be low, 5-9 per cent medium and 10-23 per cent high. If we find a society with low timing (ie. 2-29 %) then it means that the proportion married at that age level is very high. In the same taken low incidence (0-4 %) indicates that large proportion of the population is already married.

The need for this approach in examining the trends of nuptiality lies in the fact that it will be easier to clearly observe the position in which any society is existing in different times. It is also important to make comparisons among different nations, regions and social groups.

Table 6 National level, Female Percent single in the last four consecutive censuses:

Ages	1962**	1969**	1979	1989
20-24	12.6	18.43	24.49	35.29
40-44	1.9	2.82	2.85	5.09

** Source: Nyarango, 1985; Computed from 1979, 1989 censuses.

As is shown in the above Table the pattern of marriage timing as well as incidence have undergone a great deal of change in the period between 1962 and 1989. Early 1960s had been a historical era in the history of Kenya. It was a time when the country achieved its independence and the native Africans filled with not

only spirit of freedom from foreign domination but also hope of better life and secure economic opportunities. The relationship between economic conditions and marriage rates has been noted in such a way that couples will postpone marriage during unfavourable economic conditions, (Bogue 1969, Matras 1971). It is simply to indicate that in good times, marriage rates tend to be higher while during depressions and recessions, marriages are more likely to be postponed or put off entirely.

The redistribution of fertile land to African farmers formerly in exclusive control of white population, the accessibility of modern schools to Africans and the general lifting of colour discrimination in all sectors had infact been a leap forward to create a sense of bright future in the minds of Africans.

Apart from the new environment emanated from independence, it is important to notice that the large majority of the population of Kenya have still been living in traditional rural areas where backward way of farming was prevailing. The customary beliefs and attitudes were much pronounced among these rural areas and this infact governs social relationships including marriage. Though the opportunities for modern ideas to penetrate the society were opened, their dissemination could not seem to proceed smoothly. The number of schools were very few, enrolment of young Kenyans, particularly women, was much lower when compared to the following two decades.

Under circumstances indicated above it may not be surprising if we find that the level of nuptiality timing and incidence had been very low where Only 12.6 per cent of women in age group 20-24 had been single and only 1.9% were single (or 98.1% of them are already married) by the age 40-44 during 1962.

Table 7 : Typology of age at first marriage and proportions of women never married, national level in the last four censuses:

	percentage single ages 20-24		
ages 40-44	low 2-29 %	medium 30-49 %	high 50-78 %
low 0-4 %	Kenya 1962* Kenya1969* Kenya 1979		
mid. 5-9 %		Kenya 1989	
high 10-23%			

Source: * Nyarango 1985; Computed from 1979 and 1989 censuses.

The important aspect we may consider here is the stagnation of nuptiality patterns over the next 20 years since 1962 until when a well pronounced change has occurred during the time of 1989 census. The rate of never married female population in age group 20-24 during 1989 had risen to 35.3 which is three times higher from that of 1962. This increase in nuptiality rate enabled the position of Kenya to shift from low in timing and incidence to medium, as it can be clearly

seen in table number seven.

The incidence of marriage which is indicated here by the proportion single in age group 40-44, has also shown a gradual increase shifting from low to medium. The interesting thing here is that the shift of status, both in timing and incidence, have occurred simultaneously in a similar fashion manifesting a similar position during the past four censuses. It is infact argued that in a society where marriage is high at early marriageable ages the incidence or the proportion ultimately marring follows the same path showing very low remaining single.

The other important issue worth mentioning here is that though a shift in nuptiality trend has occurred, the rate at which it increases is very low such that in both timing and incidence the position in the next upper level remains at the bottom of the scale(see table 7 above). Looking at the slow pace of change in both instances one can not say that there may emerge a remarkable shift in the near future.

However, considering the rise in the quantity of proportion single women at the peak of marriageable ages in Kenya, the trend could be conceived as the occurrence of transition in nuptiality. This could be more pronounced if we have a look at the general tendency taking place in Africa where studies show that most nations in the continent are still at a lower level of nuptiality.

For the purpose of better understanding I borrowed a recent data report from a study of nuptiality patterns covering some African countries where timing and incidence of nuptiality are discussed. Table eight indicates that most of the countries under investigation are in a lower stage of nuptiality both in timing and incidence.

According to this study done in USA on the basis of data collected during 1986-1992 from respective countries, two third of the countries constitute the bottom in the scale of measurement. In some cases we find nearly all women have been married (Mali, Togo) in the age between 20-24. Subsequently, in countries like Senegal, Togo, Nigeria, Niger, Ghana, Cameroon, Tanzania and more, the proportions ultimately married between the age 40-44 is more than 99 per cent. As it is clearly shown in the typology table below, only Botswana and the newly independent Namibia have reached the high level in the rank both as regards the incidence and timing of nuptiality.

An interesting characteristic is found in the case of the Sudan where in terms of timing the country has reached high level, which means therefore the proportion single in age group 20-24 is higher than most African countries, but it remains at the bottom when considered from the point of incidence, meaning proportion single in age group 40-44 is low which is similar with most African nations. This indicates that, though women in this part of the world significantly delay their entry into marriage, their ultimate entry into union is obvious. This trend we found in the Sudan contradicts the very notion which states that in a society

where marriage occurs late, more people remain ultimately unmarried than in a society where marriage occurs early. In other words, it is assumed that high proportion single at early ages of marriage is an indication of a similar condition in the proportion of ultimately marrying.

This proposition may hold true in the case of Kenya, as the information obtained in the past censuses confirms. The transformation of Kenyans nuptiality pattern has been so moderate where it passes from low to medium both in timing and incidence of nuptiality.

The trend in the Sudan is also in disagreement with the usual practices of moslem societies where early marriage is dictated by tradition. The reason why women in the Sudan delay marriage requires closer investigation, nevertheless one can assume that the long social strive caused by the civil war could be the reason to create marriage squeeze and disrupt the normal course of events.

As indicated elsewhere, scholars engaged in the study of nuptiality tried to specify the patterns of marriage in countries with different level of development to have significant variation. In this regard higher quantity in proportion single at conventional marriageable ages and still in later years of reproductive ages is said to be a pattern found in a well developed European countries, where as the countries with lower proportion single in both instances is a typical characteristics of backward traditional societies. Nevertheless, such analytic observation which had been done in late 1950s and 1960s seems to unfit for the recent development

taking place in the realm of nuptiality both in the advanced west and under developed Africa. According to a recent finding reported in the Newsweek (January 20, 1997), there is great concern that marriage is on the verge of death in the European territory."Is this the death of marriage?" asks the study which further discusses the determination of European women not to enter into marriage relationships and yet willing to have children out of wedlock. The growing feeling is expressed by one lady from Ireland saying why bother to live with men and wash their socks? The report further indicated that the trend is not merely confined to the wealthy class, instead study revealed that amongst the getho dwellers of the black in the USA four out of five children are born to single mothers.

Anyhow, is marriage all about sock washing? Let us have a look at a different and recent report by the Kenyan Daily Nation discussing the growing attitude with regard to marriage among Kenyan men. It is indicated that men in urban areas of Kenya opt to stay with their mothers or parents even when they are able to settle on their own, (Daily Nation, June 6, 1997). Some who were interviewed on this issue explained their opinion in such a way that it is less stressful and enjoyable to stay with someone like a mother to take care of you. Having someone caring around you is something we all strive for says one of the single men who is currently living with his mother. From what is said by these men, the remark stated by the Irish lady could have a grain of truth, because the major interest in men seem to have someone who takes care of his comfort and if this is fulfilled by a member of family why he go for a commitment inherent to marriage. This trend among the African men could affect the chances of female

population in a significant delay in their age at marriage or even to a permanent celibacy silabacy on one hand growing number of single mothers on the other. As a matter of fact there are reports in the increasing number of school drop outs of young female adults because of pregnancy and the number of single mothers.

Table 8 Comparison of Nuptiality timing and incidence among some African countries.

Country	20-24	40-44	Country	20-24	40-44
Botswana	69.7	18.5	Nigeria	21.7	0.3
Burundi	33.3	0.9	Rwanda	44.9	0.6
Cameroon	18.6	0.7	Senegal	22.6	0.0
Ghana	22.6	0.3	Sudan	54.2	3.0
Liberia	24.7	1.7	Tanzania	25.1	0.9
Madagasc	31.7	3.1	Togo	24.2	0.4
Mali	2.0	0.3	Uganda	17.0	1.0
Namibia	68.9	18.9	Zambia	21.2	0.1
Niger	7.1	0.1	Zimbabwe	28.5	0.9

Source: Marriage and entry into parenthood, Maryland, 1994.

Table 9 Typology of marriage in some African countries.

	never married	ages 20-24	
ages 40-44	low 2-29 %	mid. 30-49 %	high 50-78 %
low 0-4 %	Cameroon, Ghana, Liberia, Mali, Nigeria, Senegal, Tanzania, Togo, Uganda, Zambia, Zimbabwe.	Burundi, Madagascar, Rwanda	Sudan
mid.5-9 %		Kenya 1989	
high 10-23 %			Botswana, Namibia

Source: The data in table eight is used .

4.2 Estimation of Mean Age at Marriage by Hajnal's SMAM

It is well understood that there is a critical linkage between the timing of marriage and the demographic, social and economic conditions of a given society. Younger age at marriage imply higher aggregate rates of fertility and higher rates of population growth. Apart from this, early marriage is highly associated with a lower rate of school attendance for female population. This practice results in lowering the social status of women and causes a lower rate of labour participation for them.

Therefore, the significance of examining the average age at which women enter into marriage union lies in the fact that it has a strong influence on a variety of phenomenon indicated above.

As explained by Agunda (1989), the study of age at marriage is not only important in the study of nuptiality, but also in regard to a population policy seeking to regulate fertility. And of course, to enhance the status of women and empower their role in all aspects of social life.

On the basis of the formula shown in page 37 and data information from table number five in page 41 the computation for 1989 census will be as follows:

$$11 = \frac{15 + 5 \sum S - 50\ [0.0461]}{1 - 0.0461}$$

Therefore, applying the technique on page 37 SMAM for both sexes using 1989 census is calculated as follows:

Female	Male
$= 15 + 5\,\frac{(1.5675) - 50\,(0.0394)}{1 - 0.0394}$	$15 + 5\,\frac{(2.5127) - 50\,(0.057)}{1 - 0.05735}$
$= \frac{15 + 7.8375 - 1.97}{0.9606}$	$= \frac{15 + 12.5635 - 2.8675}{0.94265}$
$= \frac{20.8675}{0.9606}$	$\frac{24.696}{0.94265}$
SMAM = 21.7	SMAM = 26.2

Table 10 Estimation of SMAM at National level from various censuses.

sex	1962**	1969**	1979	1989
male	22.96	23.62	25.5	26.2
female	17.6	18.6	19.8	21.7

** Agunda, 1985; Computed from 1979 and 1989 censuses.

The evaluation of SMAM, as shown above, indicates a steady rise in the average age at marriage for both sexes. This means that marriage has been reduced through raising age at marriage during the past couple of decades.

The rise in age at marriage of female population has been following a one year age increase during the time between 1962 to 1979, but for the next ten years upto 1989 the age rise gone to double the past rate of increase reaching

21.7, or nearly 22 which is a remarkable change in the patterns of nuptiality.

If we evaluate the trends of age at marriage revealed in table 10 from the perspective of Bogue's 1969 category index, it would be much easier to appreciate the level of change which has occurred in Kenya. As it is discussed elsewhere Bogue established a parameter through which we can examine the trends of nuptiality among the world population where first age at marriage occurred at the age less than 18 is considered to be child marriage, at ages 18 or 19 early marriage, at ages 20 or 21 years marriage at maturity and at age 22 and above late marriage.

The interesting aspect of Kenyan nuptiality when viewed from the above description is that the various reports of the censuses have been showing that child marriage for female population was virtually non existent in the country. Nevertheless, there are reports indicating the wide spread of child marriage arranged by parents. The above table clearly shows that the lowest age at marriage for women was recorded in 1962 at age 17.6. Indeed, childhood marriage appears to be eliminated since early times. Accordingly, the initial stage of independence is characterised by early marriage where both in 1962 and 1969 the average age at marriage had been around the ages 18 and 19. As from the year 1979 on wards the age at marriage has been reached a level where we may explain it not only marriage at maturity but also a transition to late marriage for the very reason that the 1989 age at first marriage for women increased to 21.7 which is nearly 22 years.

Therefore, on the basis of the two recent censuses, ie. 1979 and 1989, we may argue that many women in Kenya remain single at the age between 20-22, which means that the country has been practising the trend of late marriage. But on the other hand, referring to what is happening in the later ages of reproductive life we can not confirm that the rise in age at marriage is an indication to a situation where marriage is loosing its universality since many and perhaps all of those women will ultimately marry. As it is discussed in the first part of this chapter, the incidence of marriage reached a medium level only with a marginal increase in 1989.

Considering the shift in marriage patterns which has taken place in the 80s, ie. the movement from low to medium level in nuptiality timing and the rise in mean age at marriage during the same period, we are now in a position to ascertain the appearance of transition in nuptiality trends. Apart from what has occurred to the patterns of nuptiality, studies have indicated that a significant decline in fertility level was also observed at this period of time. Obviously, the mean age at marriage of women and the proportion that ultimately marry prior to the end of their reproductive life have been among the significant variables capable of influencing fertility rate and population growth. Therefore, a review of Kenya's fertility trend in recent times, more specifically 1989 and 1993 KDHS, does seem to suggest an impact of the change that occurred in the patterns of nuptiality.

For instance, in 1977 the total fertility rate as indicated by National Demographic Survey was 8.1, which had been the highest in the world, and a TFR

of 7.7 was indicated in 1984. The appreciable decline began to show by the year 1989 when TFR was estimated at 6.7 followed with further dwindling to 5.4 in 1993. It would infact appear that the recent remarkable decline in fertility is highly influenced, among other factors, by the change in nuptiality trends.

It is also worth mentioning the role played by various background factors to bring such a change of attitude in Kenyan women society in delaying or postponing marriage. The effect will be more discussed later in chapter six with the application of regression analysis. But, generally speaking the high increase in the enrolment of female in secondary and above education has been occurred in 1980s, and this has an immediate effect to exclude early age at marriage. This is expected, since participation in higher education almost automatically excludes early marriage. According to other studies, even primary level education adds about one year to age at marriage, while the difference between the educated women and those of higher achievements is about three to four years (Gasana 1985).

4.3 SMAM by Synthetic and Hypothetical method

The SMAM value as obtained by Hajnal's technique is, as shown above, a measure that refers to the nuptiality experience of a birth cohort. Nevertheless, experience proved that mean age at marriage, particularly for female population is subject to fluctuation from one census or survey to the other, (in case of Kenya see table 10), so that the reliability of one time experience in reflecting the general trend is much questionable. It was this doubt which aroused the necessity of other refined devices which could minimize the accuracy of estimation.

Agarwala (1962) in his Ph.D. thesis introduced a technique by which SMAM could be calculated using a synthetic cohort when two censuses are ten years apart. This technique, as indicated earlier, was further refined by Sadiq in his study of Pakistan's nuptiality where construction of synthetic hypothetical cohort was made possible. In the later case we use two ten years apart census reports in order to obtain a hypothetical census representing the half way between the first, in our case 1979, and the second census which is 1989. The values of proportion single are merely the average of those in the 1979 and 1989 censuses. On the basis of these data we are able to construct a hypothetical cohort for 1984. Therefore, we use this 1984 and the given 1989 census reports in order to apply a five year synthetic cohort.

Table 11 Estimation of Female Synthetic Cohort when two censuses are five years apart.

Age	1979	1984	1989	Synthetic cohort
15-19	0.7150	0.7635	0.8119	0.8119
20-24	0.2448	0.2989	0.3529	0.3753
25-29	0.0928	0.1254	0.1579	0.1983
30-34	0.0489	0.0695	0.0900	0.1423
35-39	0.0336	0.0483	0.0629	0.1288
40-44	0.0265	0.0387	0.0509	0.1357
45-49	0.0222	0.0316	0.0410	0.1438
50-54	0.0213	0.0296	0.0378	0.1720
SMAM				19.9

Source:Computed from 1979 and 1989 censuses.

Table 12 Estimation of Synthetic Cohort, Male population, when two censuses are five years apart.

Age	1979	1984	1989	Synthetic cohort
15-19	0.9758	0.9764	0.9789	0.9789
20-24	0.7218	0.7564	0.7910	0.7930
25-29	0.3217	0.3524	0.3830	0.4015
30-34	0.1308	0.1374	0.1439	0.1639
35-39	0.0852	0.0856	0.0860	0.1026
40-44	0.0579	0.0634	0.0689	0.0826
45-49	0.0524	0.0567	0.0610	0.0795
50-54	0.0484	0.0511	0.0537	0.0753
SMAM				26.2

Source:Computed from 1979 and 1989 censuses.

Table 13 Synthetic cohort when two censuses are ten years apart.

Female

Age grp.	no.i	proportion single 1979	proportion single 1989	proportion single for synthetic cohort
15-19	1	0.7150	0.8119	0.8119
20-24	2	0.2448	0.3529	0.3529
25-29	3	0.0928	0.1579	0.0779
30-34	4	0.0489	0.0900	0.0286
35-39	5	0.0336	0.0629	0.0194
40-44	6	0.0265	0.0509	0.0202
45-49	7	0.0222	0.0410	0.0247
50-54	8	0.0213	0.0378	0.0352
SMAM				20.8

Source:Computed from 1979 and 1989 censuses.

Table 14 **Synthetic Cohort when two censuses are ten years apart Male population**

Age grou.	no.i	proportion single 1979	proportion single 1989	proportion single for synthetic cohort
15-19	1	0.9738	0.9789	0.9789
20-24	2	0.7218	0.7910	0.7910
25-29	3	0.3217	0.3830	0.3111
30-34	4	0.1308	0.1439	0.0620
35-39	5	0.0852	0.0860	0.0166
40-44	6	0.0579	0.0689	0.0087
45-49	7	0.0524	0.0610	0.0062
50-54	8	0.0484	0.0537	0.0058
SMAM				25.7

Source: Computed from 1979 and 1989 censuses.

Table 15 SMAM values during and between 1979-1989.

1979		5 yrs. Hypothetic cohort		10 yrs. Synthetic cohort		1989	
female	male	female	male	female	male	female	male
19.8	25.5	19.9	26.2	20.8	25.7	21.7	26.2

The results we obtain from the adjusted and unadjusted Kenyan census reports shows consistency in the characteristics of SMAM during the decade between 1979 and 1989. According to the above table it was in 1979 that the lowest female mean age at marriage was observed at 19.8 and this age level was apparently similar with the result that refers to the five years period between 1984 and 1989 which was 19.9. The ten year period average result indicates nearly a one year increase from the above two time results and yet there is still an increase in the 1989 observation which reached 21.7.

In the context of Kenya where age at marriage for women is steadily increasing, the results we obtained at various stages during the ten year can be considered as good estimation of nuptiality trend in the country. The slow but steady upward increase of women age at marriage of nearly two years in the decade is an impressive gain in the context of Kenya where about 80 percent of the population were still living in rural areas.

With respect to the age difference of brides and grooms, brides are always younger than grooms, on the average of five years and the age difference came down to four years by 1989 from six years in 1979. This gives a clear indication that there is a consistent time trend in the age differences between brides and grooms. It is apparent that the age at first marriage of men had not significantly changed over the years. It seems to have remained essentially stationary between 25 and 26 years during the ten years period. This invariant age at marriage for men over the decade obviously resulted in a declining trend in the age differences between brides and grooms in the face of increasing trend in the marriage age of women.

CHAPTER FIVE

Patterns of Nuptiality - Provincial and District level:

5.1 Provincial Level

Marriage in Kenya, though universal as in many parts of the developing world, has a certain distinct feature. The characteristic of late age at marriage is rarely coupled with the universality of ever married in most countries of the world. What is usually found and agreed upon was that universality in marriage trends has been associated with early age at marriage. But the recent experience as it is shown in the present study is that while age at marriage rises the incident in the final stages of marriageable age remains universal.

In this chapter attempt shall be made to investigate the variation in patterns of nuptiality among sub-groups of the population at the regional and district levels. Hajnal's SMAM is applied to proportions single in Kenya's eight provinces and forty one districts using only 1989 census data. The values obtained for SMAM will be compared.

Table 16 Proportion single in each province - Female - 1989

Age group	Nairobi	Central	Coast	Eastern	N. Eastern	Nyanza	Western	R. VALL.
15-19	0.8110	0.9130	0.7070	0.8950	0.6950	0.7450	0.8060	0.7740
20-24	0.4360	0.4780	0.3040	0.4100	0.1750	0.2350	0.2780	0.3210
25-29	0.2960	0.2340	0.1460	0.1640	0.0570	0.0790	0.0940	0.1480
30-34	0.2080	0.1470	0.0850	0.0870	0.0270	0.0390	0.0480	0.0900
35-39	0.1690	0.1060	0.0590	0.0530	0.0140	0.0200	0.0310	0.0630
40-44	0.1460	0.0890	0.0480	0.0430	0.0160	0.0190	0.0280	0.0520
45-49	0.1310	0.0680	0.0430	0.0340	0.0160	0.0150	0.0210	0.0430
50-54	0.1267	0.0574	0.0484	0.0334	0.0258	0.0171	0.0226	0.0409

Source:Computed from 1989 census data.

Table 17 **Proportion single in each province - male population- 1989**

Age group	Nairobi	Central	Coast	Eastern	North Eastern	Nyanza	Western	Rift Valley
15-19	0.9760	0.9859	0.9690	0.9869	0.9779	0.9729	0.9799	0.9780
20-24	0.8180	0.8430	0.7750	0.8349	0.7800	0.7289	0.7420	0.7780
25-29	0.4270	0.4290	0.4150	0.4269	0.4010	0.3039	0.2949	0.3639
30-34	0.1410	0.1670	0.1730	0.1659	0.1620	0.1100	0.1119	0.1379
35-39	0.0730	0.1020	0.1030	0.0980	0.0750	0.0640	0.0740	0.0859
40-44	0.0530	0.0790	0.0789	0.0800	0.0589	0.0560	0.0650	0.0679
45-49	0.0470	0.0719	0.0639	0.0699	0.0369	0.0500	0.0569	0.0630
50-54	0.0484	0.0606	0.0606	0.0616	0.0297	0.0409	0.0476	0.0568

Source : Computed from 1989 census data.

The timing and incidence of marriage are examined in order to precisely show the patterns of nuptiality prevailing in the country during the census year. In this regard it will be easier for us to evaluate the position of each province and district as compared to one another. Further, the factors which influences the various features in the formation of patterns could be indicated, though weakly.

In general terms, as it was shown in the last chapter, all the regions in Kenya have experienced an increase in the level of women's age at marriage and proportion single in various age groups. This increase, which is believed to be one of the major factors for the recent fertility decline, is explained by the spread of social change in which the participation of women has grown.

In considering the age group 20-24 as an index for nuptiality timing and age group 40-44 as an index for incident we may find the existing differential in the level of marriage among the provinces of Kenya. This method will later be applied

in our examination of the patterns at district level.

Table 18 Percent female population single among the provinces in 1989.

Ages	Nbi.	Cent.	Coast	Eastern	N.Easte	Nyan.	West.	R.Val
20-24	49.60	47.89	30.40	41.0	17.59	23.59	27.89	32.10
40-44	14.60	8.90	4.89	4.3	1.81	1.9	2.80	5.20

Source: Computed from 1989 census data.

Considering the above table and the typology table below, we note that it is only Nairobi which has reached high level both in timing and incidence of nuptiality during 1989.

The three other provinces: Central, Coast and Rift Valley are situated in the position of medium in both instances and reveal their relative advancement from the other four provinces which are still lingering at the low level. Eastern province takes a unique position by having medium level in timing and low in the incidence, ie. that though marriage at early ages has declined, the rate in ultimately marrying remains high. The regions which have shown low level in both timing and incidence are North Eastern, Nyanza and Western province.

As indicated earlier, the influence of modernization in shaping the patterns of marriage in a society is a fact well noted by demographers. Accordingly, the position of Nairobi to be at a high level in both instances is expected. The

provinces in the position of medium have also a certain distinct socio-economic basis where urbanization and educational activities are relatively better.

Table 19 Typology of age at first marriage and proportions of women never married in the provinces during 1979 and 1989 censuses.

	ages 20 - 24		
ages 40-44	low 2-29 %	mid.30-49%	high 50-78%
low 0-4%	1979 Coast, N.East, Nyanza, Western, R.Vly. 1989 N.Eastern, Nyanza, West	1979 Central, Eastern. 1989 Eastern.	
mid 5-9%		1989 Central, Coast, R.Vly.	Nbi. 1979
high 10-23%			Nbi. 1989

Source:Computed from 1979 and 1989 censuses.

The Eastern province, which is dominated by Meru, Embu and Kamba has remained in the same position during the decade. This could be because of the similar customs that these people are sharing. Among the provinces which have recorded dramatic progress are Coast and Rift Valley which shifted from low level in 1979 to medium level in 1989. While the other three still remains in the same lower position. North Eastern is known to be dominantly a pastoral society, while Nyanza and Western are the male out migration striken and known for their high fertility in the country . There position to remain in low level of nuptiality timing and incidence could be attributed to cultural values, socio-economic condition and demographic factors.

Generally speaking, the above two tables reveal that among the eight provinces of Kenya 1989 census, we have three in low, one medium -low, three in medium and only one in high level. This nuptiality pattern of the country is a clear demonstration of the reality that nuptiality in the country is in transition and the movement from low to high level is only at its initial stage.

5.2 PROPORTION EVER MARRYING

We can also make a comparison among the provinces by using Bogue's (1969) analytic method by which the ever married population at age 50 is taken as a point of reference. This is another approach in viewing society's nuptiality pattern where we are able to evaluate whether the proportion ever marrying is high, intermediate, or low. Accordingly, a high proportion ever marrying is indicated by a situation where more than 95 percent of the female population is married at the age of 50. The intermediate level is between 90 and 95 percent and low level is shown by percentage less than 90 percent ever married. The following table shows the distribution of ever married women in 1989 by incident of marriage among the provinces of Kenya.

Table 20 **Percent ever married women at age 50.**

Province	percent married
Nairobi	87.1
Central	93.8
Coast	95.5
Eastern	96.7
N.Eastern	97.9
Nyanza	98.4
R.Valley	95.8
Western	97.8

Source:Computed from 1989 census data.

As shown in the table above among all the provinces it is only Nairobi which falls in the category of an " unusually great spinsterhood", in the words of Bogue. This is again followed by Central province alone to have an intermediate level in its population of spinsterhood at the age of 50.

The remaining six provinces rest in the category of low proportion where 95 percent or above of their female population have been ultimately married. This approach of evaluating nuptiality patterns is relevant when considering comparison among regions within a country.

5.3 Trends of Nuptiality Patterns among the provinces by SMAM method

Considering the values of female SMAM among the provinces during 1989 census we find that Central province has the highest mean age at marriage of 23.5. Central province was only the second highest in SMAM during 1979 census to Nairobi. But ten years later the mean age at marriage in central province increased by 2.5 years surpassing the stagnated Nairobi. Nairobi which had the

highest value of SMAM during 1979 census had virtually shown no change in the next ten years. The SMAM value of 22.7 in 1979 was maintained at 22.8 in 1989 with a difference of 0.1 increase.

Further detail investigation is required to find the reason why the value of SMAM in Nairobi didn't change while all the other provinces experienced significant increase (see table 21). Eastern province has maintained its position as having the third highest mean age at marriage during the two consecutive censuses. This province has also experienced an increase in it's value of SMAM where the 1979 SMAM value of 20.4 increased by 1.9 years to reach 22.5 in 1989. The interesting aspect of this observation is that during the decade between 1979 and 1989 it was only Nairobi which showed stagnation in SMAM value. The rest have experienced a remarkable increase. Eastern province increased by 2.1, while Rift Valley rose by 2.2 and Coast by 2.6. The lowest increase, apart from Nairobi, was observed in North Eastern having an increase of 0.7, followed by Nyanza 1.2 and Western 1.6 increase in their SMAM values.

The other interesting observation is the change that occurred to the Coast province with regard to its female age at marriage. Coast had the lowest mean age at marriage during 1979 census. Nevertheless, this position was radically altered in the next ten years time. The 2.6 increase during the decade put this province at the fifth level among the provinces. Here it would be important to mention that in the first part of this chapter, where we examined the typology of nuptiality, it was shown that Coast province has under gone a significant change in its pattern of

marriage in which a shift from low, in timing and incidence, to medium has occurred. The same thing holds in our observation of SMAM with regard to this region where it shifted from the bottom in the ranks of SMAM in 1979 to the fifth highest during 1989.

Table 21 The value of Female SMAM during 1979 and 1989 years among provinces:

Year	Nairobi	Central	Coast	Eastern	N.East.	Nyan.	West.	R.V
1979	22.7	21.0	18.0	20.4	18.7	19.1	19.3	19.1
1989	22.8	23.5	20.6	22.5	19.4	20.3	20.9	21.2

Source: Computed from 1979 and 1989 census reports.

Considering mean age at marriage of men, we can generally argue that all the provinces have nearly a similar pattern. With slight differences, Central province takes the highest position followed by Eastern and North Eastern. Nairobi stands as having the fourth highest SMAM value. Here it is interesting to note that Coast province still holds, as the female SMAM, the fifth position.

Table 22 The value of SMAM for both sexes in 1989.

Sex	Nbi.	Ctrl.	Coast	Estn.	N.Estn.	Nanz.	Wet.	R.Vly.
FEMALE	22.8	23.5	20.6	22.5	19.4	20.3	20.9	21.2
MALE	26.6	26.9	26.4	26.8	26.7	25.3	25.3	25.9

Source: Computed from 1989 census report.

The gaps between the sexes in SMAM values (the above table) are varied and high where the mean difference is 4.8 . The differences in 1989 census range from 3.4 years in Central to 7.3 years in North Eastern.

5.4 Nuptiality Patterns, District Level

The main purpose of this district level analysis is to establish a clear view of nuptiality trends prevailing in Kenya on the basis of 1989 census data which is the latest. National and provincial level analysis are aggregate evaluations concealing the variations existing among social groups in different sub regions of the country. In this part of nuptiality research special emphasis is placed on describing patterns of nuptiality among female population. We may give few spaces to recent information which has been appearing in daily papers and very important to indicate some ideas on the current trends in some parts of the country.

As indicated earlier, Kenya has witnessed considerable demographic change in recent years: the rapid decline in mortality, the recent trend in the lowering of fertility, the ever growing of knowledge and use of modern means of fertility control, the flows of migrants into urban areas and of course, as the main concern of this study the emerging change in the patterns of nuptiality.

Demographers expended considerable efforts working on understanding the proximate or direct factors influencing nuptiality. These factors include education, type of place of residence, income level, female participation in labour force and

sex ratio in the balance of marriageable ages. The degree of influence that these factors put on nuptiality will be seen in the next chapter where multiple regression analysis is applied. Nevertheless, the differential that we are going to observe among the districts is an essential and integral part of our objective in finding the determinant factors in existing nuptiality patterns. At this level of our study, it may not be easier to make generalization, certainly not quantitative generalizations about the level of influence of any particular socio-economic or demographic factor. However, we would expose ourselves to relevant information regarding the demographic situations of particular districts.

The pace of development among the districts does not follow a similar scale, instead some are more developed than the others contributing to their remarkable demographic change. Some are hard hit by out migration, or more urbanized than the others, some may have more educational institutes than the others facilitating the increase in the enrolment of women and creating more jobs. We know that such factors influence demographic trends including nuptiality. It is also known that population movements are usually selective affecting the balance between opposite sexes.

5.5 Ever married Women at age 50

This approach is often used by demographers to examine the level of spinsterhood in a society. As indicated in the preceding part, Bogue's classification is used here to show the prevalence of incidence in nuptiality among Kenyan women population at the district level.

For the purpose of simplification and better understanding we categorise the districts into three major characteristics on the basis of similarity in their trends. Accordingly, in the first category we will put districts with low incidence of marriage, ie. those with 90 or less ever married, the second category will comprise districts with an intermediate position, ie. those within 90-95 percent ever married, and the last category includes districts with high incidence, ie. 95 or more percent.

Table 23 The incidence of marriage among female population in the districts of Kenya, 1989.

Districts	% at age 50	Districts	% at age 50
Nairobi	87.1	Kisii	97.7
Kiambu	91.2	Kisumu	98.2
Kirinyaga	96.2	Siaya	98.7
Muranga	96.1	S/Nyanza	98.8
Nyandarua	94.3	Baringo	97.9
Nyeri	91.8	Marakwet	96.2
Kilifi	96.7	Kajiado	93.9
Kwale	95.5	Kericho	97.8
Lamu	92.3	Laikipia	92.5
Mombasa	93.1	Nakuru	93.3
T/Taveta	95.2	Nandi	96.4
T/River	96.9	Narok	95.6
Embu	96.8	Samburu	96.4
Isiolo	96.5	T/Nzoia	97.0
Kitui	96.4	Turkana	94.9
Machakos	96.5	U/Gishu	95.1
Marsabit	96.9	W.Pokot	97.6
Meru	96.8	Kakamega	97.5
Garissa	97.2	Bungoma	98.2
Mandera	98.2	Busia	98.2
Wajir	98.3		

Source: Computed from 1989 Census report.

On the basis of the above classification which is adopted from Bogue, we find only Nairobi to be a district with low incidence of ever married women at the age of 50 ie. 87.1 percent. This means 12.9 percent of women in Nairobi remain single until they reach the end of their reproductive age.

At the next stage, we find nine districts with an intermediate position. Among these three are in Central province, two in Coast and four in the Rift Valley. The remaining districts are all in the category of high incidence, meaning therefore marriage is universal in the large majority of the districts.

Among the districts in Central province the only two, Kirinyaga and Muranga, have a high incidence of marriage ie. 96.2 and 96.1 percent ever married respectively. This shows that the province has more districts with intermediate position than with high incidence. And the remaining districts in the four provinces : Eastern, North Eastern, Nyanza and Western have all high incidence of marriage for their female population.

In our comparison of the incidence of marriage among the districts in Kenya, we find certain phenomena that draws attention. This concerns the similarity of incidence level between two areas which have a significant variation in their level of development. The district of Turkana, in the Rift Valley, holds an intermediate position similar to districts like Kiambu, Nyeri, Mombasa and Nakuru,among others. When compared Turkana has only 13.4 percent of women aged 10 and above who are literate while in Kiambu the rate of literacy to the same age group is 82.14,

Nyeri 81.54, Mombasa 75.06 and Nakuru 76.84. Further, among the female population aged 10 to 14 years in Turkana 75.19 percent have never attended school. In Kiambu the rate is only 1.71 percent, Nyeri 1.01, Mombasa 16.71 and Nakuru 3.47.

Turkana is a district where pastoral life is the dominant economic activity. The level of urbanization is much lower than the other districts mentioned above. And yet its level of ever married women at age 50 is similar to areas with better social development. This could be explained by the existence of cultural practises of the nomadic people. May be the rate of mortality of men is much higher in the area so that widowhood in the later ages of female reproductive life is high compelling them to report as a single or unmarried person during censuses. Widowhood needs to be clearly separated from never married, otherwise the observation looses its purpose in establishing the correct estimation of spinsterhood in the society. The questionnaire in the 1989 census does not include the request for the past marital experience of women apart from their current status as married or not married. Therefore, precise explanation to the above observation could only be found with further research.

5.6 Timing and Incidence of Nuptiality among the Districts

The Kenyan population, as other developing countries, is characterised by early and universal marriage. As noted earlier, the appearance of change in the patterns of nuptiality, particularly with the increase of age at marriage is lately emerging.

Table 25 shows that in terms of timing, which refers to never married at age 20 to 24, 16 districts are accounted for the low level, while 23 districts exhibited an intermediate position. There are only two districts, Nairobi and Nyeri, the later is in the Central province, which were shown to reach a high level in their population of never married in the same age group. The appearance of the majority of districts, 23 out of 41, in the intermediate position implies the fact that the pace of transition has already taken its root.

The interesting aspect in this part is that all the districts of North Eastern province are still in low level as far as their never married female population is concerned. This means that the proportion married at the age of 20-24 is high in this area. It is also noted that the majority of districts in Nyanza and Western provinces follow similar pattern as in the N. Eastern. The table also clearly illustrates diversity in the patterns of marriage among the districts in terms of marriage timing.

Table 24 **The Timing and Incidence of marriage among female population, 1989.**

District	proportion never married ages 20-24	proportion never married ages 40-44	district	proportion never married ages 20-24	proportion never married ages 40-44
Nairobi	0.4960	0.1460	Kisii	0.3460	0.0280
Kiambu	0.4860	0.1179	Kisumu	0.2260	0.0220
Kirinyaga	0.4540	0.0551	Siaya	0.2319	0.0189
Muranga	0.4519	0.0599	S/Nyanza	0.1259	0.0129
Nyandaru	0.4260	0.0841	Baringo	0.3400	0.0299
Nyeri	0.5459	0.1119	Marakwe	0.3209	0.0411
Kilifi	0.2310	0.0350	Kajiado	0.2629	0.0711
Kwale	0.2240	0.0470	Kericho	0.3099	0.0359
Lamu	0.3008	0.0416	Laikipia	0.4049	0.0849
Mombasa	0.3900	0.0760	Nakuru	0.3879	0.0869
T/Taveta	0.4771	0.0659	Nandi	0.3499	0.0460
T/River	0.1880	0.0212	Narok	0.1650	0.0421
Embu	0.4809	0.0471	Samburu	0.2639	0.0329
Isiolo	0.2629	0.0329	T/Nzoia	0.3050	0.0380
Kitui	0.3520	0.0380	Turkana	0.3500	0.0480
Machakos	0.4279	0.0470	U/Gishu	0.3820	0.0619
Marsabit	0.1939	0.0319	W/Pokot	0.1789	0.0241
Meru	0.4289	0.0410	Kakamega	0.3100	0.0329
Garissa	0.2111	0.0210	Bungoma	0.2549	0.0231
Mandera	0.1540	0.0168	Busia	0.2179	0.0209
Wajir	0.1629	0.0171			

Source: Computed from 1989 census report.

Table 25: **Typology of age at first marriage and proportion of women never married in 41 districts of Kenya, 1989.**

Celibacy in ages 20-24

Celibacy in ages 40-44	low 2-29%	medium 30-49%	high 50-78%
low 0-4%	Kilifi, T/River, Isiolo, Garissa, Mandera, Wajir, Kisumu, Siaya, S/Nyanza, Narok, W.Pokot, Bungoma, Busia, Marsabit	Lamu, Kitui, Meru, Kisii, Baringo, Marakwet, Kericho, Samburu, T/Zoia, Kakamega	
medium 5-9%	Kwale, Kajiado.	Kirinyaga, Muranga, Nyandarua, Mombasa, T/Taveta, Embu, Machakos, Laikipia, Nakuru, Nandi, Turkana, U/Gishu.	
high 10-23%		Kiambu.	Nairobi Nyeri

Source: Computed from 1989 census report.

5.7 Trends of Nuptiality Patterns among the districts by SMAM method

In this part where analysis is made on district level, Hajnal's singulate mean age at marriage is applied using the 1989 census data and 1979 data will be referred for the purpose of comparison only. The table below presents the mean age at marriage for each district. As indicated earlier the results in the table clearly shows that there are variations among the Kenyan districts in their patterns of marriage entry. Accordingly, for female population in Nyeri district with smam value of 24.2 stands the highest age at marriage among all the districts in the country.

Nairobi, which was the highest in female smam during 1979 census now stands eigth in 1989. As indicated in the previous section, the situation in Nairobi reflects that nuptiality is in a state of stagnation in this part of the country. All the districts in Central province are well ahead of Nairobi. Other districts with notable increase includes Taita taveta in the Coast, Embu and Machakos from Eastern. These districts have a smam value greater than that of Nairobi as well. The following table shows estimation of female SMAM among the districts.

Table 26 SMAM values using Hajnal's method, District level 1989.

Female

No.	District	SMAM	No.	District	SMAM
1	Nairobi	22.8	21	Wajir	19.3
2	Kiambu	23.5	22	Kisii	21.6
3	Kirinyaga	23.3	23	Kisumu	20.2
4	Muranga	23.1	24	Siaya	20.5
5	Nyandarua	23.1	25	S/Nyanza	18.8
6	Nyeri	24.2	26	Baringo	21.6
7	Kilifi	19.8	27	Marakwet	21.4
8	Kwale	19.4	28	Kajiado	19.9
9	Lamu	19.8	29	Kericho	21.4
10	Mombasa	21.6	30	Laikipia	22.1
11	T/Taveta	23.3	31	Nakuru	22.3
12	T/River	19.2	32	Nandi	21.9
13	Embu	23.4	33	Narok	18.5
14	Isiolo	20.3	34	Samburu	20.2
15	Kitui	21.8	35	T/Nzoia	21.1
16	Machakos	22.9	36	Turkana	21.3
17	Marsabit	19.5	37	U/Gishu	22.1
18	Meru	22.6	38	W/Pokot	19.4
19	Garisa	19.7	39	Kakamega	20.6
20	Mandera	19.1	40	Bungoma	20.1
			41	Busia	21.3

Source: Computed from 1989 census report.

With regard to the trend in men's SMAM we find that in the large majority of the districts mean age at marriage is above 25 years in 1989. This level was maintained for quite a long time where we can observe a similar age level of men's entry into marital relationships. In 1989 the lowest mean age at marriage for men is observed in Kisii at 23.9, followed by Bungoma 24.7, Narok 24.8, and South Nyanza 24.9. These are the four districts with age level lower than 25 years. Three out of these districts are located in the two provinces of Western and Nyanza , ie. except Narok which is in the Rift Valley province. The two provinces are also known for their low age at marriage for female population, and high fertility.

Table 27 SMAM values using Hajnal's method.
Male population.

No.	District	SMAM	No.	District	SMAM
1	Nairobi	26.6	21	Wajir	26.6
2	Kiambu	26.6	22	Kisii	26.6
3	Kirinyaga	26.5	23	Kisumu	23.9
4	Muranga	27.0	24	Siaya	25.7
5	Nyandarua	26.4	25	S/Nyaza	26.3
6	Nyeri	27.6	26	Baringo	24.9
7	Kilifi	26.1	27	Marakwet	26.6
8	Kwale	25.6	28	Kajiado	25.3
9	Lamu	26.3	29	Kericho	26.2
10	Mombasa	26.7	30	Laikipia	25.6
11	T/Taveta	27.8	31	Nakuru	26.7
12	T/River	26.0	32	Nandi	25.9
13	Embu	26.8	33	Narok	24.8
14	Isiolo	27.1	34	Samburu	27.9
15	Kitui	26.3	35	T/Nzoia	25.5
16	Machakos	28.2	36	Turkana	28.4
17	Marsabit	28.8	37	U/Gishu	25.9
18	Meru	26.6	38	W/Pokot	25.1
19	Garisa	26.9	39	Kakamega	25.0
20	Mandera	26.6	40	Bungoma	24.7
			41	Busia	25.7

Source:Computed from 1989 census report.

CHAPTER 6

Determinants of Nuptiality Patterns

It is well known that social norms, demographic patterns, and economic factors all play a part in shaping the marriage characteristics in a given society. Some socio-economic factors such as urbanization, female school enrolment or education and female labour force participation have been widely recognised to have a major effect in terms of marital postponement.

It has already been suggested that early marriage has functioned largely in the absence of meaningful alternatives to marriage in many societies of the world, Duza and Baldwin (1977). Accordingly, one of the foremost alternative to early marriage - one providing a major, although temporary nonfamilial role to women -is education. This argument underlines the fact that activity which could engage women in nonfamilial areas could help in the delay of marriage. This is so because, among other things, the time spent to complete formal education requires a definite period of time. It is further argued that the other major alternative to marriage appears to be female employment, particularly in modern production, which generates movement towards female autonomy in many ways.

The experience in China, where age at marriage was successfully raised by legislative measures also seems to have a significant lesson to other developing nations interested in lowering the rate of marriage. Nevertheless, Skar 1971, as cited by Duza 1977, cautions that a deliberate policy of delayed marriage would not be a viable means of population control in the currently less developed

countries unless the institutional structures surrounding marriage behaviour in these nations are changed so that the incentives are to marry late.

Still, counting on factors which are believed to have influence on nuptiality it is indicated that illiteracy has a positive association with early marriage. Duza and Baldwin et al, under lined the fact that in developing countries the transition from massive illiteracy to even elementary literacy represents a much more vital change than is usually recognised. The other important factor that is believed to discourage early marriage is the imbalance between the opposite sexes, more significantly that of low sex ratio (when the number of men is less than 100 per 100 women). This demographic factor could arise from out migration of men at marriageable ages. However, there is evidence that male out migrants, in most cases, marry before they leave their place of origin.

Thus, the risk of migrating arises the feeling that one has to marry before moving. In this regard the western regions of Kenya may be considered good examples where most families are headed by women who are left behind by their spouses who have migrated to other parts of the country seeking better jobs. Thus it might not be easier to conclude that areas hard hit by male out migration represents a pattern of late marriage. One may find that traditional norms dictate more strongly for one to marry before leaving his place of origin. This, on the other hand, poses a different dimension to the problem where in different normative systems the same marriage determinants may have different effects on the timing and prevalence of marriage. For instance, as indicated earlier, in the central

province of Kenya marriage is found to be rare among girls attending school while in western Kenya school attendance does not prevent marriage, where, as the recent reports indicated earlier, girls in their early ages are forced by their parents to marry.

Therefore, the norms of behaviour of one social stratum may involve high value attached to educational achievement while another stratum does not emphasise the value of education for women and prefers a pattern including early school leaving, early marriage and large families.

Apart from the factors mentioned above, overall modernization coupled with rapid urbanization appearers to have a significant role in the transformation of marital values and related orientations. However, here also we find a distinct feature in the process of urbanization occurring in the developing countries where unlike the developed countries the progress is not preceded by industrialization. As explained in a UN 1973 report urban growth rates are roughly more than double the growth rates of national population and most estimates attribute at least half of this growth to migration. This human flow to urban areas in less developed countries is believed to be the outcome of imbalance of economic opportunities between urban and rural areas. The majority of migrants are settling in spontaneously built suburbs maintaining the life style and norms they practice back in rural home. It is indicated that urban poverty is simply rural poverty displaced. Such a view reminds us that the demographic influence of modern social structures could vary significantly across the deferent classes in a society.

On the basis of the above general observations we may be able now to evaluate the precise issue of nuptiality patterns and their determinants in Kenya. Most studies focused on this particular area indicate that of all the factors which are considered to influence nuptiality patterns, the role of education for female is singled out as the most significant one. In this regard Agunda (1989) asserted that among the selected eight independent variables in his regression analysis only two variables play a very significant role of which education is the most important factor. The report indicated that female education has a high positive correlation with mean age at marriage. The study later concluded that nuptiality differentials among Kenya's districts could partly be attributed to differentials in proportion of females with eight or more years of schooling. The 1977/78 Kenya Fertility Survey (KFS) on its part explained that level of education, areas of residence, religion and ethnicity were found to have significant effects on female singulate mean age at marriage.

In this study a selected number of variables have been chosen for the purpose of examining the role they could play in determining the patterns of nuptiality in Kenya. The 41 districts are our area of concern while singulate mean age at marriage as obtained by Hajnal's method is taken as a dependent variable. The independent variables are assumed to represent broad measures of socio-economic and demographic situations among the districts.

6.1 Variables used in the model

1. FSMAM - female mean age at marriage. The dependent variable.

The independent variables are:

1. NPOP - rate of urbanization
2. RTIO - sex ratio
3. FLTE - female literate
4. FSEC - female secondary school
5. FEPO - female employed

Regression analysis is essentially a method for prediction in that it enables us to assume the value of a dependent variable Y that is likely to be associates with one or more independent variables. In this research our dependent variable, as indicated above, is mean age at marriage as obtained by Hajnal's method. Hajnal's SMAM is based on the proportion single in a given population. The method gives a general overview of marriage timing.

6.2 On the choices of independent variables

6.2.1 Urbanization

The economic progress of a country and the social change it accompanies are largely manifested with the level of it's urbanization. The social gains of urbanization can be seen in much increased life expectancy, improvement in housing and living condition, access to new information, sanitation, health and education. There are also other factors which explain the other side of urbanization

in which unemployment and homelessness are the main challenges to everyday life. Urban centres are the main areas where inequalities in income distribution is manifesting openly.

Urbanization is selected in this model because it is assumed that urban environment has an important influence in shaping the attitude of it's dwellers, including their patterns of marriage, transforming from traditional outlook to liberalised ones. As it is explained in the study by the UN 1988, the more urbanised, modernized population subgroups and individuals are likely to delay marriage more and marry less often than individuals in rural surroundings. This is because, improved economic conditions are associated with changes in marriage norms, changes that tend to favour later marriage creating greater opportunities for the participation of women in the labour force.

The level of urbanization among each of the 41 districts of Kenya is taken in this study for the purpose of examining the role this variable plays in the creation of the patterns of the current trend in nuptiality. The hypothesis to be examined here is that female nuptiality is positively related to urbanization.

6.2.2 Sex ratio

The sex ratio among the marriageable ages can also influence the marriage patterns of a population. In this regard, migration is an important factor in the understanding of marriage patterns. Where migration occurs before marriage and is sex-selective, the sex ratio will not be in equilibrium in either the area of origin

or the area of destination so that marriage rate, other things being equal, will be depressed in both areas. The other sources of disequilibrium in sex ratio are changes in the size of birth cohorts and differential mortality by age, sex and marital status. From the marriage formation stand point, not all men and women in a population are socially eligible for entry into marriage, and only eligibility will determine the size and sex balance (or imbalance) of the population likely to enter a marital union, UN 1988.

Studies conducted on the dynamics of internal migration of Kenya vividly described the fact that some parts of the country are hard hit by out migration of their adult male population while other parts are affected by the large inflow of persons, already creating imbalance in sex ratio. It may be noted here that this analysis uses only the sex ratio among marriageable ages on the basis of the average age difference between the bride and groom which is five years. Accordingly, the female population in age group 15-39 in each district is measured against the male population aged 20-44. The age limits are chosen on the assumption that first marriage after 40 years for women and after 45 years for men are negligible.

Thus, the disruptions in the age and sex distribution of a population creates an imbalance between the number of men and women of corresponding age groups who are eligible for marriage, often referred as ' marriage squeeze'. In this case the hypothesis to be tested is that a shortage of males or females at given ages will likely alter marriage patterns that exist under normal conditions.

6.2.3 Education

Available reports indicate a remarkable expansion of education since Kenyan independence. According to the National Development Plan for the period 1989-1993, in 1963 there were only 6,058 primary schools with 892,000 students with a 192 sex ratio level. In the next two and half decades by 1987 the number of schools in the same level increased to 13,349 with 5,031,000 students and a sex ratio of 107. With regard to secondary schools, the number of schools in 1963 was 151 where by 1987 it increased to 2592. The increase in the high school enrolment was also dramatic where in 1963 there were 30,120 and by 1987 the level reached half a million. The level of sex ratio among secondary school students also dropped from 215 in 1963 to 144 in 1987.

What concerns us primarily is the way education can contribute to the patterns of nuptiality among female population. Demographers in general agree upon the fact that education clearly lengthens the period of training and more significantly for women it provides a viable alternative to very early marriage, furnishes a break from traditional roles and assumptions, and offers new potentials for economic emancipation, Duza and Baldwin 1977.

In this study the role of education is considered at two separate levels. The first one refers to the level of literacy among female population in each district. The second level reflects female enrolment in secondary schools of the 41 districts.

6.2.4 Labour force participation

In general there is a trend among demographers that positive association exists between economic activities of women and nuptiality. The participation of women in out of home economic activities creates a situation of independent thinking towards the decision on their future family formation. The increase in the opportunity of employment for women has convinced parents that girls can get jobs as good as those available to men and this attitude has erroded the trend that a girl was an economic burden to get rid of through marriage as fast as possible. It is also understandable that certain occupations may provide more exposure to ideas and norms that favour delayed marriage.

In this study the percentage of female population currently employed in each district is our subject of analysis. According to the 1989 census report, which is the source of our data, rural areas record has higher employment rates than the urban areas. This would affect the final finding of this study because the type of employment demographers talking about is the one related to industrial and service activities, a type of work that could keep the workers away from home. The type of employment stated in the census report includes agricultural activities in self owned home areas and this is why the employed women in rural areas are found to be grater in number.

Nevertheless, we are going to test whether this type of employment has any significant influence in the patterns of age at marriage. It is assumed that labour force participation of women is positively related to mean age at marriage.

6.3 Correlation Analysis

The Pearson product moment correlation (r) is applied to evaluate the level and the direction of relationship that each independent variable has with the independent variable. This method as it provides a summary measurement with regard to the degree and direction of association between two variables. A correlation coefficient not only summarizes the strength of association between a pair of variables, but also provides an easy means for comparing the strength of relationship between one pair of variable and a different pair (SPSS 1975).

Table 28 **Estimation of dependent and independent variables in the model.**

District	FSMAM	NPOP	RTIO	FSEC	FLTE	FEPO
Nairobi	22.8	34.1	135	47.9	89.3	78.3
Kiambu	23.5	3.0	84	41.9	82.1	90.1
Kirinyaga	23.3	.4	76	33.5	73.5	94.5
Muranga	23.1	1.4	61	32.4	77.7	94.1
Nyandarua	23.1	.4	67	30.0	79.9	95.3
Nyeri	24.2	2.7	69	45.0	81.5	94.4
Kilifi	19.8	1.6	61	9.8	35.5	93.7
Kwale	19.4	.4	67	10.5	38.1	94.2
Lamu	19.8	.2	91	14.7	56.4	84.3
Mombasa	21.6	11.9	124	34.1	75.1	68.5
T/Taveta	23.3	.7	70	27.8	72.0	91.8
T/river	19.2	.3	76	9.3	36.6	92.3
Embu	23.4	.7	69	28.8	71.1	95.8
Isiolo	20.3	.6	87	14.5	33.4	84.1
Kitui	21.8	.3	54	17.1	57.1	96.4
Machakos	22.9	3.9	61	28.6	74.2	95.8
Marsabit	19.5	.9	67	5.4	15.8	87.7
Meru	22.6	2.8	72	23.4	64.9	96.2
Garissa	19.7	.9	86	7.9	14.9	73.4
Mandera	19.1	.9	84	2.6	14.6	77.5
Wajir	19.3	.6	83	3.5	12.3	71.6
Kisii	21.6	1.4	60	31.2	70.3	95.3
Kisumu	20.2	5.5	76	26.8	68.3	85.2
Siaya	20.5	.5	52	17.6	58.2	96.2
S.Nyanza	18.8	1.6	61	15.7	60.7	92.1
Baringo	21.6	.8	72	23.1	57.4	94.2
Marakwet	21.4	.1	72	22.0	63.2	95.5
Kajiado	19.9	1.2	88	20.0	49.0	89.5
Kericho	21.4	1.5	82	22.5	68.1	91.7
Laikipia	22.1	.7	81	28.8	70.9	91.8
Nakuru	22.3	6.3	83	31.7	76.8	87.8
Nandi	21.9	.3	78	23.3	69.0	90.0
Narok	18.5	.4	72	10.0	43.9	91.6
Samburu	20.2	.3	68	6.9	16.9	88.1
Transzoia	21.1	1.4	76	25.4	66.7	87.5
Turkana	21.3	.6	65	4.2	13.1	90.2
Uasin G.	22.1	3.3	88	33.8	73.9	89.2
W.Pokot	19.4	.4	77	8.5	29.8	92.9
Bungoma	20.6	1.7	67	29.8	70.4	96.2
Busia	20.1	.7	55	16.6	51.8	91.1
Kakamega	21.3	2.5	58	27.3	68.3	91.5

Source: Computed from 1989 census report.

Table 29 **Mean value of the significant variables**

variable	mean	st.deviation
FSMAM	21.2	1.5
NPOP	2.4	5.5
RTIO	75.0	16.2
FLTE	56.2	22.4
FSEC	21.8	11.6
FEPO	90.0	6.9

Source: Based on 1989 census.

As it is reflected in the table below, among the independent variables Female Secondary Education (FSEC) is found to have a strong positive association with Female SMAM at 0.7410. The result of our computation clearly indicates that all the independent variables are positively associated to the dependent variable, though sex ratio of marriageable ages is related very weekly. Further, urbanization and female labour force participation are also weekly associated with FSMAM. The lack of strength in the relationship of these three variables with the dependent variable could be attributed to various reasons such as the definition of urbanization which includes areas with 2000 people and above as urban centres when these areas are simply villages with the absence of basic services and structures. As indicated earlier the exaggeration of female participation in the data of labour force activities is assumed to influence the result we obtained, then the aspect of sex ratio we found in most districts reflect that there is low sex ratio (less than 100 men per 100 women) in the majority of the districts but it is not clear whether the male out migrants were already married before they moved. So simple counting of persons and categorising in sex may not reflect the marital

position of the population. For instance, in areas hard hited by male out migration, the men usually marry and leave their spouses behind at their place of origin. This trend seriously affect the balance of opposite sexes both at the place of origin and destination. In Nairobi and Mombasa we find high sex ratio (more than 100 men per 100 women) and this should have led to low age at marriage for women, at least theoretically, but it is in this areas that we find high age at marriage for women to be high. This may happen because, all things remain equal, those extra men who affected the balance of sex ratio are already married and they are apparently out of marriage market.

Table 30 Estimation of correlation coefficient

Indicator	FSMAM	t - test computed	table t at 5% level
NPOP	0.2427	1.614	2.02
RATIO	0.0656	0.411	"
FLITE	0.7410	6.891	"
FSEC	0.8184	8.895	"
FEMP	0.2952	1.929	"

Source: Based on 1989 census.

In order to examine the significance of the association of each independent variable with the dependent variable we employed the t test. It is found that the obtained value for women in secondary school and women literate are greater than the critical values at 0.05 percent level of significance. This means that the positive and high association between FSMAM and female secondary education, and FSMAM to female literacy are statistically significant. The other three variables

are found to be insignificant, though this does not mean that they are not relevant. Therefore, the finding supports the fact that education is the most important factor in affecting female age at marriage.

6.4 Simple Linear Regression Analysis

Regression in general involves the idea of finding values of one variable from a knowledge of values on another variable or variables. It is for this reason that we always require to distinguish between the variable about which predictions are to be made and the variable(s) from which we make the prediction. Consequently, we have already designated mean age at marriage as obtained by Hajnal's method as the dependent and the other five variables as independent.

In this section we will examine the degree of influence that each independent variable has on the dependent variable. The computer print out of the simple regression analysis is presented in the table below.

Table 31 Estimation of simple regression analysis.

Inde. variable	constant B	slope B	std. err.	R square	F values
NPOP	21.0	0.67562	1.50597	0.05889	2.44050
RATIO	20.0	0.00621	1.54904	0.0430	0.16837
FLIT	18.3	0.05071	1.04235	0.54915	47.50306
FSEC	18.8	0.10797	0.89201	0.66982	79.11810
FEPL	15.3	0.06521	1.48320	0.08714	3.72267

Source: Based on census data of 1989.

As we can read in column five of the above table where the amount accounted by each variable, when considered separately, secondary education

remains the most relevant variable followed by literacy. Nearly 67 % of the variation in female mean age at marriage is explained by FSEC while FLIT explained 55 % of the variation. The other three variables are not only weakly associated but also the amount they account for remains much lower. K'Oyugi (1994) argues that a low R square value may imply inappropriate choice of the model or irrelevant variables in the model. With regard to the present study it is believed that the variables are not relevant for the various reason we mentioned earlier. Koutsoyiannis (1973) also explained that the higher R square the greater the percentage of the variation of dependent variable explained by the regression plane, that is, the better the goodness of fit of the regression plane to the sample observation. The closer R square is to zero, the worse the fit.

To summarise the results we obtained in the simple regression analysis we will take, as an example, the relationship between FSEC and FSMAM for explanation. The table above shows that the value of constant B is 18.8 which means that this is the predicted score of FSMAM when FSEC is zero. On the other hand the slope B is 0.1709 meaning that for each unit increase in the percentage of female secondary education female smam increases by 0.1709. Therefore, to obtain a predicted female SMAM score (Y) for a given percentage of secondary level of education (X), we would employ the following linear prediction equation:

$$Y = 18.871 + o.1079\ X$$

The computer print out also gave us a value of measurement through which we can evaluate the accuracy of our estimatior.. Here we use the standard error

of estimate to show the absolute errors in the prediction. Hence, the value of female secondary education is the lowest where the average error in guessing FSMAM scores from FSEC is 0.8920. The next lower value is found to be FLIT. The values for the other explanatory variables are relatively high indicating the precense of high errors in the prediction.

Further, the table also demonstrate the degree of significance that the selected explanatory variables obtain. In this regard F test indicates that there is evidence both at the 1 percent and 5 percent level there exists a linear relationship between FSMAM and FSEC as well as between FSMAM and FLIT. The table value of F at 1% level of significance and 1:39 degree of freedom is 7.3 and at 5% level is 4.1. In both cases the calculated value of F are greater than the respective table values.

The other explanatory variables, namely urbanization, female employment and sex ratio of marriageable ages show that there is weak evidence for their linear relationship with the dependent variable as the critical values of F are lower than table values.

6.5 Multiple Regression Analysis

In this section of our analysis we shall proceed with the application of multiple regression method inorder to examine the degree of influence that the independent variables have in predicting the dependent variable. The five independent variables are regressed against the dependent variable to verify the

relative importance. Before we analyze the variables it is important to evaluate the characteristics of all the variables against each other under interrelation. This is vital for the analysis because multiple regression preimposses that one may not to use two highly correlated independent variables in an analysis.

6.5.1 Inter Correlation among the variables in the study.

The importance of evaluating the existing correlation among all the variables involved in this study lies in the fact that it enables us to examine the degree of relationship or influence incorporated. Further, the method of multiple regression requires that the independent variables must not be highly correlated with one another. Such a situation is referred to as multicollinearity. Statisticians give the advise that such a situation could produce unstable and misleading results. Though multicollinearity often happens in social sciences, the situation needs to be corrected so that satisfactory results are obtained. It is indicated that when a multicollinearity of 0.8 to 1.0 occurs it is necessary to drop one of the variables or find some other common variable that could reflect the required condition for the analysis.

Table 32 **Intercorrelation among the variables in the model.**

varib.	FSMAM	NPOP	RATO	FLIT	FSEC	FEMP
FSMA	1.000	0.243	0.066	0.741	0.810	0.295
NPOP	0.243	1.000	0.712	0.363	0.497	-0.393
RATO	0.066	0.712	1.000	0.138	0.291	-0.715
FLIT	0.741	0.363	0.138	1.000	0.929	0.330
FSEC	0.818	0.497	0.291	0.929	1.000	0.167
FEMP	0.295	-0.393	-0.715	0.330	0.167	1.000

Source: Based on 1989 census data.

As shown in the table above, female secondary education is very strongly related with female literacy having, a correlation coefficient of 0.929. According to what is suggested above it would not be correct to use these two variables jointly in a regression analysis. Therefore, female literacy is dropped from the equation because of two reasons. The first reason is that female secondary education is much more important in affecting age at marriage and this is affirmed by a high correlation of FSMAM and FSEC; and the other is that we can not find any common ground that could represent the two variables. The remaining variables are associated with each other in various degrees but scores are below 0.8.

Thus, the four independent variables mentioned earlier and the dependent variable which is female mean age at marriage as obtained by Hajnal's technique forms the basis of our analysis. The method applied in the multiple regression analysis was stepwise in which the independent variables are selected according to their relative significance in affecting the dependent variable. In stepwise regression the procedure operates by fitting the explanatory variables stage by

stage in order of the best predictor among the given independent variables. The analysis stops when the addition of an extra variable will not significantly increase the regression sum of square. The SPSS package was used in the analysis.

Table 33 Estimation of Multiple regression analysis applying stepwise. Variable Entered on Step Number one is FSEC.

Variable	mult R	R squ.	Beta	std error	F
FSEC	0.81843	0.66982	0.818427	0.89201	79.11810

Source: Based on 1989 census data.

Table 33a On the second step NPOP was added in the equation and the results are shown below.

variables	mul. R	R squ.	adj R	std error	F
FSEC and NPOP	0.84007	0.70571	0.6902	0.85314	45.56

Source: Based on 1989 census data.

Table 33b Beta and 't' values.

Variables	Beta	't'	sig t
FSEC	0.927031	9.139	.0000
NPOP	-0.218371	-2.153	.0377

Source: Based on 1989 census data.

The computer rejected any additional variable apart from the above two explanatory variables. Thus, it is asserted in the result that female secondary education is the most significant factor which affects female mean age at marriage.

This finding is consistent with results from most studies done in various parts of the world including Kenya.

With regard to the result we obtained from this analysis urbanization is the other important factor considered to affect nuptiality. However, the regression coefficient in case of urbanization is found to be negative indicating that its relationship with the dependent variable could take an opposite course of direction. This is contrary to what we found in the correlation analysis where positive but weak relationship was indicated. Further, the amount of variation which is found to be explained by urbanization is very low when compared to female secondary education.

In our regression analysis the variable entered on step one was FSEC followed by urbanization. It is shown that when we consider the two variables jointly, our R square equals 0.70571 indicating that about 71 % of the variation in female mean age at marriage can be accounted for by FSEC and NPOP. However, FSEC revealed that it alone accounted for 67% of the variation in the dependent variable. The increment in R square due to the addition of urbanization as the component of variation is only 4%.

The F statistic of 45.56284 is also found to indicate that the equation is statistically significant at (2.38) degrees of freedom. This is affirmed by comparing the computed F value with the critical value of 2.85 in the table at 95 percent level of confidence. The computed regression equation is as follows:

$$Y = 18.65289 + 0.1223\ X1 + (-0.0608)\ X2$$

where X1 is female secondary education,

X2 is urbanization.

Referring to the obtained values of beta weights indicated that secondary education is by far the most important variable to determine female mean age at marriage. The beta weights tell how much change in the dependent variable will take place as a result of a standardized change in each of the independent variables. Therefore, beta weights are used to assess the relative importance of independent variable on the dependent one and it is interpreted interms of standard deviation.

The results show that if a percentage of female secondary education increases by one standard deviation, then female mean age at marriage increases by 0.93. The effect of urbanization takes a negative direction with an increase of -0.21.

The test of sig T is also a good measure of the relative importance of variables in the equation. The above table gives a remarkable proof that FSEC is the most relevant factor influencing FSMAM. On top of this, we proceed to define the role of the two variables which were put out of the equation during stepwise analysis. To evaluate their numerical value with regard to their importance we applied a different method called enter.

In the estimation of multiple regression analysis using enter method variables involved in the equation are the same, and they are presented as follows:

Dependent Variable.. FSMAM

Variable(s) Entered on Step Number

1..FEMPLO FEMALE EMPLOYMENT AGES 10+

2..FSEC FEMALE IN SECONDARY EDUCATION

3..NPOP NATIONAL POPULATION URBAN

4..RATIO SEX RATIO

The results from the above regression showed the value of Multiple R to be .84326 where the R square is .71108. The other statistical measurements are given in the following table.

Table 34 Estimation of multiple regression using enter method.

variable	B	Se B	Beta	T	SigT
FEMPLO	.009328	.034171	.042224	.273	.7864
FSEC	.118903	.016071	.901266	7.399	.0000
NPOP	-.039933	.039408	-.143435	-1.013	.3177
RATIO	-.006061	.017206	-.063935	-.352	.7267

Source: Based on 1989 census data.

The results using enter method showed above indicates that when the two variables are added to the equation, ie. female employment and sex ratio, the value of R square almost remains the same, moving from 70.6 % to 71.1 % only. This increase is negligible as was shown earlier.

CHAPTER 7

SUMMARY, CONCLUSION AND RECOMMENDATION

7.0 Introduction

In this chapter, attempt will be made to summarize the findings, draw conclusions relevant for policy makers and give recommendation on aspects for further research.

7.1 SUMMARY

The focus of this research was to examine the patterns of nuptiality and on the basis of this to find the determinant factors for the observed patterns. To establish the patterns of nuptiality by using the two latest Kenyan censuses, i.e. 1979 and 1989 two indirect methods and other relevant statistical techniques were employed. These are Hajnals Smam and the five and ten years hypothetic and synthetic methods.

The patterns of nuptiality at national and provincial level was estimated using the 1979 and 1989 censuses while the district level was done on the basis of the 1989 census data. Differential in nuptiality among the provinces and districts was reflected by using the timing and incidence of marriage which is clearly demonstrated by the table of typology of marriage. In this regard it is possible to show the areas where marriage timing and incidence are low, medium or high. In an attempt to account for nuptiality differentials, demographic and socio-economic variables, ie. Sex ratio, urbanization, female secondary education, female literacy and female employment were regressed against female mean age

at marriage as obtained by Hajnals Smam method.

7.2 FINDINGS

In this study it is shown that Kenya represents one of the developing countries where nuptiality transition is still at a progressing stage. Having used the appropriate estimation techniques in examining nuptiality patterns at various levels i.e. districts, province and national, the following results were obtained.

Values of female and male mean age at marriage as obtained by Hajnals method at national level indicates that there has been a steady increase of age at marriage. The increase is more remarkable when we look at female Smam where age at marriage rose from 17.6 in 1962 (Agunda, 1989) to 19.8 in 1979 and 21.7 in 1989. The ten and five years synthetic cohort techniques produced results that were a reflection of the gradual upward movement of age at marriage among both sexes. In this regard, the five year hypothetic data produced a result in which after 1979 female mean age at marriage increased only by 0.1 from 19.8 in 1979 to 19.9 in the following five years time. The increase took a dramatic move when a ten year synthetic analysis was done where female mean age at marriage rose to 20.8 and by 1989 it was already 21.7.

For the purpose of comparison the age patterns of marriage studied by other scholars during earlier times were carried out. The results produced in those studies showed that there had been an increasing trend in female mean age at marriage since independence. We also examined the trends in the timing and incidence of

marriage and compared with previous findings. The results showed that there was a substantial increase in marriage timing in Kenya since 1962 where proportion single for female population at ages 20-24 rose from 12.6% in 1962 (Nyarango, 1985), to 24.48% in 1979 and to 35 29% in 1989. It is also observed that there was a significant change in the incidence of marriage where proportion single at ages 40-44 increased from 1.9% in 1962 to 2.65% in 1979 and 5.09% in 1989. When we consider the rate of incidence of marriage in Kenya it can be concluded that marriage is still universal. However, the trend which is found in the timing of marriage revealed that there is a remarkable increase in the single population at the conventionally accepted level of age at marriage during the past three decades.

In this study an attempt was also made to examine the position that Kenyan nuptiality trend holds in todays world by comparing its level with the timing and incidence of marriage from various countries. The results showed that Kenya is at a medium level both in timing and incidence while there are many African countries still at a lower level of nuptiality.

At provincial level we found dramatic changes of nuptiality patterns during the period between 1979 and 1989 years. These changes were revealed when we analyzed the data according to the timing and incidence of marriage. It was shown that the number of provinces which had been at low level both in timing and incidence of marriage numbering five until 1979 reduced to only three in 1989. The two provinces, Coast and Rift Valley which were at the lower level in 1979 shifted to medium level during 1989 while the three, N. East, Nyanza and Western still

remained at the same lower position. Central province which was low in incidence and medium in timing during 1979 moved to medium in both instances in 1989. Eastern remained in the same low-medium position in incidence and timing respectively during the two censuses. Nairobi province, which was medium in incidence and high in timing of age at marriage during 1979 showed high level in both instances during 1989. Hence, Nairobi is found to be the only province to have a high rate of proportion single at age 20-24 as well as 40-44 during 1989. When we consider the percent ever married women at ages 50 at provincial level the result showed a similar trend as that of the above typology analysis. Accordingly, Nairobi is the only province with an "unusually high spinsterhood" of 87.1 percent level of ever married women population. Central Province was the next with 93 percent while the remaining six provinces were at higher rate of ever married women with 95 and above percent at age 50 during the 1989 census year.

Examining the provincial patterns of nuptiality using Hajnal's Smam method showed that in all the eight provinces there was an increase in female SMAM values. Nevertheless, the rate of increase varies from one region to the other. The lowest increase was found to be in the capital Nairobi where the highest mean age at marriage during 1979 at age 22.7 remained almost the same at age 22.8, showing only 0.1 increase. Because of the stagnation, Nairobi lost its leading position to Central province where a higher increase from Smam value of 21.0 in 1979 to 23.5 in 1989 occurred. The record in North Eastern Province revealed that the region had the lowest SMAM value during the decade despite the fact that there was an increase of 0.7 in mean age at marriage.

At district level, an attempt was made to examine the position of each area in order to have a detailed perception of nuptiality patterns in the country during the 1989 census year.

Using Bogues technique in which the level of life time spinsterhood is estimated it was found that 31 out of the 41 districts in Kenya constitute a very high level of ever married women at age 50. This clearly indicates that marriage is still a universal phenomena in the country. Except Nairobi which had a high level of spinsterhood the remaining nine districts were at a medium level . Three districts out of five in Central, two districts out of six in Coast and four districts out of thirteen in Rift Valley province were found to have medium level in the ever married women at age 50. In the remaining four provinces, i.e. Nyanza, Western, N. Eastern and Eastern, none of the districts had an experience of decline in the ever married at age 50 estimation.

The results obtained by using Dixons (1971) typology of marriage showed that districts had been relatively changing through times. Accordingly, when we consider the rate of never married women using 1989 census data at ages 20-24 we found 16 districts to be at a low level, 23 districts medium and only two districts, Nairobi and Nyeri to have a high level. With regard to the incidence of marriage considering the never married women population at ages 40-44 we found that 24 districts having a low level, 14 districts medium and 3 districts, i.e. Kiambu , Nairobi and Nyeri to have a high level. The trend we observed in this analysis is that there are more districts with low level of never married women at age 40.44

than at age 20-24. Meaning therefore the delay or postponement of marriage at marriageable ages is increasing while marriage in later ages continued to prevail in many districts. It is important to note that a big town like Kisumu is still at low level both in timing and incidence of marriage while a nomadic pastoralist area like Turkana is situated at medium level in both instances. The districts in the central province revealed that all are in or above medium level in both situations.

Differential in female nuptiality at district level were further analyzed by using the mean age at marriage as obtained by Hajnals method using 1989 census data. The results obtained in this method was compared to the findings by Agunda (1989) on the basis of 1979 census. The 1979 analysis of female mean age at marriage showed that there were twelve districts which had a Smam value less than 19, seventeen districts had been estimated to have between 19 and 20 and the remaining twelve districts were in a higher Smam value of greater than 20. Ten years later, in 1989 applying the same method we found that the condition has completely changed. Accordingly in 1989 our data analysis showed that there were only two districts, Narok in Rift Valley and South Nyanza province which remained below age 19 in their female Smam values.

Further, the number of districts with SMAM value of 19 and 20 were reduced from seventeen in 1979 to ten in 1989. A remarkable increase in Smam value have occurred in three districts namely Isiolo, Nandi and Trans Nzoia where from their position of Smam which was less than 19 during 1979 now reached at more than 20 level in 1989. Therefore, the number of districts with a Smam value

of more than 20 has increased from 12 in 1979 to 29 in 1989. This, in fact, is a remarkable change that has taken place in the country during the decade in the realm of nuptiality. All the districts in Central and Western provinces are within the category of Smam values more than 20. Though the position of central province is in confirmation with other findings, the situation in Western province needed further and careful investigation. According to (1969) classification, these districts would be categorised as having very late marriage.

It is therefore clear from these findings that the female nuptiality differential among Kenyaś district began to follow some kind of trend which leads to similarity in character. As we observe the increasing trend, we find that age at marriage is moving upward where more and more districts reflect somewhat similar patterns and reducing regional differentials.

In this study we applied simple as well as multiple repression analysis in order to identify those factors responsible for the existence of nuptiality differentials at district level. The mean age at marriage for females as obtained by Hajnaľs method using 1989 census data was regressed as a dependent variable against selected socio-economic and demographic variables. After employing the two types of regression methods we found the following results: the result from simple regression analysis, where each independent variable was repressed against the same dependent variable showed that female secondary education is the, most important variable to have a major positive effect upon female mean age at marriage where about 66.9% of the variation was explained. Female literacy was

found to explain 54.9% of the variation. The remaining three variables constitutes a value less than 10% each in explaining the variation in sex ratio to be the least important factor. Furthermore, when all factors were taken together through application of multiple regression analysis, it was found that about 73% of the total variation was explained by the five independent variables. Nevertheless, due to high intercillinearity between female secondary education and female literacy, as discussed earlier we dropped the later to avoid misleading results. By doing this we were left with the four independent variables, i.e. Female secondary education, population in urban areas, female employment and sex ratio. The result showed that 71% of the total variation was explained by the four variables. However, among these four independent variables, only two were found to play a very significant role in explaining variation in female mean at marriage among the 41 districts in the country. The two significant variables were female secondary education which accounted for 66.9% out of 70.6% of the explained variation and population in urban areas which accounted for 3.7%. The remaining two variables namely female employment and sex ratio contributed about 0.5% of the explained variation. It is thus clear from this analysis that as far as nuptiality determinants are concerned, the most significant predictor variable found in this study was the proportion of female with high school education. This finding is in confirmation with Agundas, where he applied the same method to examine determinants of nuptiality but using the 1979 census data. In his findings we note that out of his eight independent variables the most likely factor to influence mean age at marriage was female with eight years and above schooling. Though it's role was very low in his research, urbanization was also found to have a role in affecting the

patterns of age at marriage among female populations. Thus, Kenya's nuptiality patterns are not only determined, but also undergo some kind of changes following the situation of secondary level education participation among the female population and to some extent with urbanization process. The differential in nuptiality among the districts could partly be attributed to the distribution and accessibility to these explanatory variables.

7.3 RECOMMENDATIONS FOR FURTHER STUDIES

Policy options in the area of age at marriage need to be in response to the dynamics of varying forces. Concerned governmental and non-governmental organizations should establish a mechanism, by which the appropriate forces in the dynamics of nuptiality be identified for the purpose of intervention and manipulation. To attain a desired goal in raising age at marriage.

As it was indicated in previous chapters nuptiality has a considerable role in the study of population growth. As in most developing countries Kenya epitomizes a major problem of population growth. Recent governmental reports indicate that food production in Kenya will not sustain the increasing population in the future. Due to this, the problem of land and resources, employment and facilities such like schools are among the challenges that would further aggravate the pressure on the future development of the country. Thus, careful study in the field of nuptiality will obviously help to evaluate not only the trends in population growth but also to find the means by which a serious concern due to this growth could be controlled and avoided.

In this research it is found that the level of nuptiality timing is increasing in all the districts of Kenya. The changing trend in female age at marriage was more pronounced in late 1980s. In some areas we observed a dramatic change in the rate of single populations at an age group which was supposed to be a rushing time for marriage. This finding could therefore serve as a good beginning for further study of the environment under which the changes in nuptiality behaviour had been occurring in various regions and different areas the country. This study has also found that though female age at marriage has been risen, marriage is still a virtually universal situation in all the districts of Kenya. Therefore, there is a strong belief that research on nuptiality trends need to be conducted on regular short term basis among the district inorder to verify the root causes of such unusual trend. Instead of waiting for a census data which is carried out in ten years time, it is preferable to employ a survey covering a limited area but well planned and executed. This will help to have a follow up report and more precise knowledge about the trends as well as the possible agents in the changing circumstance.

The nature of further surveys need to include certain questions which are very relevant in the establishment of those assumed factors affecting female age at marriage. Accordingly, we need to have the exact age at marriage of every person. We were so far using an indirect technique to establish age at marriage which can not be free from error. It is also important to include the rate of divorce, widowhood and separation. Unless these situations are given, one could simply consider a divorced woman who could possibly report single when asked her marital status as a never married person and use this to calculate singulate mean

age at marriage as well as proportion single in various age groups.

This study clearly demonstrated the role of education, more significantly female secondary education, in raising age at marriage. This is in confirmation with various studies conducted both in Kenya and abroad. For women, education provides a viable alternative to early marriage, furnishes a break from traditional roles and assumptions and offers new potentials for economic emancipation. Therefore, as a policy, this research recommends that there should be a particular incentive to further attract Kenyan young women not only to start school but also to continue with their education at least until the completion of high school. The focus of this policy needs to be directed towards those areas where parents are forcing young girls to quit school for early marriage and in general to traditional oriented regions of the country.

Besides the role of education, the overall modernization coupled with the fast growth of urban centres that Kenya has been experiencing over the past three decades and more appears to have significantly transformed marital values. This could apparently change the role of women by creating an opportunity involving them in a gainful economic activity and consequently making early marriage less feasible. Therefore, efforts should be made , in part of the policy makers, so to give special attention to young girls both in urban and rural areas by increasing prospects of their participation in the economic activity of the country as well.

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