DETERMINANTS OF AGE AT FIRST MARRIAGE IN KENYA: AN URBAN-RURAL COMPARATIVE STUDY

BY

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DECLARATION

This research project is my own original work and has not been submitted to any other university for award of academic degree.

Reinhard Kiplagat Rutto

…… ……

Signature Date

The research project has been submitted for examination with our approval as University supervisors.

1. **Prof. Lawrence Ikamari**

…….. ……

Signature Date

2. **Dr. Wanjiru Gichuhi**

…….. ……

Signature Date

DEDICATION

I dedicate this research work to my Dad, Vincent Kiprutto and Mum Veronica Kobilo who made so much sacrifice to educate me despite the harsh economic challenges at the time. Indeed, they inspired and gave me resources to study. Further, I wish to appreciate the support and patience from my wife, Roselyne Bowen and my children Victor and Abel who wished me all the best in my studies.

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ABSTRACT

This study sought to establish the effects of the demographic, socio-economic, socio-cultural factors on age at first marriage among ever married women in urban and rural areas in Kenya. The data for the study was drawn from the 2008-09 Kenya Demographic and Health Survey (KDHS) dataset. The KDHS is a nationally representative survey of 8444 women aged 15 to 49 years. The study only focused on 1697 and 4207 ever married women from urban and rural areas, respectively. The study variables included; women's age at first sexual intercourse, education level, region of residence, household wealth index, employment status and religious affiliation.

The study used descriptive statistics and cox regression analysis. Frequencies were used to obtain analysis of the basic characteristics of the study population. The life table technique was used to estimate the median age at first marriage for the different categories of women. A Cox regression model was used to analyze the effects of the explanatory variables on age at first marriage.

The life table results indicate that there are differentials in median age at first marriage by various background characteristics. For nearly all the explanatory variables, median age at first marriage is lower among women in rural areas compared to their urban counterparts.

The multivariate results show that, the effect of the explanatory variables on age at first marriage differ among the urban and rural women in Kenya. The age at first sexual debut has a statistically significant effect on age at first marriage among urban women but it has no significant effect among rural women. The results show that education has a strong effect on age at first marriage among both rural and urban women. The results further indicate that there was minimal regional difference in the risk of entering into first marriage among women in urban and rural areas except among women in rural Nyanza who were 26 percent less likely to enter into first marriage compared to their counterparts in Central net the effects of other variables.

Household wealth index, employment status and religious affiliation were each found to have no statistically significant effect on age at first marriage among both rural and urban women. Thus, it was only the age at first sexual intercourse, women's educational level, and being in rural areas of Nyanza region of residence that had statistically significant net effects on age at first marriage among both rural and urban women in Kenya.

Education policies should target in improvement of girl child education to enable them acquire at least post-secondary education. Programs should target girls both in and out of school on adolescent and youth sexuality and thus enabling them to delay early sexual debut and subsequently early marriage.

Age at first sexual intercourse has consistently appeared and remained a significant determinant of age at first marriage among women in urban Kenya. Given the differences that do exist between men and women on age at first marriage, it would also be important that the effects of the study variables on age at first marriage among ever married men are investigated to determine if the effects differ according to the type of place of residence. I recommend that future studies could focus on the effects of these variables on age at first marriage among ever married men in urban and rural areas in Kenya.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Marriage is an important institution for the individual and the society at large. For the individual, it is a significant and memorable event in one's life cycle as well as the most important foundation in the family formation process. In addition, marriage marks the beginning to an end of the transition to adulthood as the individual separates from the parental home, even if generations continue to be socially and economically interdependent through the extended family. Age at marriage is of particular interest because it marks the transition to adulthood in many societies; the point at which certain options in education, employment, and participation in society are foreclosed; and the beginning of regular exposure to the risks of pregnancy and childbearing services (Palamuleni, 2011). For the society as a whole, it unites several individuals from different families and represents the creation of a production and consumption unit as well as one for the exchange of goods and services (Quisumbing and Hallman, 2003).

In most societies marriage defines the onset of the socially acceptable time for childbearing and is the most predominant context for childbearing in most countries and a determinant of fertility (Bongaarts, 1983). Women who marry early will have, on average; a longer period of exposure to the risk of pregnancy, often leading to higher completed fertility. It is important to understand variation in age of entry into marriage because it helps explain differences in fertility across populations and also helps explain trends in fertility within individual populations over time (United Nations, 1990; Ezeh and Dodoo, 2001). Therefore, age at first marriage has a direct bearing on fertility behaviour (Davis and Blake, 1965; Coale, 1971; Lesthaeghe et al., 1989).

Age at first marriage is of interest to social demographers, and understanding the dynamics of marriage timing of women is of interest primarily because of its perceived positive association

with fertility. Indeed, entry into sexual unions is seen as one of the most important proximate determinants of human fertility (Bongaarts, 1982; Davis and Blake, 1956). Early marriage potentially affects the reproductive life span and thus has a positive influence on fertility. Women who get into marriage early in their life's will be associated with early childbearing as, in most cases particularly in the developing world; the main purpose of marriage is to have children. Early childbearing is fraught with substantial health risks for both the mother and the child. Young women are more likely to experience pregnancy related complications and less able to deal with them, which often lead to maternal death (Zabin and Kiragu, 1998). Children born to young mothers are usually subject to elevated risks of morbidity and mortality (Casterline and Trussell, 1980; Zabin and Kiragu, 1998; Ikamari, 1996).

Type of place of residence may be equally important, as rural areas generally are associated with early marriage. People living in urban areas are exposed to a more diverse life style and subject to a weaker social control than those in rural areas. Rural areas tend to have institutional and normative structures such as the kinship and extended family that promote early marriage and childbearing (Goode, 1963; Dixon, 1971; United Nations, 1988; 1990). These social structures and networks are less potent and individual responsibility in the matters of marriage is emphasized in urban areas. People in urban areas need to develop skills, gain resources and achieve maturity to manage an independent household and thus they have to delay marriage. Furthermore, urban women tend to be more educated and engaged in salaried employed than their rural counterparts. In Kenya, as in other developing countries, urban areas usually have the largest share of the country's well-educated, high income population and the best educational and health facilities (Ewbank et al, 1986). Thus, urban areas are expected to be associated with later entry into marriage.

Increases in age at marriage are associated with major social-structural changes such as increases in educational attainment, urbanization, and the emergence of new roles for single women (United Nations, 1987; 1988; Lesthaeghe et al., 1989, Singh and Samara, 1996;

Kaufman and Meekers, 1998). Jejeebhoy (1995) analyzed 51 studies based on a number of data sources, mostly the World Fertility Surveys and Demographic and Health Surveys (DHS), and found that education is the single factor most strongly related to the postponement of marriage, but the relationship may be subject to threshold effects.

Walker, (2012) describes the sub-Saharan region as an area with the highest rates of marriage in the world. The latter work also points to the harmful effects of early marriage in terms of the impact of the health, education and well-being of young girls (Aryee, 1977). Indeed, many women in the developing world are subject to marriage at early age (Van de Walle and Meekers, 1994). Most such women have little choice in the age at which they marry or whom they marry (Jensen and Thornton, 2003).

Hertrich and Leschingand, (2012) argue that the weakening of family control over marriage and greater involvement in young people in the choice of spouse could have also triggered this transition in nuptiality leading to increased age at first marriage.

1.2 Problem Statement

The median age at first marriage in Kenya among women of reproductive age was recorded at 19.7 years in 2003 and 20.0 years in 2008 (CBS et al; 2003, KNBS et al; 2010). Moreover, age at first marriage varies by woman's type of place of residence (urban and rural areas) (CBS et al; 2003, KNBS et al; 2010). Age at first marriage among urban women was recorded at 21.4 years in 2003 and rose to 22.2 years in 2008. During the same period, age at first marriage among rural women areas was also recorded at 19.3 years in 2003 and 19.4 years in 2008 (CBS et al; 2003, KNBS et al; 2010).

The Government of Kenya (GoK) has over the years formulated policies and programmes that are aimed at raising age at first marriage. The Sessional Paper No. 1 of 2000 on Population Policy for Sustainable Development proposed measures aimed at reforming and enforcing minimum legal age-at-marriage to eliminate child marriages. The sessional Paper No. 3 of 2012

on Population Policy for National Development also seeks to raise the age at first marriage in Kenya from 20.2 years in 2009 to 23 years by 2030 (NCPD 2000; 2012).

In spite of these government policies and programmes in place, evidence from the past Kenya Demographic and Health Surveys (KDHS) show that, urban women marry, nearly 2 to 3 years later than rural women (CBS et al; 2003; KNBS et al; 2010). Delayed age at marriage directly affects completed fertility by reducing the number of exposure years available for childbearing. Later marriage permits women to complete their education, build labor force skills, and develop career interests that compete with childbearing within marriage. These career interests may, in turn, motivate women to limit family size and / or widen the spacing of their children (Amin, 1995; Jensen and Thornton, 2003).

In the recent past, studies have been undertaken on age at first marriage in Kenya. Lwaki, (2012) established that median age at first marriage differ by type of place of residence. Makheti, (2008) established that men and women in rural areas are more likely to marry earlier than their urban counterparts with women getting married earlier than men. Nthenge, (2006) found out that, type of place of residence (rural-urban) is significantly associated with age at first marriage in medium and low fertility regions.

Ikamari, (2005) established that both the place of childhood residence and usual place of residence are weakly associated with the timing of first marriage and their relative effects vary across the three cohorts of women. Childhood place of residence has a significant effect only for women in the 15-29 and 40-49 age cohorts. In these two cohorts women who grew up in rural areas had a slightly higher risk of first marriage compared to those who grew up in urban areas. Usual place of residence had a significant effect only for the 30-39 age cohorts. In this cohort, rural women had a higher risk of first marriage compared to urban women.

While most of these studies found out that urban-rural residence significantly affect age at first marriage, it is also important to note that rural areas have made advances in education as

primary education is almost universal. It would therefore be critical to investigate whether the effects of demographic, socio-economic and socio-cultural factors on age at first marriage differ among urban and rural women in Kenya to determine if the urban and rural differentials still exist. This study focuses on this issue using the data drawn from the 2008/09 KDHS.

1.3 Research Questions

i) What are the differentials in the age at first marriage among ever married women in urban and rural Kenya?

ii) What are the effects of demographic, socio-economic and socio-cultural variables on the age at first marriage among ever married women in urban and rural Kenya?

1.4 Objectives of the Study

1.4.1 Overall Objectives of the Study

The general objective of the study is to establish the factors affecting age at first marriage among ever married women in urban and rural Kenya.

1.4.2 Specific Objectives of the Study

The specific objectives are:

i) To estimate the differentials on age at first marriage among ever married women in urban and rural Kenya.

ii) To establish the effect of demographic, socio-economic and socio-cultural variables on the age at first marriage among ever married women in urban and rural Kenya.

1.5 Justification and Significance of the Study

This study makes a contribution in two ways. First, it contributes to a better understanding of factors behind the differentials on age at first marriage among ever married women in urban and rural Kenya. In Kenya increasing age at first marriage is one of the country's targets in a bid to reducing the teenage pregnancies and high fertility rates (NCPD, 2012). It is also

importance to the government in a bid to achieving sustainable development and Kenya's Vision 2030 aspirations.

The current data has shown that urban women marry, nearly 2 to 3 years later than rural women (CBS et al; 2003, KNBS et al; 2010). It is also still not clear whether the effects of demographic, socio-economic and socio-cultural factors on age at first marriage differ among the ever married women in urban and rural Kenya. This knowledge gap can only be filled by undertaking a comparative study on the effects of these variables on age at first marriage among the ever married women in urban and rural Kenya.

Secondly, a detailed understanding of the effects of demographic, socio-economic and socio-cultural factors on age at first marriage among ever married women in urban and rural Kenya and knowledge generated from the study will spur more research around age at first marriage in Kenya, provide evidence based information to policy makers and program managers in designing better policies and programmes which if well implemented will go a long way in rising the age at first marriage among rural women in Kenya where age at first marriage is lower than urban areas. Thus this study is important because low age at first marriage especially among women in Kenya has been and remains a major contributor to the high fertility rates in Kenya and the degree of success of health programs could be ascertained on the basis of observable increase in age at first marriage and eventually declining fertility rates.

1.6 Scope and Limitations of the Study

This study sought to establish the factors affecting age at first marriage among ever married women in urban and rural Kenya. Specifically, it focused on the effects of age at first sexual intercourse, woman's education level, region of residence, household wealth index, employment status and religion on age at first marriage. The main data used was from the Kenya Demographic Health Survey 2008/9 data. The study focused on ever married women comprising of 1697 and 4207 from urban and rural Kenya respectively.

Some limitations may exist in this study. Data quality checks revealed that, completeness of information on the ages of respondents was not 100 percent. For example, completeness of information on year and month of birth for the respondents was at 80.7 percent in urban areas and 75.4 in rural areas. The distribution of the respondents' age in single years indicates that there are digit preferences in age reporting especially in those ages ending with digits 0 or 5.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature on age at first marriage. The first section focuses on theoretical perspective, the second part looks at the demographic, socioeconomic and socio-cultural factors affecting age at first marriage in urban and rural Kenya; and the last part presents the conceptual and operational frameworks.

2.2 Theoretical Perspective

Studies elsewhere have, however, identified a number of factors that influence marriage timing (Garenne and Veronique, 2002; Singh and Samara, 1996; Jejeebhoy, 1995; Oppenheimer, 1988; Bloom and Trussell, 1984; Rindfuss and St. John, 1983). Increase in age at marriage is associated with major social-structural changes such as increases in educational attainment, urbanization, and the emergence of new roles for single women (United Nations, 1987, 1988; Lesthaeghe et al., 1989, Singh and Samara, 1996; Kaufman and Meekers, 1998).

This study is guided by the micro-economic theory of fertility. The micro-economic theories of fertility assume that husbands and wives, acting as a unit, weigh the costs and benefits of children against the cost of other competing goods and subsequently arrive at desired family size that reflect their interests (Adebusoye, 2001). Thus, the theory assumes that marriage is arrived at if marriage increases their utility relative to remaining single. This theory predicts that individuals view that there are benefits among couples who have similar attributes but are not similar in their future potential in earning power.

Becker's theory consider marriage as a process where women and men simultaneously search for partners and make a decision by comparing gains from marriage with their current utility. The theory follows two principles. The first is that, since marriage is practically always voluntary, either by the persons marrying or their parents, the theory of preferences can be

readily applied, or persons marrying (or their parents) can be assumed to expect to raise their utility level above what it would be were they to remain single. The second is that, since many men and women compete as they seek mates, a market in marriages can be presumed to exist. Each person tries to find the best mate, subject to the restrictions imposed by market conditions. These two principles easily explain why most adults are married and why sorting of mates by wealth, education, and other characteristics is similar under apparently quite different conditions. Yet marital patterns differ among societies and change over time in a variety of ways that challenge any single theory (Becker, 1973).

The theory of marriage as developed by Becker (1973; 1991) implies several sources of gains from marriage. First, it is assumed that men have a comparative advantage in the labor market while women have a comparative advantage in home production or childcare. Therefore, by forming a partnership, both men and women are better off from specialization. Second, Becker views the family as an entity which produces and raises children. In this case, a large part of gains from marriage arises from having children. Third, by combining a couple's resources, gains from marriage also come about from economies of scale. This study will adopt the micro-economic theory in order to explain the early age at first marriage norms in the society particularly in the rural areas as shown by the low age at first marriage. This is where women are valued with their comparative advantage in home production and child care hence the early marriages.

The theory further suggest that, simple correlations between intelligence, education, age, race, nonhuman wealth, religion, ethnic origin, height, place of origin, and many other traits (including type of place of residence) of spouses are positive and strong in assortative mating.

2.3 Demographic Factors

Age at First Sexual Intercourse

Pre-marital sexual activity and child bearing may prompt early marriage. A woman who initiates sexual activity before age 20 is significantly more likely to enter into early marriage compared to that one who starts sexual activity when at least 20 years old (Ikamari,2005). However, some studies elsewhere show that the presence and sometimes the number of ex-nuptial children reduce women's likelihood of marrying (Chiswick and Lehrer, 1990; Teachman and Heckert, 1985; Bennett et al., 1995).

Family planning campaigns have advocated for a later start to sexual activity and marriage in order to avoid teenage pregnancy and its unfavorable health and social consequences (Lloyd and Mensch, 2008; Nour, 2006). The time spent between sexual debut and marriage is considered a high-risk period because it is a time for sexual experimentation, and the partnerships formed by young people during this time is often transitory (Hallett et al., 2007 and Ali et al., 2001). Furthermore, it has been postulated that sexual behaviour patterns established at this time may influence behaviour in later life (White et al., 2000 and Mardh et al., 2000). Early age at marriage is statistically associated with marital instability and longer time spent sexually active and unmarried is statistically associated with higher rates of partner acquisition at later stages of life (Zaba et al., 2009).

Age at first sex is also an important indicator of exposure to risk of pregnancy and sexually transmitted infections during adolescence. In fertility studies age at first marriage is often used as a proxy measure of the onset of a woman’s exposure to pregnancy, but in many societies premarital sexual activity is common, and age at first sex would be a better proxy (Stover, 1998).

2.4 Socio-economic Factors

Education

The relationship between education and age at marriage is well established from previous studies (Axinn and Thornton, 1992; Blossfeld and Huinink, 1991; Adedokun, 1999; Westoff, 2003; Garenne, 2004; Choe et al., 2005; Bates et al., 2007). Young women aspiring to college education are likely to delay marriage (Axinn and Thornton, 1992; Quisumbing and Hallman, 2003). Adedokun (1999) found in a study in Nigeria that the duration of schooling has strong correlation with age at marriage. He reports an increase in the mean age at marriage of women from 20 years for 0–5 years of schooling to 22.6 years for 11–15 years of schooling. The 2000 MDHS reports that the median age of women at marriage increases incrementally with years of education: no education 17.4 years, primary education 17.5 years, senior primary 18.0 years and secondary and above 20 years (Malawi Government, 2002).

Similarly, parents' education has a significant effect on age at first marriage for both girls and boys. Parental educational attainment is also positively related to children's educational attainment, leading to higher age at marriage, because educational goals and priorities are reinforced by parental role models (Michael and Tuna, 1985). Additionally, Bates et al., (2007) found in their study of rural Bangladesh that mothers' education was significantly related to higher age at first marriage of daughters. Educational level was determined by asking the respondent the highest level of school attended.

Education may affect the timing of marriage in various ways. The highly educated spend many years in school and college receiving instruction and knowledge. In Kenya today, one requires at least sixteen years to complete University education at the first degree level. When enrolled in school or college it is not desirable nor is it feasible for students to marry as it is disruptive and generally young people lack the financial resources and the prospect of a stable income that would be ideal for marriage and forming a family (Dixon, 1971; Oppenheimer, 1988; Goldscheider and Waite, 1991).

Therefore, school enrolment is an impediment to early marriage. Furthermore, there is usually strong social norm preventing person in school from marrying or even from forming co-residential partnerships (Blossfeld and Huinink, 1991; Blossfeld and Jaenichen, 1992; Thornton et al., 1995). School attendance removes the girls from the domestic environment and offers literacy and exposure to new ideas and value systems that may compete with the traditional customs, values and beliefs that promote early marriage (Westoff, 1992; Caldwell et al., 1983). For example, Westoff (1992) has demonstrated with the data from the recent DHS from sub Saharan Africa that higher education delays marriage and postpones childbearing among women in the region. Estimates from the 1998 KDHS indicate that the median age at first marriage among the ever- married women aged 25-49 years with at least secondary education was 22 years compared with 17 years among those with no education (NCPD et al., 1999).

By exposing girls to non- traditional roles and providing them with the means to establish viable alternatives to early marriage, education expands the women's life opportunities and choices. Thus, the effect of education on the timing of marriage may relate to the development of value orientation and aspirations that give priority or preference to personal fulfillment and career development over traditional roles or early marriage and childbearing. Marriage is likely to be delayed or postponed when it is incompatible with the attainment of one's personal goals and ambitions (Bracher and Santow, 1998).

Education may also affect the age at first marriage through the use of effective contraceptive. Many studies show that educated women are more likely to use effective contraceptives than their uneducated counterparts. Education enables them to have access information on modern contraception and their proper use and to appreciate their role in fertility regulation. The use of effective contraceptives enables them to avoid unplanned pregnancy that may compel them to enter into marriage earlier than desired (NCPD et al., 1999).

Furthermore education may affect the timing of marriage through its influence on how the educated perceive themselves and how the society perceives them, and the perception about the value of children in a modern society (Caldwell et al, 1983). In the traditional society, women often relied on marriage and childbearing as avenues for gaining social status, respect and power in the household as well as in the community arena. Consequently, early marriage and childbearing were highly valued in many traditional societies (Caldwell and Caldwell, 1987).

However, with the advent of education, women who are educated are respected and enjoy high social status, whether married or not, in the modern Kenyan society. In Kenya today, women's education is viewed as a crucial human capital investment and an avenue to salaried employment, independence, and decision-making and enhanced social status. Thus the educated women no longer see marriage and childbearing as viable avenues to social status and economic independence.

Previous studies have also identified pervasive discrimination exacerbated by culture as the leading cause of early age at marriage. Most cultures in sub-Saharan Africa restrict the social and economic space of women by denying them access to education (Yabiku, 2005; Kaufman & Meeakers, 1998; Jejeebhoy, 1995). Women who have no or low education marry young, start childbearing at a young age and do so for a long period, leading to high fertility (Gebremedhin & Batre, 2009). Additionally, low education impedes the acquisition of skills, lifestyles, attitudes and aspirations that can increase age at first marriage by limiting their access to economic opportunities (Heyneman & White, 1986). As a result, many young women regard marriage as a means of escaping social and economic deprivation (Sanyukta, Green & Malhotra, 2003) and poor families many off daughters because bride price is seen as a means of improving the economic standing of households (Innocenti Research Centre, 2001; Barthelemi, 1996).

A study by Nyamongo, (2000) in Marsabit District, established that the value of formal education is based on wage-labour opportunities. High value is placed on women's household labor and low accessibility to non-household employment which places differential pressure on the education of Borana children. This leads to a higher dropout rate from school and earlier marriage for female than for the male children.

Ikamari, (2005) found out that the highly educated women are more likely to delay marriage and the study also found significant variations in the effects of education across the generations of women in Kenya.

Region of Residence

The age at marriage differs significantly by region of residence. Studies in Nepal reveal that age at marriage varies by the ecological zones of the Hills, Mountains and Terai regions (Thapa, 1989; Niraula and Morgan, 1996; UNFPA, 2002; Choe et al., 2004). The difference in age at marriage by ecological zone may in part be due to the concentration of Hindus and Muslims and low educational status of women in the Terai (UNFPA 2002; Choe et al., 2004). Province of residence is similarly useful since different provinces may have different levels of socio-economic development and may be culturally different, which may lead to differences in marriage timing. In absence of any specific measures for culture, most demographic studies, use region of residence as control for any cultural differences between groups of people. However, in this study, region of residence will be considered under socio-economic as various geographic regions in Kenya present unique socio-economic characteristics.

A study in Kenya on regional analysis of determinants of age at first marriage, established that type of place of residence is significantly associated with age at first marriage in medium and low fertility regions of Kenya (Nthenge, 2006).

Household Wealth Index

In many societies the economic status of the girl child's family is significant in determining the age at which people marry (Bracher and Santow, 1998; Garenne, 2004). Axinn and Thornton, (1992) stated that social and economic conditions in the parental home affect the likelihood of marriage of young women. Economic independence of women, as well as the economic status of the family, has a significant effect on the age at which women marry (Quisumbing and Hallman, 2003).

Some scholars confirm that increasing economic independence of women is largely responsible for the delay in marrying (Preston and Richards, 1975) and a lack of independence accelerates the transition to marriage (Lichter et al., 1992; Oppenheimer, 1988). Several cross-cultural studies conducted in America evidenced that people from economically disadvantaged families tended to marry earlier compared with those from advantaged families (South and Crowder, 2000; Snyder et al., 2004).

Employment Status

Proponents of 'new home economics theory hypothesize that, women's growing economic independence largely accounts for the rise in delayed marriage in industrialized societies (Blossfeld, 1995). Evidence also shows that, occupation of girls affects age at marriage. Singh and Samara (1996) found or considers women's labour force participation as one of the three major factors (women's acquisition of formal education and urbanization are the other two) affecting women's age at first marriage. Adedokun, (1999) reported from Nigeria that 10.3 percent of women employed in the public and private sectors, 28.7 percent of self-employed and 34.4 percent of unemployed women were married between the ages of 15 and 19.

However, in contrast to these findings, McLaughlin et al. (1993) report from a US study that women aged 18–28 years who are employed before marriage are more likely to marry than those not employed before marriage. Participants were asked whether they were currently working, aside from their housework.

2.5 Socio-cultural Factors

Religion

Religion has also been found to have a significant role in determining age at marriage, particularly for girls (Grenier et al., 1985; Adedokun, 1999; Pande, 2003). Studies confirm that elders assume they have a religious obligation to marry off their sons and daughters (Dixon, 1971). Studies show differences in the mean age at marriage for various religious groups. For instance, in Nigeria, Muslims have a mean age at marriage of 21.5 years compared with Christians (non-Catholic) who have an average age at marriage of 22 years, and Catholics of 22.5 years (Adedokun, 1999).

Various studies conducted in Asia indicate that the mean age at marriage for girls is lowest amongst Muslims, than the Hindus and highest amongst Buddhists (Pande, 2003). To determine religious affiliation, respondents in 2000 and 2004 MDHSs were asked to mention the religion they belonged to. The response options included Catholic, Anglican Church of Kenya, Seventh Day Adventist, Baptist, Other Christian, Muslim, No religion and other.

2.6 Conceptual Framework

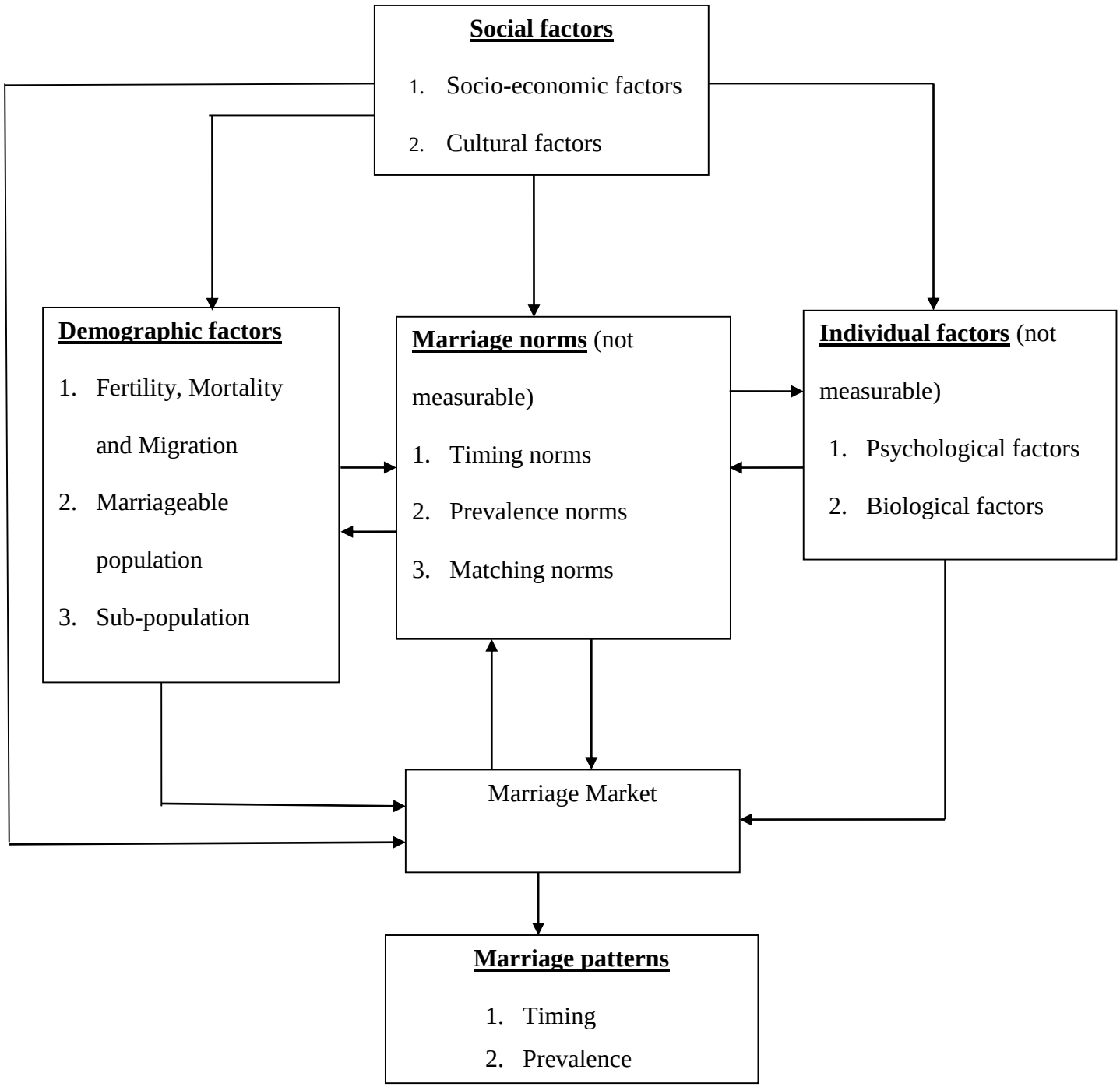
The micro-economic theory that is informing this study adopts the United Nations' framework (1988) for the study of marriage patterns. From the conceptual framework, it is clear that the socio-economic factors interact with the socio-cultural and demographic factors to determine age at first marriage. The conceptual framework is shown in *figure 1*.

The conceptual framework consists of interrelated blocks of factors. The first block is the social factors (socio-economic and cultural factors) block which is within the social structures that may influence marriage patterns in the society. These factors are also assumed to directly influence the other blocks of intermediate variables.

The second level of the blocks constitutes the intermediate variables which include; demographic factors, marriage norms and individual factors. The demographic factors;

fertility, mortality and migration represent the key demographic processes that shape the total population and size by age.

Figure 1: Conceptual Framework for the Study of Marriage Timing



Source: *United Nations (1988)*

The marriageable population constitutes a sub-group of the total population of both men and women who have reached the minimum legal age to marry.

The sub-population refers to the various sub-groups of the total population such as ethnic groups which are characterized by different marriage patterns. The socio-demographic factors are assumed to be determined by the social factors in the first block and seem to influence the marriage patterns directly through the sex ratio of the marriageable population and indirectly through their influence on the prevailing marriage norms.

Marriage norms are the values held by the society about legal and ideal age at first marriage (marriage timing), marriage desirability (marriage prevalence) and preference of marriage partners (matching norms). Marriage norms reflects the social traits of marriage patterns that are not explained by the standard socio-economic factors and may potentially explain why same socio-economic factors affect marriage timing in different social environment.

The individual factors are psychological and biological factors. These factors are however not measurable since no data on a large scale is available. Additionally, their effect on marriage patterns is very insignificant at aggregate level.

The marriage market block represents an environment of demand and supply for marriage by individuals. At this point, marriage is likely to occur when there is matching of marriage partners with a variety of socio-cultural issues that may be explained by matching norms in the society. Exit of individuals from this block is through marriage.

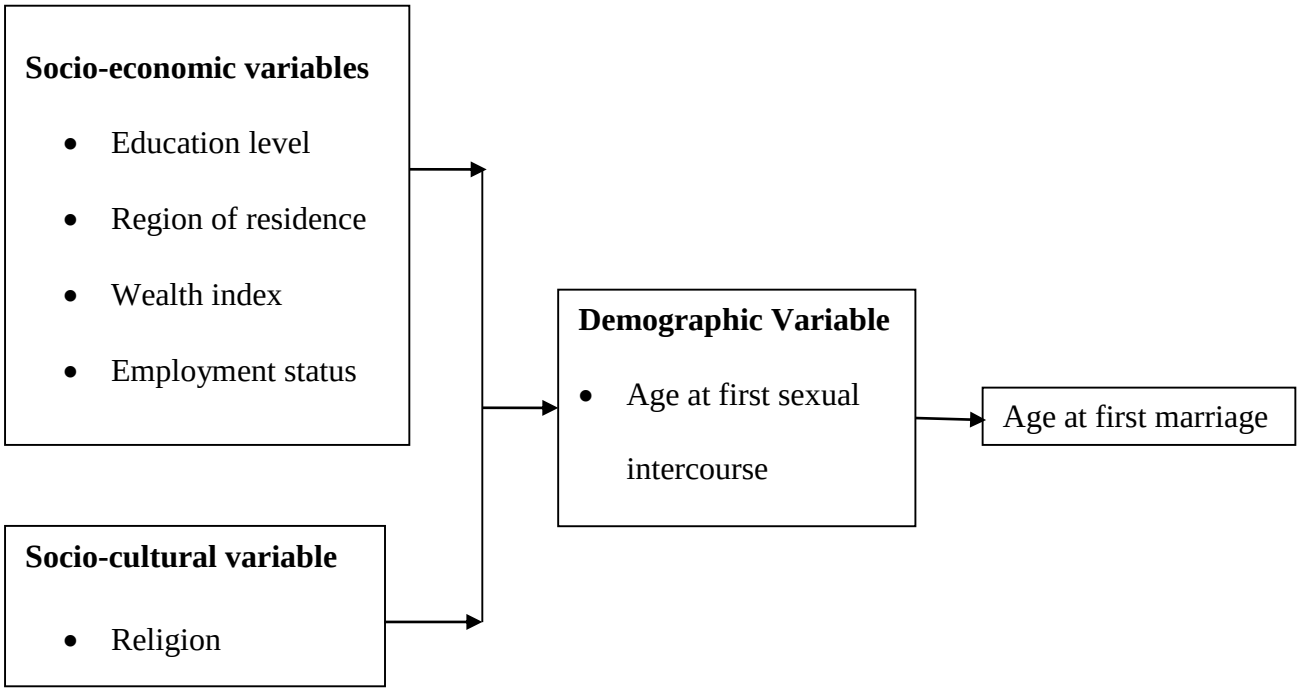
The dependent variable in this conceptual framework is the marriage pattern which is determined by; timing of marriage and marriage prevalence. Timing of marriage represents the median age at first marriage while marriage prevalence is the proportion of individuals who are ever married by age 50.

2.7 Operational Framework

Figure 2 shows the operational framework for this study. For the demographic variable, age at first sexual intercourse was analyzed. Under the socio-economic variable, four explanatory variables were analyzed which included: women's education level, region of residence,

household wealth index and the employment status. Religion is used to represent the socio-cultural block. From the framework, it is worth noting that the social factors operate through the demographic factors to determine age at first marriage.

Figure 2: Operational Framework



Modified from United Nations (1988)

Operational hypotheses

- Age at first sexual intercourse is positively associated with age at first marriage.
- Woman's education level is likely to affect age at first marriage.
- Women's region is likely to influence age at first marriage.
- Household wealth index of women is positively associated with age at first marriage.
- Employment status of women is likely to influence the age at first marriage
- Women's religion is likely to influence age at first marriage.

CHAPTER THREE

DATA AND METHODOLOGY

3.1 Introduction

This chapter covers data and methodology used in the study. The section describes the sources of data, data quality issues, operationalization of variables and the methods of data analysis used.

3.2 Sources of Data

The data for the study was drawn from the 2008/09 KDHS dataset. The KDHS is a nationally representative survey which interviewed a total of 8444 women of reproductive age. The study population comprised of 1697 and 4207 ever married women from urban and rural areas respectively. The method by which the data was collected is quantitative approach. Data collected and analyzed from this source included; women's age at first sexual intercourse, education level, region of residence, household wealth index, employment status and religious affiliation.

3.3 Data Quality

To check the quality of the data used for the analysis, evaluation on the completeness of data on age reporting was done. The current age of the respondents was plotted against digit preference in age reporting. The completeness of the information on age reporting was also checked by computing Whipple's index for urban and rural women respondents. To ensure that the data for analysis was of good quality, sub-setting and recording was done to those variables used in the study. The means of the current age and age at first marriage for the women will also be computed. Analysis on the quality of data used for this study was generally of good quality as shown by the 2008 KDHS report.

3.3.1 Completeness of Information

Information on completeness of information is presented in table 3.1

Table 3.1: Completeness of information on age reporting

	Urban		Rural	
	Frequency	**Percent**	**Frequency**	**Percent**
Month and year	1369	80.7	3171	75.4
Year and age, month imputed	262	15.4	845	20.1
Age and year, month imputed	60	3.5	165	3.9
Month and age, year imputed	1	0.1	4	0.1
None - all imputed	5	0.3	22	0.5
Total	**1697**	**100**	**4207**	**100**

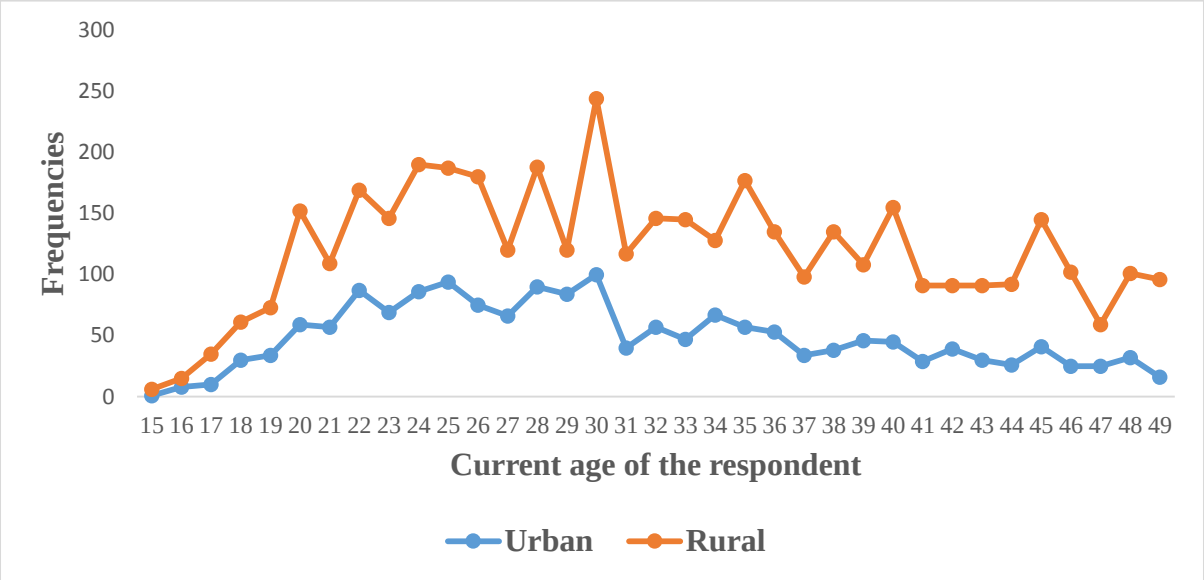
The completeness of information on year and month of birth for the respondents was at 80.7 percent in urban areas and 75.4 percent in rural areas. Moreover, the completeness of information on year and age was at 15.4 percent in urban areas and 20.1 percent in rural areas. The above statistics imply that the data is fairly of good quality and can be used for analysis.

3.3.2 Distribution of Respondents' Current age in Single Years

Analysis of age digit preference by respondents was checked by plotting current age of the respondents in single years against the number of women in urban and rural areas. The distribution of age in single years indicates digit preferences especially those ending with digit 0 or 5. The high picks shows that there was digit preference in age reporting. The highest pick therefore represents the mode of the current age of the women in urban and rural areas. This is the age were majority of the married women were the respondents. For example figure 3 shows the distribution of respondents' ages in single years among women in urban and rural areas. According to the results, the mode for the respondents in urban and rural areas was 30 years.

To obtain the mean of the current age of the respondents, a basic descriptive statistics was performed. The results show that, the mean of the current age of the respondents is 30.83 and 32.27 for urban and rural women respectively.

Figure 3: Distribution of Respondents according to their Current Ages in Single Years



Whipple's Index

To assess if there was digit preference especially those ending with digit 0 and 5 in age reporting; the Whipple's index is computed.

The general form of the Whipple's index is given as;

$$W_j = \frac{\Sigma P_a * 100}{1/5 \Sigma P_i}$$

Where;

a= ages 15,20,25,30,35,40,45 for urban and rural women.

i= all ages for women in urban and rural areas.

Whipple's index varies from 0 to 500. A value of 0 indicates that digits '0' and '5' are not reported, 100 means there is no preference for '0' or '5', and a maximum of 500 is obtained when only the digits '0' and '5' are reported in the age data. The inference about age distribution based on this index is as follows: <105 = highly accurate; 105–109.9 = fairly accurate; 110–124.9 = approximate; 125–174.9 = rough; ≥175 = very rough (Henry S et al; 1976). The Whipple's Index distribution table is shown in table 3.2.

Urban $\left\{\frac{(1+59+94+100+57+45+41)}{1/5 *1697}\right\}$ *100 = 117 (approximate according to the above criteria)

Rural $\left\{\frac{(6+152+187+244+177+155+145)}{1/5 *4207}\right\}$ *100 = 127 (rough according to the above criteria)

Table 3.2: Whipple's Index Distribution Table

Ages ending with digit 0 and 5	Urban	Rural
15	1	6
20	59	152
25	94	187
30	100	244
35	57	177
40	45	155
45	41	145
Total	**397**	**1066**

The indices for urban and rural areas were 116.9 and 127 respectively. These indices indicates that there were cases of digit preference in age reporting in those ending with digits '0' and '5'.

From the above data quality checks, the quality of the data is fairly of good quality. The minor limitations in terms of the completenes of information and digit preference may not significantly affect the results of this study.

3.4 Study Variables and their Methods of Measurement

3.4.1 Dependent Variable

Age at First Marriage

The dependent variable is age at first marriage measured in terms of single years. Age at first marriage is the survival time from a single state to married state. It starts from the time one is born till when they are married. During the survey all women were asked a series of questions regarding their marital status and whether they had ever lived with a man. All those who reported that they were ever married or ever-lived with a man, were asked to indicate how old they were at the time when they started, for the first time ever, living with a man as a wife,

irrespective of the legality or otherwise of their union. The response to this question constitutes the woman's age at first marriage. All the women who indicated that they had never been in a union or lived with a man were considered single and as a result they were not asked the question about the age at first marriage. It is worthwhile to note that in Kenya, non-marital cohabitation is hardly practiced and as such women who cohabit with men considered themselves as married.

3.4.2 Independent Variables

This study examined six independent variables. These variables included age at first sexual intercourse, women's education level, region of residence, household wealth index, women's occupation and religion. The methods of measuring these variables are shown in table 3.3.

Age at First Sexual Intercourse:

This is the initial age at which an individual starts engaging in sexual activity and is measured in terms of the age categories. i.e. below 15 years, 15-19 and 20 years and above.

Women's Education

This refers to the women's completed level of education. The education level is measured and categorized based on women with no education, primary, secondary and higher education.

Region of Residence

In this study, the region of residence has eight regions: Nairobi, Central, Coast, Eastern, Nyanza, Rift Valley, Western and North Eastern.

Household Wealth Index

The wealth index is a measure of a household's cumulative living standard. In the KDHS data, the wealth index is recoded as follows; poorest and poorer to poor, middle remained middle while richer and richest to rich.

Table 3.3: Variables and their Measurements

VARIABLE NAME	MEASUREMENT
Age at first marriage	Age in single years
Demographic Factors Age at first sexual intercourse	1=Below 15 Years 2=15-19 Years 3= 20 + years
Socio-Economic Variables Education level	0=No education 1=Primary 2=Secondary 3= Higher
Region of Residence	1=Nairobi 2=Central 3=Coast 4= Eastern 5= Nyanza 6= Rift Valley 7= Western 8= North Eastern.
Household Wealth Index	1=Poor 2= Middle 3= Rich
Employment status	0= Not employed 1= Employed
Socio-Cultural factors Religion	1= Roman Catholic 2= Protestant/other Christians 3= Muslim 4=Non- religious/Others

Employment Status

In this study, the employment status is the occupations that women were engaged during the survey. These occupations were categorized into two groups: Those that are employed

(Professionals, Clerical, agriculture, Sales and services, skilled manual) and not employed (Unskilled manual, Domestic services).

Religion

In this study, women's religion is categorized as Roman Catholic, Protestant/other Christians, Muslim and non-religious.

3.5 Methods of Data Analysis

This section presents the descriptive statistics, survival analysis using life table and Cox regression model as described below.

3.5.1 Descriptive Statistics

A descriptive univariate analysis will be performed to obtain the frequency distributions of the study population according the study variables. Descriptive statistics, such as the median, helps to describe, show or summarize data in a meaningful way such that, for example, patterns might emerge from the data. Descriptive statistics do not, however, allow us to make conclusions beyond the data we have analyzed or reach conclusions regarding any hypotheses we might have made. They are simply a way to describe our data.

Descriptive statistics are very important because if we simply presented our raw data it would be hard to visualize what the data was showing, especially if there was a lot of it. Descriptive statistics therefore enables us to present the data in a more meaningful way, which allows simpler interpretation of the data.

3.5.2 Life Table Technique

The most appropriate method for estimating median time from censored observations is survival analysis using the life table technique (Davis and Lay Yee 1999).The life table technique will be used to compute the median age at first marriage for the different characteristics of women in both urban and rural areas of Kenya. The United Nations defines

median age at first marriage as the age at which approximately half of women will have entered into marriage.

The input data of the equation is age of the respondent, whether or not they have ever married and, if applicable, recalled age at first marriage. Age at the time of interview and current status data from those who have not yet married as well as recalled age at first marriage among those who have married are used in a life table analysis to obtain the survival function by age. Those who never married are considered censored at their current age and reported age at first married is the failure event. The median age at first marriage will help us deduce the differentials in age at first marriage in urban and rural areas and possibly link their differentials on the effect of the explanatory variables on age at first marriage.

3.5.3 Proportional Hazard Model

Proportional hazard (Cox) model is used to assess the effect of the demographic, socio-economic and socio-cultural variables on the timing of marriage. The model was developed by Cox in 1972; it is usually stated in continuous form and is fitted by the method of partial likelihood (Cox, 1972). The age at first marriage may be interpreted as survival time from a single state to married state. Throughout this interval, women may either enter into marriage or be right censored at the time of the survey. In this case, women who were single at the time of the survey constitute censored cases. Censored cases require special treatment in estimating exposure time, and as such, ordinary regression procedures are not appropriate (Allison, 1995). We, therefore use continuous time event history analysis techniques (Allison, 1984, 1995).

The hazard model is appropriate for the analysis because age at marriage measures the length of time (the duration) till the occurrence of the event (getting married), hence, it accounts for women who have not yet experienced the events resulting in right censoring of the data.

The model is generally described as:

$h(t;x_{1...}x_n)=h_0(t)exp(b_1x_{1+}.....+b_nx_n)$

Where

h (t ...) = Resultant hazard,

$x_{1,}$ $x_{2,...}$ $x_{n=}$ n covariate for the respective case, xi, x2 are the study explanatory variables

And

t = Age at first marriage

The term h_o (t) is called the baseline hazard; it is the hazard for the respective individual when the values of all the covariates are equal to zero.

Hazard rate is the key concept of the proportional hazards model. Hazard rate measures the risk of making a transition from the absence of an event to the presence of an event, such as from being single to being married. Hazard rate is essentially a transition rate. The rate is measured by the ratio of number of cases experiencing the event at the end of a time interval to the total number of cases exposed to the risk of experience the event at the beginning of the time interval. In this study, a lower hazard rate implies a longer duration of waiting time for the event to occur, i.e. older ages at first marriage. In this study, the coefficients of the covariates will be transformed by exponentiation and interpreted as risk ratios.

We present the results as risk ratios, which represent the relative likelihood of a woman with the specific characteristic of marrying in comparison to a woman who would be in the appropriate reference group. The risk ratio of the reference group or category is one (1.00). If the risk ratio of a given category is greater than 1.00, this indicates greater risk of marrying, and when the risk ratio is less than 1.00, it indicates a lower risk of marrying compared to the reference group. In this analysis, a variable will be reported as having a significant effect, if its effect on the timing of marriage is statistically significant at least at the 5 per cent level of significance.

CHAPTER FOUR

RESULTS ON AGE AT FIRST MARRIAGE

4.1 Introduction

This chapter presents the results on age at first marriage among women in Kenya by type of place of residence. The first part presents a description of the background characteristics of the study population. The second part describes results of the life table on the differentials in median age at first marriage among urban and rural women in Kenya by background characteristics while the third section presents the multivariate Cox proportional hazard regression results. The last part presents summary of the chapter.

4.2 Background Characteristics of Study Population

The results indicating the background characteristics of the study population are presented in table 4.1. The study population comprises 1,697 respondents from urban areas representing 28.7% and 4,207 from urban areas representing 71.3% of the study population respectively.

The results indicate that, among the two categories of women, majority of the women had their first sexual intercourse between ages 15-19 years. For example, among the sample in urban areas, about half 51.1% and about a third 39.8% had their first sexual intercourse when between ages 15-19 years and over 20 years respectively. In the rural areas, almost half 45.8% and 43.9% experienced first sexual intercourse between ages 15-19 years and over 20 years respectively.

Among the urban women, 9.3% had no education, 42.3% with primary education, and 29.8% having secondary education while only about 18.6% had higher education level. In rural areas, about 22.5%, 58.3%, 16.4% and 2.9% had no education, primary, secondary and higher education levels.

Table 4.1: Percentage Distribution of Women according to the selected Background Characteristics

Variables	Urban		Rural	
	N	Percent	N	Percent
Age at first intercourse				
Below 15 years	155	9.1	436	10.4
15-19 years	867	51.1	1926	45.8
20+ years	675	39.8	1845	43.9
Total	**1697**	**100**	**4207**	**100**
Highest educational level				
No education	158	9.3	947	22.5
Primary	718	42.3	2451	58.3
Secondary	506	29.8	688	16.4
Higher	315	18.6	121	2.9
Total	**1697**	**100**	**4207**	**100**
Region				
Nairobi	549	32.4	-	-
Central	117	6.9	566	13.5
Coast	381	22.5	456	10.8
Eastern	55	3.2	741	17.6
Nyanza	207	12.2	771	18.3
Rift Valley	129	7.6	747	17.8
Western	168	9.9	552	13.1
North eastern	91	5.4	374	8.9
Total	**1697**	**100**	**4207**	**100**
Household Wealth Index				
Poor	57	3.4	2184	51.9
Middle	55	3.2	952	22.6
Rich	1585	93.4	1071	25.5
Total	**1697**	**100**	**4207**	**100**
Employment status				
Employed	633	37.3	1597	38.0
Not employed	1064	62.7	2610	62.0
Total	**1697**	**100**	**4207**	**100**
Region				
Roman Catholic	275	16.2	832	19.8
Protestant/other Christians	1034	60.9	2504	59.5
Muslim	323	19.0	713	16.9
Non-Religious/others	65	3.8	158	3.8
Total	**1697**	**100**	**4207**	**100**

Of all the urban women, Nairobi region has the highest proportion 32.4%, 22.5% from coast and 12.2% from Nyanza while Eastern region had the smallest proportion 3.2% of the study population. Among the rural women, Nyanza had the highest proportion 18.3% and the lowest at 8.9% being North Eastern.

The results also show that, majority 93.4% of the urban women were categorized as belonging to rich households with 3.2% and 3.4% categorized as middle and poor households. In contrast about half 51.9% of the rural women were categorized as belonging to poor households while 22.6% as middle and about a quarter 25.5% as rich households.

The results also show that, majority of urban and rural women, were not employed. For example, about 37.3% of the women in urban areas were employed while over half 62.7% are not employed. In the rural areas, about 38% are employed while about 62.0% were not employed

Among the women in urban areas, about 60.9% are Protestants and the minority 3.8 % did not have any religion. In the rural areas, majority about 59.5% of the women were Protestants while the minority about 3.9% had no religion.

4.3 Differentials in Median Age at First Marriage

Table 4.2 shows the median age at first marriage among the women in urban and rural areas according to the study variables. The life table method was used to generate the results. The graphical presentation of the same data is shown in Appendix I.

4.3.1 Age at First Sexual Intercourse

The results indicate that generally, early age at first sexual intercourse increases the woman's chances of entering into first marriage among women in both urban and rural areas in Kenya. For example, the results show that women in urban areas who engaged in first sexual intercourse below ages15 years were more likely to enter into marriage than those between

Table 4.2: Median Age at First Marriage among Women in Urban and Rural Areas according to the Study Variables

Variables	Urban	Rural
	Median age	Median age
Age at first intercourse		
Below 15 years	19.04	19.49
15-19 years	20.24	19.60
Above 20 years	23.25	19.55
Highest educational level		
No education	18.91	18.29
Primary	19.61	19.12
Secondary	22.34	22.36
Higher	25.68	23.76
Region		
Nairobi	23.02	-
Central	20.47	21.09
Coast	21.10	18.19
Eastern	22.45	21.18
Nyanza	21.76	19.28
Rift Valley	21.28	19.69
Western	19.81	19.73
North eastern	19.41	18.20
Household wealth index		
Poor	18.68	18.97
Middle	18.72	19.63
Rich	21.97	21.10
Employment status		
Not employed	20.67	19.28
Employed	22.39	19.75
Religion		
Roman Catholic	22.02	20.02
Protestant/Other Christians	22.05	19.98
Muslim	19.69	18.34
Non-religious/others	23.91	18.07

ages 15-19 years and 20 years. In the rural areas, the results show that age at first intercourse and entry into first marriage do not significantly vary with each other.

The findings show that, women in urban areas who engage in first sexual intercourse below ages 15 marry 4.21 years earlier compared to those who engage in first sexual intercourse after age 20. However, in the rural areas, there are little differentials of entering into first marriage among women between those who engage in first sexual intercourse below ages 15 and after age 20.

4.3.2 Education

The results of this study indicate that, as the education level of a woman increases, the age at first marriage in both urban and rural also increases. Women with tertiary education level in urban areas marry 6.77 years later than those with no education. Compared to women in rural areas, those with higher education marry 5.47 years later than those with no education.

These results however support the hypothesis that, woman's education affects the age at first marriage. (Dixon, 1971; Oppenheimer, 1988; Goldscheider and Waite, 1991).

4.3.3 Region of Residence

The findings of this study indicate regional differentials in the median age at first marriage among both urban and rural women. In urban areas, the regions with the highest median age at first marriage are Nairobi (23.02) and Eastern (22.45) while that with lowest is western and North Eastern at 19.81 years and 19.41 years respectively. For the women in rural areas, the highest is Central province (21.09) and Eastern (21.18) while the lowest is North Eastern and Coast at 18.20 and 18.19 respectively.

These results support the hypothesis that, age at marriage differs significantly by region of residence. Studies in Nepal reveal that age at marriage varies by the ecological zones of the Hills, Mountains and Terai regions (Thapa, 1989; Niraula and Morgan, 1996).

4.3.4 Household Wealth Index

The results obtained indicate that women who belong to rich households delay entering into first marriage compared to those who are from a poor background. In the urban areas, the median age at first marriage among women from the rich background is at 21.97 years and for those from the middle is at 18.72 years. The gap in the median age at first marriage between those from the rich and the poor families is also pronounced in the rural areas as in the case of urban areas. For instance, the median age at first marriage for women from poor background is 18.97 while for those from the rich background is 21.10 years.

The results in this study is indeed similar to the previous studies which established that that people from economically disadvantaged families tended to marry earlier compared with those from advantaged families (South and Crowder, 2000; Snyder et al., 2004).

4.3.5 Employment

The results of this study show that, among women in both urban and rural areas, the median age at first marriage was higher among women categorized as employed than among those unemployed. In urban areas, employed women marry 1.72 years later than those who are not employed. Among the rural women, the gap is too small where employed women marry 0.57 years later than those who are not employed.

4.3.6 Religion

The results in urban areas are striking in that, the highest median age at first marriage is for women who report no religion at 23.91 while the lowest is among Muslim women at 19.69. However, among rural women, the Roman Catholic women recorded the highest median age at 20.02 while the lowest is for women with no religion at 18.07. The median age for the protestant women was at 19.98 while for the Muslim women was 18.34.

These results support findings from previous studies which established that there exist some differences in the mean age at marriage for various religious groups (Adedokun, 1999).

4.4 Multivariate Analysis Results

The results of the multivariate analysis are presented in Table 4.3. As indicated, the results for urban women are in Model 1 and those for rural women are Model 2. The models were both significant at $p<0.01$.

4.4.1 Age at First Sexual Intercourse

The multivariate results of this study indicate that late exposure into sexual intercourse reduces the risk of entering into first marriage among women in Kenya. For example, in urban areas, women who engage in sexual activity after ages 20 years and above were 33 percent less likely to enter into first marriage compared to those who engage in first sexual debut when below 15 years of age. This association was significant at $p<0.01$.

Interestingly, among women in the rural areas, the results indicate that, there is no statistically significant difference in the risk of entering into first marriage between those who engage in first sexual debut when below 15 years compared to those who engage in first sexual debut when they were between ages 15-19 years and after age 20 years.

4.4.2 Education

As expected, the risk of entering into first marriage decreases with increase with the women's level of education. The results of this study indicate that, among women in urban and rural areas, those with higher level of education are less likely to enter into first marriage compared to those with no education. Among the women in urban areas, those with no education are 132 percent more likely to enter into first marriage while those with primary level of education are about 155 per cent more likely to enter into first marriage, all compared to those with higher level of education. Those with secondary level of education are 61 per cent more likely to enter into first marriage, compared to those with higher level of education. These associations were significant at $p<0.01$.

Table 4.3: A Multivariate Life Table analysis of the risk of entering First Marriage for Women in Urban and Rural Areas by Background Characteristics

	Model 1: Urban***			Model 2: Rural***		
Variables	**coeff B**	**SE**	**Hazard Ratios Exp(B)**	**coeff B**	**SE**	**Hazard Ratios Exp(B)**
Age at first intercourse						
Below 15 years (RC)	0.000		1.000	0.000		1.000
15-19 years	-0.043	0.134	0.958	0.085	0.076	1.088
20+ years	-0.394	0.138	**0.674*** **	0.084	0.077	1.088
Highest education level						
Tertiary	0.000		1.000	0.000		1.000
No education	0.842	0.175	**2.321*** **	0.838	0.152	**2.312*** **
Primary	0.938	0.109	**2.556*** **	0.758	0.137	**2.134*** **
Secondary	0.476	0.105	**1.609*** **	0.237	0.141	**1.268***
Region of residence						
Nairobi (RC-Urban)	0.000		1.000			
Central (RC-Rural)	-0.320	0.195	0.726	0.000		1.000
Coast	0.037	0.243	1.037	-0.261	0.137	**0.770***
Eastern	-0.352	0.182	**0.703***	0.148	0.107	1.159
Nyanza	-0.237	0.248	0.789	-0.295	0.118	**0.745** **
Rift Valley	-0.192	0.208	0.825	0.066	0.127	1.069
Western	-0.222	0.254	0.801	-0.099	0.126	0.906
North Eastern	-0.114	0.212	0.892	-0.087	0.129	0.917
Household wealth index						
Rich (RC)	0.000		1.000	0.000		1.000
Middle	0.149	0.187	1.160	0.053	0.062	1.054
Poor	0.367	0.204	**1.444***	0.037	0.066	1.037
Employment status						
Not employed (RC)	0.000		1.000	0.000		1.000
Employed	0.119	0.074	1.126	-0.029	0.050	0.971
Religion						
Roman Catholic (RC)	0.000		1.000	0.000		1.000
Protestant/other Christians	-0.036	0.203	0.964	-0.125	0.129	0.883
Muslim	-0.085	0.191	0.918	-0.174	0.124	0.840
Non- Religious/others	0.030	0.213	1.030	-0.069	0.131	0.933

RC: refers to Reference Category

***P<0.01, **P<0.05 *P<0.10

Urban: -2Log Likelihood=10582.669; Chi2=200.324; df=18

Rural: -2Log Likelihood=29638.872; Chi2=218.353; df=17

Among women in rural areas, those with no education and primary education were 131 percent and 113 percent more likely to enter into first marriage, all compared to those with higher education. All these associations were significant at $p<0.01$.

The possible explanation is that, delayed age at first marriage among educated women is the strong social norm preventing girls in school from marrying (Blossfeld and Huinink, 1991; Blossfeld and Jaenichen, 1992; Thornton et al., 1995).

4.4.3 Region of Residence

The results of this study indicate that, there is minimal regional difference in the risk of entering into first marriage among women in urban areas and a slight difference in rural areas. For example, there is no significant difference in the risk of entering first marriage among women in Central, Coast, Eastern, Nyanza, Rift valley, Western and North Eastern, all compared to women in Nairobi. Among women in rural areas, women in Nyanza are 26 percent less likely to enter into first marriage compared to their counterparts in Central. The effect was only significant at $p<0.01$.

4.5 Summary

Chapter four presented the results of the factors affecting age at first marriage among ever married women in Kenya by type of place of residence. The life table technique was used to estimate the differentials in median age at first marriage while the Cox proportional hazard regression was used to determine the effects of the study variables on age at first marriage in urban and rural areas.

The life table results of this study generally show differentials in median age at first marriage by various background characteristics. For nearly all the explanatory variables, median age at first marriage is lower among women in rural areas compared to their urban counterparts. Additionally, the results also confirm findings from previous studies elsewhere which have

shown that, higher rates of early marriage are in rural areas than in urban areas (McLaughlin et al., 1993; Westoff, 2003; Garenne, 2004).

The multivariate results show that, the effect of the explanatory variables on age at first marriage differ among the urban and rural women in Kenya. The results of this study show that, delayed age at first sexual debut among women in urban areas significantly reduces the risk of entering into first marriage. The results further indicate that, among the women in rural areas, exposure to sexual activity at any age has no significant risk of entering into first marriage. The results also show that increase in the level of education among women in both urban and rural areas reduces the risk of entering into first marriage. On the women's region of residence, the results indicated that in rural areas, residing in Nyanza reduces women's risk of entering into first marriage.

Household wealth index, employment status and religious affiliation did not have any significant effects on age at first marriage among women in urban and rural areas in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and recommendations of the study findings. The first section describes the summary of the study findings; the second section presents the conclusion while the last section presents the recommendations of the study.

5.2 Summary of Findings

This study sought to establish the factors affecting age at first marriage among ever married women in urban and rural areas in Kenya. The specific objectives were to estimate the differentials on age at first marriage among ever married women in urban and also to establish the effect of demographic, socio-economic and socio-cultural variables on the age at first marriage among ever married women in urban and rural Kenya.

The data for the study was drawn from the KDHS of 2008/09. The study population consisted of 1697 and 4207 ever married women from urban and rural areas respectively. The study was conceptualized within the United Nations' framework (1988) for the study of marriage patterns.

The dependent variable for this study was age at first marriage and the explanatory variables included; age at first sexual intercourse, woman's education level, region of residence, wealth index, employment status and religious affiliation.

The main methods of data analysis were the survival analysis using life table and Cox regression model.

The life table method was used to estimate the differentials in median age at first marriage among ever married women in urban and rural areas by various background characteristics.

The results show that there were significant differentials in the median age at first marriage in all the two categories of women by various background characteristics. The results further show that, any additional unit increase in an independent variable increases the median age at first marriage in all the two categories of women. It is also apparent that, in almost all the explanatory variables, median age at first marriage is lower among the women in rural areas compared to their urban counterparts. For example, the median age at first marriage for women with no education in urban areas is 18.91 years and for a woman with higher level of education is high at 25. 68 years and 18.29 years for women with no education and 23.76 years for those with higher level of education in rural areas.

The Cox proportional model established that, age at first sexual intercourse, education level and also being in rural areas of Nyanza significantly affect age at first marriage among women in urban and rural areas in Kenya. The study did not find statistically significant effects of being in urban residence, wealth index, employment status and religious affiliation on age at first marriage in Kenya.

5.3 Conclusion

The results of the study show that, women who delay the age first sexual intercourse generally delay age first marriage. Among the urban women, the effect of age at first sexual intercourse is only significant for those who engage after age 20 years while increase in the age at first sexual intercourse is not significant at all in rural areas.

As hypothesized, increase in the education level increases the age at first marriage. Women's education level significantly affects the age at first marriage both among rural women and urban women in Kenya.

Although there is variation on the effect of residence age at first marriage in the different regions, there is no significant effect on the age at first marriage among the married women in all the regions in urban areas. However, in rural areas, except being in Nyanza where there is significance, there is no significant effect on their age at first marriage in all the other regions. .

5.4 Recommendations

5.4.1 Recommendations for Policy

The findings of the study suggest that, increase in education level reduces the risk of entering first marriage. It is important that, education policies should target in improvement of girl child education to enable them acquire at least post-secondary education.

5.4.2 Recommendations for Programmes

The results show that girls who engage in early sexual intercourse increase their risk of entering into first marriage. Delaying engaging in sexual intercourse positively affects age at first marriage. The results further indicate that, more educated women delay entry into first marriage. Programs should target girls both in and out of school on adolescent and youth sexuality and thus enabling them to delay early sexual debut and subsequently early marriage.

5.4.3 Recommendations for further Research

Age at first sexual intercourse has consistently appeared and remained a significant determinant of age at first marriage among women in urban Kenya. Given the differences that do exist between men and women on age at first marriage, it would also be important that the effects of the study variables on age at first marriage among ever married men are investigated to determine if the effects differ according to the type of place of residence. I recommend that future studies could focus on the effects of these variables on age at first marriage among ever married men in urban and rural areas in Kenya.

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APPENDIX

Appendix I: Median Age at First Marriage among Women in Urban and Rural Areas by various Background Characteristics