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Socioeconomic determinants of age at marriage in Malawi

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Although age at first marriage has important demographic and health consequences for any population, no systematic analysis of changes in the timing of marriage has been conducted in Malawi. The purpose of this study is to identify factors affecting age at marriage among women in Malawi. This study used data obtained from 2000 and 2004 for Malawi Demographic and Health surveys. Univariate, bivariate and logistic regressions were employed to examine the relationship between age at marriage and selected background variables. Marriage in Malawi takes place early: nearly 70% of the respondents were married before the age of 18 years and the mean age at first marriage is 17.4 years. Age at marriage varies by age, region, rural-urban residence, religion, ethnicity and wealth. Early marriage and consequent early childbearing are related to high fertility, low status of women and adverse health risks for both the mother and child. The findings from logistics regressions indicate that age, region and education are the most important determinants of age at marriage in Malawi. The policy implications of the results are discussed.

Key words: Age at marriage, socio-economic, determinants, Malawi.

INTRODUCTION

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; 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 socially acceptable time for sexual activity and childbearing. As such marriage is not only the most predominant context for childbearing but also one of the most important determinants of fertility (Bongaarts, 1983; Lesthaeghe et al., 1989). However, reproduction is not the only function of marriage. Marriage marks the beginning of a new family unit with all the complicated statuses and the roles that the members of this unit are

expected to play. For the society as a whole, marriage 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 (Ikamari, 2005).

Changes in marriage pattern, for instance delayed marriage, are believed to bring in the issues of dating, premarital sex, unwanted pregnancy, abortion, STDs and HIV/AIDS (Jones, 2007). Studies indicate that an increase in age at marriage leads to a rise in premarital sex and in absence of contraception which gives rise to unwanted pregnancies and a rise in adolescent fertility (Jones, 2007). On the one hand, women who marry early will have, on average; a longer period of exposure to the risk of pregnancy, often leading to higher fertility. On the other hand, societies with later age at first marriage have experienced decreased fertility rates while in traditional populations in Asia and Africa where age at first marriage is younger, high levels of fertility have been observed (Bongaarts, 1983; Week, 2007). Due to its importance, various researchers believe that understanding variations

in age at marriage helps in explaining differences in fertility across populations and fertility within individual populations over time (United Nations, 1990; Ezeh and Dodo, 2001).

Early marriage is associated with early childbearing as, in most cases particularly in the developing countries; the main purpose of marriage is to have children. Early childbearing is also related to low status of women and adverse health risks on the mother and child. Young mothers are more likely to experience pregnancy related complications and less able to deal with them, which often lead to maternal deaths (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, 2005). Some studies indicate that marrying at an early age in certain parts of the world leads to higher rates of divorce (Jones, 1992; VandenHeuvel and McDonald, 1994).

Delayed age at marriage (or late marriage) directly affects completed fertility by reducing the number of 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).

Studies elsewhere have, however, identified a number of factors that seem to influence the timing of marriage (Veronique, 2002; Singh and Samara, 1996; Jejeebhoy, 1995; Oppenheimer, 1988; Bloom and Trussell, 1984; Rindfuss and St. John, 1983; Harwood-Lejune, 2001). Some of the factors are region of residence, place of residence, education, occupation, economic status, religion and ethnicity. 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, 1990; Lesthaeghe et al., 1989; Singh and Samara, 1996; Kaufman and Meekers, 1998). Jejeebhoy (1995) found that education is the single factor most strongly related to the postponement of marriage, but the relationship may be subject to threshold effects.

Age at marriage is one of the most important factors in population dynamics as it affects fertility, mortality and migration. In Malawi, where marriage is nearly universal, age at marriage has a strong influence on a variety of social, economic and demographic factors. The preceding paragraphs have attempted to demonstrate that changes in the age at marriage, especially for women, have long been considered an important component of the development process. It is argued that by delaying marriage, women may stay in school longer, find more suitable mates, gain greater bargaining power and push the age of childbearing upward resulting in better child outcomes, fewer births and slower population growth. Unfortunately, despite the importance of age at

marriage in an individual's life history and its role in fertility and mortality transitions, very few studies have been undertaken to investigate the determinants and consequences of marriage patterns in Malawi. Therefore this study examines the effect of social and economic factors on the woman's age at first marriage. In particular, the study aims at establishing the effects of some of the factors that have been indicated in studies elsewhere to be closely associated with the woman's age at first marriage. The goal is to determine the factors that are influencing age at marriage in Malawi so as to manipulate these factors to increase age at marriage and thereby reduce fertility and population growth rates to manageable levels.

METHODOLOGY

Country background

Malawi is a small land locked country in southeast Africa. It shares borders with Mozambique to the east, south and southwest, Zambia to the west and Tanzania to the north. The country is divided into three administrative regions, namely: Northern Region, Central Region and Southern Region. These are further subdivided into a total of twenty-seven districts. Malawi has an estimated population of 13 million unevenly distributed among the three regions (Malawi Government, 2010). Although Central Region has 38%, Southern Region, 34% and Northern Region, 29% of the total land area, the available demographic information indicates that 11% of the population is in the Northern Region, 39% in the Central Region and 50% in the Southern Region (Malawi Government, 2010). The country is ethnically diverse and over twelve different cultural sub-groups can be identified. The 2000 MDHS, the first nation-wide demographic survey to ask the question of ethnicity identified nine major ethnic groups as follows: *Chewa, Tumbuka, Lomwe, Tonga, Yao, Sena, Nkonde, Ngoni, Anyanya* and Others. Each of these ethnic groups has its own unique customs, beliefs and norms and varies in socio-economic characteristics. The ethnic groups in the Northern Region (*Tumbuka, Tonga, Nkonde* and *Ngoni*) are characterized by a patrilineal system of descent with patrilocal residence after marriage and inheritance traced through sons. The ethnic groups in the Southern Region (*Yao, Lomwe* and *Anyanja*), with the exception of the Sena, follow a matrilineal system of descent and inheritance, and residence after marriage is most often matrilocal. The Central Region is mixed, although being the home of the *Chewa*, the largest ethnic group in Malawi, the region can be categorized as mainly matrilineal and matrilocal residence. However, due to interaction with other ethnic groups, there seem to be a shifting trend towards patrilineal and patrilocal residence (Zulu 1996).

Although the Northern Region is often considered less developed, a closer examination of the social and economic indicators reveal that Northern is wealthier and characterised by a higher level of education than the Central or Southern Regions (Malawi Government, 2000). The high levels of education in the Northern region are attributed to the establishment of an educational system with more extensive coverage by the Scottish missionaries who settled in the region well before the establishment of colonial rule in 1891. Catholic missionaries who settled in the Central and Southern Regions had made relatively less of an effort in the development of an educational system (Zulu, 1996). For political and ideological reasons, far fewer missionary schools were established in predominantly Muslim areas (Bone, 2000). In terms of poverty, nearly 49.2% of the population in Southern Region are poor, followed by Central Region with 40.2% of its population

categorized as poor and Northern Region with a mere 10.6% of its population being poor (Malawi Government, 2000).

Malawi's social and demographic indicators are among the worst in the world. With a Human Development Index of 0.404 in 2009, the 2009 Human Development Report ranks Malawi 166 out of 178 countries (UNDP, 2009). Relative to other countries in the region, Malawi has always had high fertility, mortality and population growth rates. For example, infant mortality rate currently estimated at 76 infant deaths per 1000 live births is one of the highest in Southern Africa (Malawi Government, 2006). Moreover, the risk of Malawian women dying due to pregnancy and related complications is very high and has been worsening. Maternal Mortality Ratio (MMR) almost doubled between 1992 (620/100000) and 2000 (1120/100000) and declined slightly to around 984 in 2004 (Malawi Government, 1994b, 2002b, 2006). Similarly, expectation of life at birth was estimated to be 48 years in 1998 and it is believed to have declined to 40 years in recent times and is currently among the lowest in the world. The decline in expectation of life at birth is largely attributed to the HIV and AIDS epidemic. It is estimated that the HIV prevalence rate is 14% (Government of Malawi, 1994b). Total fertility rate (TFR) in Malawi is still high though it has declined somewhat over the past few decades. TFR declined from 7.6 children per woman in 1977 to 6.7 children per woman in 1992 and further down to 6.0 children per woman in 2004 (Malawi Government, 1984, 1994b, 2006). The decline in fertility could be attributed essentially to an increase in contraceptive prevalence rate. Contraceptive prevalence rate (CPR) has increased from 13% in 1992 to 26% in 2004 (Malawi Government, 1994b, 2006). The major factors contributing towards poor health status among the majority of the people in the country are: poverty, high illiteracy rates, especially among women, too early, too many, too frequent and too late pregnancies and high fertility (Malawi Government, 1984, 1994b; United Nations Population Fund, 1997).

In Malawi, like other African countries, marriage was characterised as early and universal (Van de Walle, 1968; Reniers, 2003). The universality of marriage and low age at marriage is related to the religious affiliations and lower status of women in the society. Although the constitution of Malawi has fixed the legal age at marriage at 18 years for females (Malawi Government, 1994a) such a requirement is hardly known in the countryside. As such, a large percentage of marriage still takes place before the legal age at marriage encouraging the government to introduce a bill to reduce the minimum age from 18 to 15 years. In addition, as a result of poverty many young women are forced to get married at an early age, and in most cases marry someone who is older than them. In 2008, government introduced a bill in parliament to lower the legal age at marriage from 18 to 15 years. Although the bill was passed by parliament, the President refused to endorse the bill due to a public outcry. In the face of poor social and economic indicators, the potential contribution of a study like this one towards policy formulation to improve the quality of living for all Malawians cannot be overemphasized.

Sources of data

The study is based on the analysis of data obtained from the 2000 and 2004 Malawi Demographic and Health surveys (Malawi Government, 2002b, 2006). The DHS (now DHS+) program has conducted over 170 nationally representative surveys in about 70 countries throughout Africa, Asia, the Near East, Latin America, and the Caribbean. The DHS program is funded by USAID and implemented by Macro International, Inc. DHS typically have large sample sizes of between 5000 and 30,000 households. These surveys provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition.

The MDHSs involved the use of three basic questionnaires. First, a questionnaire on households that recorded information on all household members. Second, a questionnaire on individual women that recorded detailed information on eligible women who were identified from the household questionnaires. The 2000 MDHS collected data for 13220 women aged 15-49 whereas the 2004 DHS collected data for 11698 women of the same age range. Total sample for this analysis comprises 10,600 and 9605 ever-married women aged 15-49 years old in 2000 and 2004 data sets respectively. The questionnaires on individuals collected information on the respondent's background characteristics, reproductive history, knowledge and practice of family planning, breast-feeding practices, marriage, fertility preferences etc., as well as on her husband's background characteristics. Third, a questionnaire for individual men aged 15-54 was administered and a total of 3092 and 3261 men were interviewed in 2000 and 2004 respectively. The male questionnaire was similar to that of the individual women questionnaire but excluded the birth history and maternal and child health sections. The analyses in this paper will use data from the individual women questionnaire only.

The 2004 MDHS had 3 broader objectives and 7 specific objectives (Malawi Government, 2006). One of the broader objectives and one that is of interest in this study is to "assist in the monitoring and evaluation of Malawi's health, population, and nutrition programmes" (Malawi Government, 2006). In particular, this study is meant to examine the socioeconomic factors responsible for early age at marriage in Malawi. It is hoped that the findings of this study will contribute towards the successful implementation of the national population programme in Malawi including efforts to improve the status of women in the country.

Variables

Dependent variable

The variables of interest for this study were obtained from the individual women questionnaire. The dependent variables for this analysis, age at first marriage, were obtained from a question in the section on marriage in the individual woman's questionnaire: "How old were you when you started living with him?" The "him" refers to husband for those women who are married or any man the woman once lived with. Age at first marriage, the dependent variable, is a continuous variable. However for the purposes of this study, age at first marriage was dichotomized at 18. This enabled us to look at the percentage of marriage that happened before and after the age of 18.

Independent variables

The main interest of this study is to examine the interrelationship between age at first marriage and social and economic factors. Eight (8) independent variables were used in the analyses: current age, education, region, type of residence (rural-urban), religion, ethnicity, wealth index and occupation. The variables selected in this investigation are those that are frequently used for the analysis of age at first marriage (Islam and Ahmed, 1998; Rahman et al., 2009; Vu, 2009). All the independent variables were obtained from the section on participant's background characteristics.

Age of respondent

Current age of the respondent is one of the most important variables in demographic analysis (Shryock and Siegel, 1976). Vital events such as fertility, mortality, marriage and divorce are

dependent on age. Most countries in the world have set minimum age at which individuals can enter into marriage.

Place of residence

Current place of residence in urban or rural areas was used. Studies have shown higher rates of early marriage in rural areas than in urban areas (McLaughlin et al., 1993; Westoff, 2003; Garenne, 2004). The 2000 MDHS indicate that the median age at first marriage of 20–24-year-old women at 18.7 years for urban women, and 17.8 years for rural women (Malawi Government, 2002b).

Region of residence

Region of residence is identified as the geographic region in which the participant was interviewed. The age at marriage also 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). The 2000 MDHS reports the median age at marriage of women at 17.7 years, 18.3 years and 17.7 years for women from the Northern, Central and Southern Regions respectively (Malawi Government, 2002b). 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.

Ethnicity

Previous studies have found a relationship between ethnicity and age at marriage both in developed and developing countries (Kobrin and Goldscheider, 1978; Thapa, 1989, 1997; Adedokun, 1999). Kobrin and Goldscheider (1978) report ethnic differences in age at marriage and marriage patterns in the United States of America, a highly industrialized country. McLaughlin et al. (1993) report that white women marry earlier than black women in the US; black women are only 45% as likely to marry as white women in a given year. Adedokun (1999) reports the difference in age at marriage in Lagos, Nigeria, explaining that Yoruba people marry later than Igbo and other smaller ethnic groups.

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, 2002b).

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.

Occupation

Occupation of girls also affects age at marriage. Singh and Samara (1996) defined 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% of women employed in the public and private sectors, 28.7% of self-employed and 34.4% 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.

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, CCAP, Anglican, Seventh Day Adventist./Baptist, Other Christian, Muslim, No religion and other.

Economic status

In many societies the economic status of the 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). In this study wealth index was constructed using the following household assets data: electricity, radio, TV, bicycle, motorbike and car. Each item was given a score and it was summed across items for each household. Individual wealth was ranked as poor; middle and rich based on the total score. Based on the extensive review of the literature on the determinants of age at

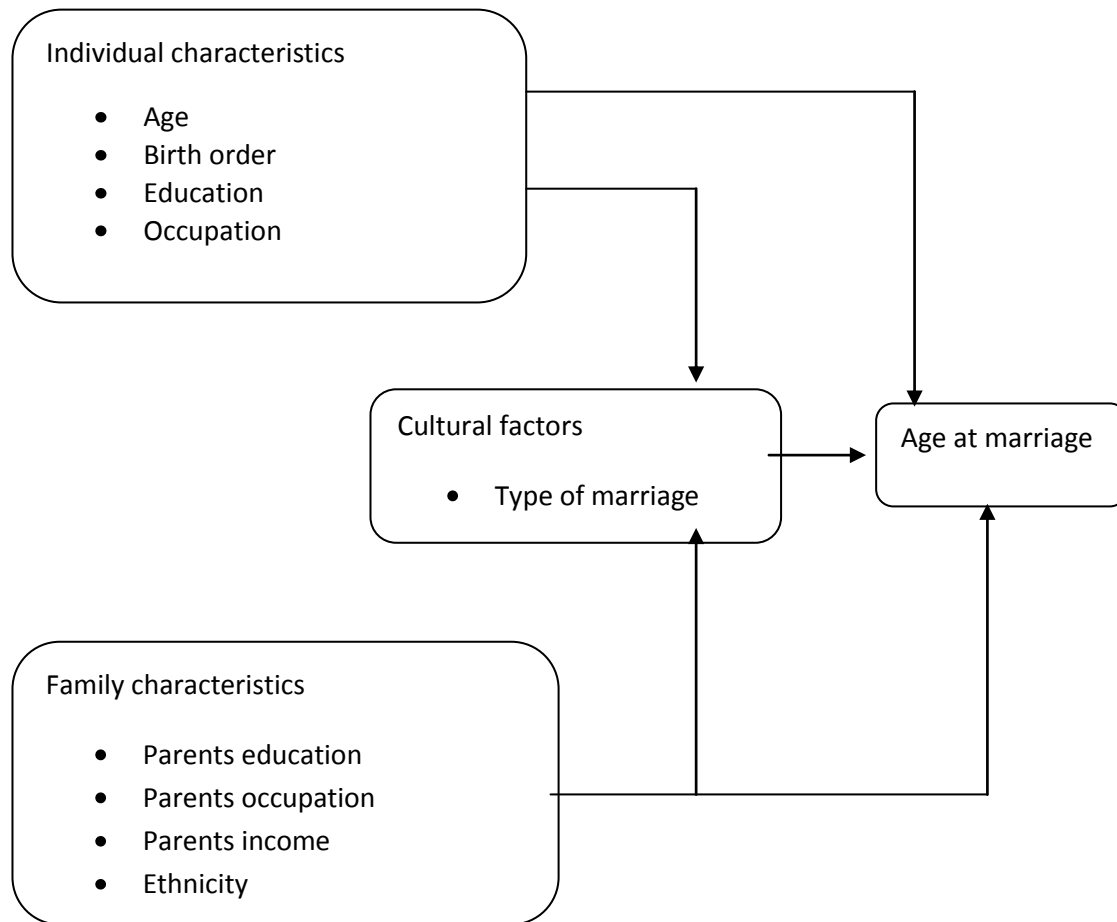


Figure 1. Hypothetical relationship between variables.

marriage, a simple framework presented in Figure 1 was developed. This framework was used as a basis for studying the determinants of age at Marriage in Malawi.

Methods

Three approaches were used in the analysis. Descriptive univariate analyses were performed to inspect the frequency distributions of the various factors. Bivariate analysis was employed to examine the relationships of the independent variables and age at first marriage. Chi-square tests of independence were conducted for categorical variables. Significant differences were determined using chi-square at $p < 0.05$. Logistic regression was used to examine the impact of social and economic factors on age at first marriage. The use of the logistic regression is based on the fact that the dependent variable is dichotomous (0=age at first marriage below 18, 1=age at first marriage above 18). The logistic regression model takes this form:

$$\text{Logit}(p_i) = \ln \left[\frac{p_i}{1-p_i} \right] = a + b_i x_i$$

With p_i being the probability that a woman marries before 18 years and $1 - p_i$ is the complement, a is the constant; b_i standing for the

regression coefficient, x_i 's being the independent covariates and the ratio $[p_i / (1-p_i)]$ being the odds that a woman marries before 18 years.

Study limitation

Although our interest is in exploring the relationship between age at first marriage and socio-economic factors, our study has some limitations. First, the reporting of age at first marriage might be inaccurate. This might arise from recall bias and might be more severe in rural areas where literacy levels are low and marriage certificate may not be readily available. However, the study also collected information on duration of marriage in an effort to minimize the effect of error reporting on age at first marriage. Second, our study includes only ever-married women. This may bias downward age at first marriage because women in the older group who had not married were not included. Third, the study includes only women so there might still be much unknown about trends and determinants of marriage among men. Lastly there is also the problem of measuring some of the independent variables such as education, ethnicity and religion.

For instance, religion may not permit us to identify people belonging to charismatic and non-charismatic churches or allow us to assess the direct effects of religious theology, attitudes,

Table 1. Mean age at marriage by selected background variables for Malawi in 2000 and 2004.

Background variables	2000				2004			
	Mean	SE	N	%	Mean	SE	N	%
Age of respondent								
15-19	16.0	1.5	1039	9.8	16.1	1.6	871	9.1
20-24	17.2	2.3	2513	23.7	17.1	2.3	2446	25.5
25-29	17.6	3.0	2237	21.1	17.5	2.9	2035	21.2
30-34	17.5	3.4	1516	14.3	17.7	3.5	1465	15.3
35-39	17.8	4.0	1372	12.9	17.7	4.1	1106	11.5
40-44	17.5	4.0	1027	9.7	17.7	4.0	925	9.6
45-49	18.1	4.3	896	8.5	18.1	4.5	757	7.9
Region								
Northern	17.2	3.0	1743	16.4	17.4	2.8	1227	12.8
Central	17.7	3.2	3581	33.8	17.7	3.2	3412	35.5
Southern	17.3	3.4	5276	49.8	17.2	3.4	4966	51.7
Place of residence								
Urban	17.8	3.2	2082	19.6	18.1	3.4	1182	12.3
Rural	17.3	3.2	8518	80.4	17.3	3.2	8423	87.7
Education								
No education	17.3	3.7	3198	30.2	17.1	3.7	2639	27.5
Primary	17.1	2.8	6469	61.0	17.2	2.9	5976	62.2
Secondary	19.7	3.2	917	8.7	19.5	3.1	950	9.9
Higher	22.4	3.2	16	0.2	22.7	4.0	40	0.4
Religion								
Catholic	17.5	3.1	2273	21.4	17.5	3.0	2035	21.2
CCAP	17.8	3.0	1796	16.9	18.1	3.4	1517	15.8
Anglican	17.5	3.1	255	2.4	17.8	3.3	197	2.1
Seventh Day Adventist/Baptist	17.4	3.1	674	6.4	17.6	3.2	608	6.3
Other Christian	17.2	3.3	3846	36.3	17.1	3.1	3540	36.9
Muslim	17.3	3.6	1581	14.9	17.1	3.5	1587	16.5
No religion	17.5	3.6	93	0.9	17.1	3.7	76	0.8
Other	17.1	4.1	78	0.7	19.1	6.1	41	0.4
Ethnicity								
Chewa	17.8	3.2	2777	26.2	17.6	3.2	2990	31.1
Tumbuka	17.4	3.0	990	9.3	17.4	2.7	904	9.4
Lomwe	17.0	3.2	2155	20.3	17.2	3.3	1872	19.5
Tonga	17.5	3.1	215	2.0	17.8	3.3	192	2.0
Yao	17.3	3.7	1580	14.9	17.1	3.5	1548	16.1
Sena	17.5	3.2	376	3.5	17.4	3.4	330	3.4
Nkonde	17.2	2.9	355	3.3	17.1	2.4	83	0.9
Ngoni	17.6	3.1	1131	10.7	17.8	3.2	923	9.6
Anyanya	17.0	3.3	614	5.8	0.0	0.0	0	0.0
Other	17.0	3.0	399	3.8	17.2	3.3	761	7.9
Wealth status								
Poor	17.3	3.2	6405	60.4	17.3	3.2	5541	57.7
Medium	17.4	3.3	3983	37.6	17.5	3.2	3924	40.9
Rich	19.3	3.6	212	2.0	19.3	3.9	140	1.5
Total	17.4	3.2	10600	100.0	17.4	3.3	9605	100.0

practices, and norms on women's age at marriage. This is important because the religious groups under consideration here may differ in their religious teachings regarding gender roles, female status and education, spouse selection and childbearing practices. Furthermore, whereas education, particularly school enrollment, occurs during childhood, religious affiliation is usually established by the family at the time of birth and for the most part is unchanged throughout the life course. However, there is a chance that a respondent could change her religious affiliation after getting married or at any point during her adult life, particularly at a time when there is an upsurge of charismatic ministries. Thus, a full understanding of religious influence on marital factors including age at first marriage requires a consideration of the religious heritage in which an individual was raised rather than the respondent's current religious background. Despite these limitations, we hope this study will shed some light on the factors influencing age at first marriage in Malawi.

Lastly, examination of age at marriage also requires an understanding of the cultural changes in a society. In most national datasets including MDHSs cultural variables are not available since the focus is on structural variables. Data on cultural change are typically obtained from attitudinal studies. Shifts in people's attitudes on different issues generally reflect changes in cultural norms and values. On the issue of marriage, shifts in how people view early or late marriage, spousal self-selection, sexual relations outside of marriage and sexual orientation could be indicative of the cultural context in which changes in marital patterns are taking place. However, DHSs, like many datasets does not as yet collect data on people's attitudes. This prevented us from understanding the cultural component of changes in marriage timing.

RESULTS

Characteristics of respondents

Table 1 gives the summary statistics of the samples and the variation of means age at first marriage across independent variables.

In terms of social and demographic characteristics the mean age of respondents is 30.3 years. The majority of the respondents lived in rural areas (80% in 2000 and 88% in 2004). The 2008 Malawi population census suggests that the percentage of the population living in urban areas is 17% (Malawi Government, 2010). This means that the urban segment is overrepresented in the study population in 2000 and the opposite is true in 2004. The majority of the respondents were in the Southern Region, followed by Central Region and then Northern Region. The 2008 Malawi Population census indicate that the highest population is in the Southern Region (45%), followed by Central Region (42%) and lowest in the Northern Region (13%) (Malawi Government, 2010). This finding is consistent with the distribution of the population at the national level where the southern region is home to almost half of the population. In terms of religion, Table 1 indicates that over 80% of the respondents were Christians, with Muslims accounting for nearly 15%. The majority of the study population has primary education (61% in 2000 and 62% in 2004), followed by no education (30% in 2000 and 28% in 2004), then secondary education (8% in 2000 and 10% in 2004). There are very few respondents in the higher education

category (0.2% in 2000 and 0.45 in 2004). The majority of the study population is poor: 60% in 2000 and 58% in 2004. Only 2% of the respondents in 2000 and 1.5% of the study population in 2004 could be said to be rich. Malawi is one of the poorest countries in the world.

Mean age at first marriage by background variables

Table 1 also presents mean age at first marriage by selected background variables. Overall the mean age at first marriage is 17.4 years for all the women in both surveys. The mean age at first marriage varies by background characteristics of the study population. The mean age at first marriage is lower among the younger women than older women. The mean age at first marriage is 16 years for women aged 15-19 increasing to 17.8 years for women aged 35-39 years and 18.1 years for women aged 45-49. In 2004 mean age at first marriage is 16.1 years for women aged 15-19 increasing to 17.7 years for women aged 35-39 years and 18.1 years for women aged 45-49.

In 2000 the mean age at first marriage is lowest in Northern Region, followed by Southern Region and highest in the Central Region. In 2004 the mean age at first marriage is lowest in the Southern Region, followed by Northern Region and highest in the Central Region. Overall, women in Central Region on average got married later than women in Northern and Southern Regions. Women in urban areas on average got married slightly later than women in rural areas. In 2000, the mean age at first marriage is 17.8 years in urban areas as compared to 17.3 years in rural areas. Similar estimates for 2004 are 18.1 and 17.3 years respectively. Women with no or primary education were among the youngest to get married compared to people who had secondary and higher education. In 2000 the mean age at first marriage ranged from a low value of 17.1 years among those with primary education, 17.3 among women with no education, 19.7 years among women with secondary education and 22.4 years among women with higher education. In 2004 the mean age at first marriage ranged from a low value of 17.1 years among with no education, 17.2 among women with primary education, 19.5 years among women with secondary education and 22.7 years among women with higher education.

The differences in age at first marriage comparing no-education with those who had had more than higher education were: 5.1 years in 2000 and 5.6 years in 2004. The mean age at first marriage varied by religious affiliation. The mean age at first marriage was lowest among those respondents practicing other religion (17.1), then other Christian (17.2), Muslims (17.3), seventh day (17.4), No Religion, Anglican, Catholic (17.5) and highest among CCAP (17.8). It is interesting to note that age at first marriage among Muslim women is slightly lower than Christian women and women belonging to Catholic denominations have slightly lower age at marriage than

Protestant women.

Poor people tend to get married earlier than people in middle and rich class. Comparing people in the poor category with those in rich category, the differences in age at first marriage were 2 years in both 2000 and 2004 MDHSs.

Bivariate analyses

The relationship between age at first marriage and the independent variables was further explored by examining the percentage of marriage that took place at or before age 18. Table 2 shows the percentage of women who were first married before 18 years of age by selected background variables. Overall, just like the mean age at first marriage, the percentage of women who got married before the age 18 remained unchanged between 2000 and 2004 (the percentage was 70.5 in 2000 and 70.8 in 2004). Younger women, women who lived in rural area; women who lived in the Northern and Southern Regions; women who had lower education level and poor women were more likely to get marriage before the age 18. This pattern remained consistent in both surveys. Furthermore, according to Table 2, there was significant proportion of women who got married before the age 18 and all independent variables were significantly associated with early marriage.

Multivariate analysis

All the independent variables were put in a binary logistic regression to assess individual variable effects on the dependent variable. The result of the binary logistic regression models is presented as relative odds in Table 3.

Table 3 indicates that out of seven independent variables that were considered in the model, five independent variables (age, region, education, religion and ethnicity) are found to be the most important determinants of age at first marriage in Malawi. However, only age and education were statistically significant ($p < 0.05$). Rural-urban residence and wealth status were excluded from the final model suggesting that these two variables are not significantly associated with the age at first marriage.

Age at first marriage is higher among older women than younger women. Age at marriage is higher among women aged 20-44 relative to younger women and the reference category. The odds indicate that women aged 15-19, 20-24, 25-29, 30-34, 35-39 and 40-44 are 96, 36, 19, 20, 18 and 23%, respectively, and are less likely to marry after the age 18 than the reference category. The odds ratio decrease with increasing age probably suggesting a slight increase in age at marriage.

Women who lived in the Central Region are more likely

to get married later than those who live in the Southern and Northern Regions. On the one hand residents in Central Region are 8% more likely to marry after age of 18 than women residing in Southern Region, and the difference is not statistically significant. On the other hand residents in Northern Region are 17% less likely to marry after age of 18 than women residing in Southern Region, and the difference is not statistically significant.

Education has the expected relation with age at first marriage. Women with no education are 97% less likely to marry after age 20 relative to the reference category; women with primary and secondary education are 97% and 85% less likely to 17 times and 3 times as likely marry after age 20 relative to the reference category.

There are differences in age at first marriage by religious denominations. Catholics are 37% more likely to marry after age 18 than the reference category. CCAP are 29% more likely to marry after age 18 than the reference category. Anglicans are 31% more likely to marry after age 18 than the reference category. Seventh Day Adventists are 39% more likely to marry after age 18 than the reference category. Other Christians are 10% more likely to marry after age 18 than the reference category. Muslims are 45% more likely to marry after age 18 than the reference category. No religions are 66% more likely to marry after age 18 than the reference category. In general among the mainstream religious groupings Muslims are more likely to marry at an earlier age than other religious groups in Malawi. There are variations in age at first marriage by ethnic group in Malawi. The Chewa are 25% more likely to marry after age 18 than the reference category. The Tumbuka are 8 times less likely to marry after age 18.

The Lomwe are 12% times more likely to marry before age 18. The Tonga are 10 times more likely to marry before age 18. The Yao are 5 times more likely to marry before age 18. The Sena, Nkonde and Ngoni are 1.3, 1.0 and 1.1 times less likely to marry before age 18. The Nyanja are 16 times more likely to marry before age 18.

CONCLUSIONS AND RECOMMENDATIONS

This paper focuses on examining the social, economic and demographic factors affecting age at first marriage among Malawian ever-married women aged 15-49 years old. Although the findings from multiple regression analysis indicate that age, region, education, religion and ethnicity are found to be the most important determinants of age at marriage, only age and education are significantly related to age at first marriage.

The results of the multivariate analysis agree with expectation that age at marriage is rising in Malawi but are contrary to the picture portrayed in Tables 1 and 2, which seem to suggest that age at marriage is declining. The median age at marriage increased from 17.7 years in

Table 2. Percentage of women in Malawi who married before age 18 in 2000 and 2004.

Background variables	2000			2004		
	%	Chi-square	p-value	%	Chi-square	p-value
Age of respondent						
15-19	95.5			97.5		
20-24	73.1			70.0		
25-29	65.6			66.3		
30-34	66.2	554.1	0.000	67.7	350.0	0.000
35-39	66.8			67.7		
40-44	67.9			69.5		
45-49	62.9			64.4		
Region						
Northern	72.7			75.6		
Central	67.0	52.6	0.000	66.9	34.3	0.000
Southern	72.3			71.8		
Place of residence						
Urban	60.2			64.2		
Rural	71.9	59.2	0.000	72.4	71.3	0.000
Education						
No education	73.3			71.6		
Primary	74.6	615.2	0.000	75.3	604.5	0.000
Secondary	38.6			37.4		
Higher	17.5			6.3		
Religion						
Catholic	70.8			68.6		
CCAP	61.9			65.9		
Anglican	66.0			67.1		
Seventh Day	65.6	72.9	0.000	68.7	93.6	0.000
Other Christian	74.0			75.0		
Muslim	72.5			70.6		
No religion	77.6			63.4		
Other	61.0			79.5		
Ethnicity						
Chewa	67.4	73.4	0.000	65.7	34.2	0.000
Tumbuka	72.9			72.4		
Lomwe	73.0			74.6		
Tonga	67.2			73.5		
Yao	72.7			71.0		
Sena	71.5			68.4		
Nkonde	74.7			75.2		
Ngoni	67.7			68.6		
Anyanja				75.7		
Other	71.7			75.4		
Wealth status						
Poor	72.4			72.6		
Medium	68.5	90.4	0.000	69.4	55.4	0.000
Rich	47.9			43.4		
Total	70.4			70.8		

Table 3. Logistic regression coefficients predicting the relative odds that a woman marries before exact age 18.

Background variables	2000		2004	
	Odds ratio	S.E.	Odds ratio	S.E.
Age of respondent				
15-19	0.039*	0.21	0.059*	0.19
20-24	0.643*	0.09	0.440*	0.09
25-29	0.807*	0.09	0.701*	0.09
30-34	0.800*	0.09	0.768*	0.10
35-39	0.816*	0.09	0.782*	0.10
40-44	0.768*	0.10	0.772*	0.11
45-49 ®				
Region				
Northern	0.826	0.11	0.910	0.11
Central	1.079	0.07	1.244*	0.07
Southern ®				
Education				
No education	0.027*	1.04	0.077*	0.42
Primary	0.027*	1.04	0.094*	0.42
Secondary	0.146	1.04	0.503	0.43
Higher ®				
Religion				
Catholic	1.373	0.30	0.748	0.34
CCAP	1.288	0.30	0.947	0.34
Anglican	1.305	0.33	0.797	0.38
Seventh Day Adventist/Baptist	1.386	0.31	0.927	0.35
Other Christian	1.098	0.30	0.705	0.34
Muslim	1.447	0.31	0.827	0.35
No religion	1.682	0.37	0.532	0.44
Other ®				
Ethnicity				
Chewa	1.255	0.16	1.092	0.11
Tumbuka	0.926	0.15	0.756	0.14
Lomwe	0.875	0.16	0.941	0.10
Tonga	0.907	0.21	1.177	0.20
Yao	0.954	0.18	1.019	0.13
Sena	1.297	0.19	1.258	0.16
Nkonde	1.044	0.18	0.886	0.29
Ngoni	1.061	0.16	1.026	0.12
Anyanja	0.840	0.18		
Other ®				
Constant	14.641*	1.09	7.704*	0.55
-2 Log likelihood =	11588.035		10718.604	
Cox & Snell R square =	0.108		0.111	
Nagelkerke R square=	0.154		0.158	

* = p<0.5.

1992 to 17.9 years in 2000 and 18.0 years in 2004 (Malawi Government, 1994b, 2002b, 2006). The increasing trend in age at first marriage is consistent with

results from other countries in the region (Harwood-Lejune, 2001). The same picture is portrayed by data obtained from 1987, 1998 and 2008 Malawi population

censuses. Available information indicates that Singulate Mean Age at Marriage (SMAM) has increased from about 17 years in 1977 and 1987 to 19 years in 1998 and 21 years in 2008 census (Malawi Government, 1984, 1994c, 2002a, 2010). However, the information presented in Tables 1 and 2 suggest that age at marriage in Malawi is declining. For instance, Table 1 indicates that the mean age at marriage is lower among the younger women than the older women whereas Table 2 shows that the percentage of women who marry before the age 18 is higher among the young than old women. Although the discussion of trends in the age at marriage is beyond the scope of this study the observed declining trend in age at marriage is probably attributable to errors in the data. First, the estimates of mean ages at marriage based on retrospective reports of age at marriage for the two younger cohorts, namely those of 15-19 and 20-24, cannot be trusted because their experience is incomplete (Smith et al., 1980). Moreover it is possible that women in these age groups were included in the survey because they were already married at the time of the survey or they had already started childbearing. Thus, mean ages at marriage calculated from the retrospective information understate the true level. Secondly, in this study, age at first marriage is calculated based on the responses to the question about the age of the respondent when the respondent first married or started living with a man. The specific question that was asked was "How old were you when you started living with him?" The interviewer was expected to record the age of the respondent at the time of marriage. No attempt was made to allow the interviewer to probe respondents, especially older respondents who might not accurately recall marriage dates or age. In a society where recording of such events is not common and given that the event took place a long time ago, the data for the oldest cohorts should be interpreted cautiously. Moreover, older women interviewed are survivors out of the original cohorts. In a society where maternal mortality is high it can be assumed that those who survived to the older age groups are those who started childbearing at a later stage.

In addition, other researchers have noted that reports of age at marriage for the two cohorts, those 15-19 and 20-24, cannot be trusted because their experience is so incomplete (Ryder, 1975; Smith et. al., 1980). Moreover, younger women included in the survey were already selected according to early marriage and/or fertility. Thus, mean age at marriage calculated from the retrospective information understate the true level.

The study also revealed that there were a significant proportion of women who got married during adolescence and before the legal age (18 years old) especially among young women and less educated women. Sociologically speaking, early marriage is a part of the wider practice of female seclusion through their subordination to men and deprivation of equal access to social and material resources. This evil practice destroys their ability to think, question, and act independently. Child marriage also

minimizes parental responsibilities toward girl's education, developmental activities, socialization, and so forth.

This study has implications for policies and programs that seek to promote the status of woman in Malawi. First, policies that aim at increasing the women's age at first marriage should be promoted. In this regard the unpopular *Chidyamakanda* (those who eat children) bill designed to reduce the minimum age at marriage from 18 years to 16 years and to legitimize those children who are "forced" into early marriages should be vigorously challenged. Second, it is crucial to continue improving girls and young women access to education in the country, as this is an important avenue for increasing the women's age at first marriage and for empowering women so as to enhance their active participation in the market economy. Similarly, it is advisable to target young women, particularly those with no or little education, with information on reproductive health and to provide them with basic life skills to enable them to avoid early sexual activity and ultimately early marriage. These should include primary school girls. This should be done throughout the country with more emphasis placed on the least developed parts of the country. These programs should emphasize the health as well as the economic advantages of delayed marriage and childbearing. Third, from a demographic point of view Malawi still needs to reduce its fertility rate to "manageable levels". One way of achieving this is by increasing age at first marriage. Lastly, there is need to conduct more studies on the causes and consequences of early marriage in Malawi. Future studies should not only be multidisciplinary but also qualitative in nature.

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